SOLUTIA

*Solutions for a better life.*

**Solutia Inc.**
575 Maryville Centre Drive
St. Louis, Missouri 63141

P.O. Box 66760
St. Louis, Missouri 63166-6760
*Tel* 314-674-1000

April 27, 2010

Mr. Kenneth Bardo - LU-9J
U.S. EPA Region V
Corrective Action Section
77 West Jackson Boulevard
Chicago, IL 60604-3507

VIA FEDEX

Re: Long-Term Monitoring Program
1st Quarter 2010 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

Dear Mr. Bardo:

Enclosed please find the Long-Term Monitoring Program 1st Quarter 2010 Data Report for Solutia Inc.'s W. G. Krummrich Plant, Sauget, IL.

If you have any questions or comments regarding this report, please contact me at (314) 674-3312 or gmrina@solutia.com

Sincerely,

Gerald M. Rinaldi
Manager, Remediation Services

Enclosure

cc: Distribution List

**DISTRIBUTION LIST**

**Long-Term Monitoring Program**
**1st Quarter 2010 Data Report**
**Solutia Inc., W. G. Krummrich Plant, Sauget, IL**

USEPA

Stephanie Linebaugh
USEPA Region 5 - SR6J, 77 West Jackson Boulevard, Chicago, IL 60604

IEPA

James Moore
IEPA Bureau of Land, 1021 North Grand Avenue East, Springfield, IL 62706

Booz Allen Hamilton

Dan Briller
Booz Allen Hamilton, 8283 Greensboro Drive, McLean, VA 22102

Solutia

Justin Prien 500 Monsanto Avenue, Sauget, IL 62206-1198

1ST QUARTER 2010
DATA REPORT

# LONG-TERM MONITORING PROGRAM

# SOLUTIA INC.
# W.G. KRUMMRICH FACILITY
# SAUGET, ILLINOIS

*Prepared for*

Solutia Inc.
575 Maryville Centre Drive
St. Louis, Missouri 63141

April 2010

URS Corporation
1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100
Project # 21562401.00002

1.0 INTRODUCTION ..... 1

2.0 FIELD PROCEDURES ..... 2

3.0 LABORATORY PROCEDURES ..... 7

4.0 QUALITY ASSURANCE ..... 7

5.0 OBSERVATIONS ..... 9

6.0 REFERENCES ..... 11

**List of Figures**

Figure 1 Site Location Map
Figure 2 Long-Term Monitoring Program Well Locations (with Surface Water/Sediment Sample Locations)
Figure 3 Potentiometric Surface Map Middle/Deep Hydrogeologic Unit
Figure 4 Benzene and Total Chlorobenzenes Results

**List of Tables**

Table 1 Monitoring Well Gauging Information
Table 2 Groundwater Analytical Results
Table 3 Monitored Natural Attenuation Results Summary

**List of Appendices**

Appendix A Groundwater Purging and Sampling Forms
Appendix B Chains-of-Custody
Appendix C Surface Water and Sediment Sampling Forms
Appendix D Quality Assurance Report
Appendix E Groundwater Analytical Results (with Data Review Reports)
Appendix F Surface Water and Sediment Analytical Results (with Data Review Reports)
Appendix G Microbial Insights Data Package

## 1.0 INTRODUCTION

This report presents the results of the 1st Quarter 2010 (1Q10) sampling event performed at the Solutia Inc. (Solutia) W.G. Krummrich (WGK) Facility located in Sauget, Illinois (Site). This sampling event was conducted in accordance with the Revised Long-Term Monitoring Program (LTMP) Work Plan (Solutia 2009). The Site location is presented in **Figure 1**.

The LTMP was designed to evaluate the effectiveness of monitored natural attenuation (MNA), including: 1) a clear and meaningful trend of decreasing contaminant mass; 2) data that indirectly demonstrate the types and rates of natural attenuation processes active at the site; and 3) data that directly demonstrate the occurrence of biodegradation processes at the site.

**Groundwater Sampling Location and Frequency -** As specified in the Revised LTMP Work Plan, groundwater samples will be collected for eight quarters from five monitoring wells downgradient of the Former Chlorobenzene Process Area (CPA-MW-1D through CPA-MW-5D) and five monitoring wells downgradient of the Former Benzene Storage Area (BSA-MW-1S and BSA-MW-2D through BSA-MW-5D) to assess attenuation processes in the American Bottoms aquifer, as impacted groundwater from these source areas migrates toward and discharges to the Mississippi River.

Monitoring wells BSA-MW-1S, 2D, 3D, 4D and 5D are located within the limiting flow lines downgradient of the Former Benzene Storage Area. Monitoring wells CPA-MW-1D, 2D, 3D, 4D and 5D are located within the limiting flow lines downgradient of the Former Chlorobenzene Process Area. Source areas and monitoring well locations are presented in **Figure 2**.

Quarterly sampling under the Long-Term Monitoring Program commenced 3Q08 and will continue for a total of eight quarters. At the end of eight quarters, groundwater quality and attenuation process data will be evaluated to determine if longer sampling intervals (e.g., semi-annual or annual) are appropriate.

**Groundwater Sampling Parameters -** During the 1Q10 groundwater sampling event, groundwater samples were analyzed for benzene, monochlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene using USEPA Method 8260B to demonstrate a trend of decreasing contaminant mass and/or concentrations over time. In accordance with USEPA comments regarding the Long-Term Monitoring Plan, the following constituents were added to the groundwater monitoring parameter list on a semi-annual basis (1st and 3rd Quarters):

- 4-Chloroaniline: CPA-MW-3D, CPA-MW-4D, and CPA-MW-5D
- 2-Chlorophenol: All wells
- 1,2,4-Trichlorobenzene: All wells
- 1,4-Dioxane: BSA-MW-2D, BSA-MW-3D, BSA-MW-4D, and BSA-MW-5D

MNA samples were collected from all ten long-term monitoring program wells. Evaluation of the types of active natural attenuation processes at the site is based on the following key geochemical parameters:

- Electron Donors: Organic Carbon (Total and Dissolved)
- Electron Acceptors: Iron (Total and Dissolved)<br>Manganese (Total and Dissolved)<br>Nitrate<br>Sulfate
- Biodegradation Byproducts: Carbon Dioxide<br>Chloride<br>Methane
- Biodegradation Indicators: Alkalinity

Direct demonstration of the occurrence of biodegradation processes is completed quarterly utilizing Microbial Insights (www.microbe.com) Bio-Trap® Samplers for Phospholipid Fatty Acid Analysis (PLFA), along with Stable Isotope Probes (SIPs) for benzene or chlorobenzene detection in select wells.

**Surface Water and Sediment Sampling –** Surface water and sediment samples are collected during winter low flow conditions and during summer low flow conditions as part of the site long-term monitoring program. This typically coincides with the 1st and 3rd quarter groundwater sampling events. The objective of the surface water and sediment monitoring program is to assess the impact of contaminated groundwater discharging to the Mississippi River north of the Groundwater Migration Control System (GMCS).

## 2.0 FIELD PROCEDURES

URS Corporation (URS) conducted 1Q10 monitoring well sampling activities between February 12 and 23, 2010, in accordance with procedures outlined in the Revised LTMP Work Plan, including the collection of appropriate quality assurance and quality control (QA/QC) samples. The following section summarizes field investigative procedures:

**Groundwater Level Measurements** – URS personnel used an electronic oil/water interface probe to measure depth to static groundwater levels and if present, the thickness of non-aqueous phase liquid (NAPL), to 0.01 feet. Depth to groundwater measurements were performed on February 12, 2010 from accessible existing wells (i.e., GM-, K- , PSMW- and PMA-series) and piezometer clusters (installed for the Sauget Area 2 RI/FS and WGK CA-750 Environmental Indicator projects) specified in the Revised LTMP Work Plan **(Figure 3**). NAPL was not detected within any of the LTMP monitoring wells.

Well gauging information for the 1Q10 event is presented in **Table 1**. As the middle and deep hydrogeologic units are the primary migration pathway for constituents present in groundwater at the WGK Facility, a groundwater potentiometric surface map based on water level data from wells screened in the Middle Hydrogeologic Unit (MHU) and Deep Hydrogeologic Unit (DHU) is presented as **Figure 3**.

**Groundwater Sampling** – Groundwater samples were collected on February 15 through 18, 2010. Low-flow sampling techniques were used for groundwater sample collection. At each monitoring well, disposable, low-density polyethylene tubing was attached to a submersible pump, which was then lowered into the well to the middle of the screened interval. Monitoring wells were purged at a rate of 300 mL/minute to minimize drawdown. If significant drawdown occurred, flow rates were reduced.

Drawdown was measured periodically throughout purging to ensure that it did not exceed 25% of the distance between the pump intake and the top of the screen. Once the flow rate and drawdown were stable, field measurements were collected approximately every three to five minutes. Purging of a well was considered complete when the following water quality parameters remained stable over three consecutive flow-thru cell volumes:

| Parameter | Stabilization Guidelines |
|---|---|
| Dissolved Oxygen (DO) | +/- 10% or +/-0.2 mg/L, whichever is greatest |
| Oxidation-Reduction Potential (ORP) | +/- 20 mV |
| pH | +/- 0.2 units |
| Specific Conductivity | +/- 3% |

Sampling commenced upon completion of purging. Prior to sample collection, the flow-thru cell was bypassed to allow for collection of uncompromised groundwater. Samples were collected at a flow rate less than or equal to the rate at which stabilization was achieved. Sample containers were filled based on laboratory analysis to be performed, in the following order:

- Volatile Organic Compounds (VOCs)
- Gas Sensitive Parameters (e.g., methane, carbon dioxide)
- General Chemistry (i.e., alkalinity, chloride, total and dissolved iron, total and dissolved manganese, nitrate, sulfate, and total and dissolved organic carbon)
- Field Parameters (i.e., dissolved oxygen, ferrous iron, and oxidation-reduction potential).

Samples collected for ferrous iron, dissolved iron and dissolved manganese analysis were filtered in the field using in-line 0.2 micron disposable filters, represented by a notation of “F (0.2)” in the sample nomenclature.

Quality assurance/quality control (QA/QC) samples consisting of analytical duplicates (AD) and equipment blanks (EB) were collected at a rate of 10% and matrix spike/matrix spike duplicates

(MS/MSD) were collected at a rate of 5%. In addition, trip blanks accompanied each shipment containing samples for VOC analysis.

Each investigative or QC sample was labeled immediately following collection. Each sample identification number consisted of the following nomenclature "AAAMW#-MMYY-QAC" where:

- "**AAA**" denotes "Chlorobenzene Process Area (CPA)" or "Benzene Storage Area (BSA)"and "**MW-#**" denotes "Monitoring Well Number":
- **MMYY –** Month and year of sampling quarter, e.g.: First quarter (February) 2010, 0210
- **"QAC"** denotes QA/QC sample
  - **AD –** analytical duplicate
  - **EB –** equipment blank
  - **MS or MSD –** Matrix Spike or Matrix Spike Duplicate

Upon collection and labeling, sample containers were immediately placed inside an iced cooler, packed in such a way as to help prevent breakage and maintain inside temperature at or below approximately 4$^{o}$C. Field personnel recorded the project identification and number, sample description/location, required analysis, date and time of sample collection, type and matrix of sample, number of sample containers, preservative used (if applicable), analysis requested/comments, and sampler signature/date/time, with permanent ink on the chain-of-custody (COC). Prior to shipment, coolers were sealed between the lid and sides of the cooler with a custody seal, and then shipped to TestAmerica in Savannah, Georgia by means of an overnight delivery service. Field sampling data sheets are included in **Appendix A**, COC forms are included in **Appendix B**.

Field personnel and equipment were decontaminated according to procedures specified in the Revised LTMP Work Plan to ensure the health and safety of those present, maintain sample integrity, and minimize movement of contamination between the work area and off-site locations. Equipment used on-site was decontaminated prior to beginning work, between sampling locations and/or uses, and prior to demobilizing from the site. Non-disposable purging and sampling equipment was decontaminated between each sample acquisition by washing with an Alconox® or equivalent detergent wash, a potable water rinse, and a distilled water rinse. Personnel and small equipment decontamination was performed at the sample locations. Disposable sampling equipment, such as gloves were collected and bagged on a daily basis and managed in accordance with Solutia procedures. Purge water was containerized and handled per Solutia procedures.

**Biodegradation Evaluation Sampling** - Bio-Trap® samplers and Stable Isotope Probes (SIPs), provided by Microbial Insights, Inc. (Rockford, TN), were utilized in the LTMP to provide information regarding biodegradation potential of the Shallow Hydrogeologic Unit (SHU), the

MHU and the DHU. Bio-Trap® samplers are passive sampling tools which, over time, collect microbes across a membrane that serves as the sampling matrix. SIPs are similar passive sampling tools that are analyzed to measure the degradation of a specific contaminant (i.e., benzene and chlorobenzene).

On January 15, 2010, URS field personnel deployed Bio-Trap® samplers in each of the ten LTMP wells for PLFA analysis. A benzene SIP and a monochlorobenzene SIP were placed in monitoring wells BSA-MW02D and CPA-MW03D, respectively. Bio-Trap® samplers and SIPs were tied to nylon line attached to the well cap and lowered to the middle of the well screen.

On February 15, 2010, the Bio-Trap® samplers and SIPs were retrieved from the wells, sealed in Ziploc® bags, labeled with the proper well identification and placed in an iced sample cooler with a signed COC. Sealed sample coolers were sent to Microbial Insights, Inc. for analysis.

**Surface Water and Sediment Monitoring** - Surface water/sediment and groundwater sampling events are typically coordinated to confirm groundwater is discharging to the river at the time of sampling, and to assess the relationship between VOC concentrations in the river and in groundwater. The surface water and sediment sampling was conducted concurrent with the 1Q10 groundwater sampling event on February 17, 2010. Fluid levels in groundwater monitoring wells CPA-MW-5D, BSA-MW-5D and BSA-MW-4D were gauged on the same day in which the surface water and sediment sampling occurred. The water levels in the wells (CPA-MW-5D, el 389.75; BSA-MW-5D, el 391.75; and BSA-MW-4D, el 392.80) were higher than the Mississippi River (~387.21) confirming discharge to the river.

Surface water and sediment samples were collected at three locations, R2007-1 through R2007-3 (**Figure 2**). Coordinates for each of the three sample locations were preloaded into a Trimble Global Positioning System (GPS) unit, which URS field personnel used for navigation to the sample locations. With a scoured river bed in the vicinity of sediment sampling locations, field personnel positioned the sampling boat at a point where the dredge was able to reach the river bed. Surface water samples were collected prior to sediment samples at each of the three locations in an effort to collect a sample representing the water column above the sediments and minimize potential contamination from the sediments or the sampling system.

Samples were analyzed for the following VOCs: benzene, chlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene along with semivolatile organic compounds (SVOCs) 1,4-dioxane, 4-chloroaniline, 2-chlorophenol and 1,2,4-trichlorobenzene.

QA/QC and shipping procedures were similar to those described above for groundwater sample collection.

In-situ water quality parameters (temperature, pH, dissolved oxygen and conductivity) were also recorded at each of the three sample locations. These parameters were measured with a

Horiba Model U-22 at a depth of one foot below the water surface, and recorded on field data sheets (**Appendix C).**

Surface Water Sampling

Surface water samples were collected at the sediment-water interface (within one foot of the bottom) at the pre-designated sampling locations. Samples were collected with a peristaltic pump and weighted intake. New tubing was used at each sampling location. Tubing was clamped to the cable of the sediment sampler (ponar dredge) and lowered with the dredge to the bottom of the river. Unfiltered surface water samples were used for chemical analysis. The samples for VOC and SVOC analysis were collected by directly filling appropriate containers from the peristaltic pump tubing to minimize VOC and/or preservative loss. Pump velocity was reduced during sampling to minimize volatilization.

Sediment Sampling

Sediment samples were collected with an 11.1 liter ponar grab sampler. The sampler was deployed from a davit along the side of the boat, and was raised and lowered with a winch. Prior to sampling at each location, the grab sampler and the other sampling devices (stainless steel bowl and spoon) were decontaminated with a distilled water and Alconox® wash, followed by a distilled water rinse. A single grab sample was sufficient to provide the needed sample quantity. Sediment samples were collected from the upper 2 inches (5-6 centimeters) of the river bed. Upon retrieval, the sediment sampler was opened and the sediment was transferred to the stainless steel bowl. The samples for VOC analysis were obtained using a 5 milliliter TerraCore sampler, which was inserted into the sediment below the surface and removed with care to prevent VOC loss.

COCs for surface water and sediment sampling are included in **Appendix B**.

## 3.0 LABORATORY PROCEDURES

Samples were analyzed by TestAmerica for VOCs, SVOCs and MNA parameters, using the following methodologies:

- VOCs, via USEPA SW-846 Method 8260B
- SVOCs, via USEPA SW-846 Method 8270C
- MNA parameters: alkalinity (310.1), carbon dioxide (310.1), chloride (325.2), total and dissolved iron (6010B), total and dissolved manganese (6010B), methane (RSK 175), nitrate (353.2), sulfate (375.4), and total and dissolved organic carbon (415.1).

Dichlorobenzenes were quantitated using Method 8260B because of potential volatilization losses associated with Method 8270C. Laboratory results were provided in electronic and hard copy formats.

## 4.0 QUALITY ASSURANCE

Analytical data were reviewed for quality and completeness, as described in the Revised Long Term Monitoring Work Plan. Data qualifiers were added, as appropriate, and are included on the data tables and the laboratory result pages. The Quality Assurance report is included as **Appendix D**. Laboratory reports with data validation review sheets for groundwater, and surface water/sediment, are included in **Appendices E** and **F**, respectively.

A total of 14 groundwater samples (10 investigative samples, 1 field duplicate, 1 MS/MSD pair and 1 equipment blank) were prepared and analyzed by TestAmerica for combinations of VOCs, SVOCs, dissolved gases, metals, and general chemistry. In addition, four trip blank sets were included in the coolers that contained samples for VOC analysis and were analyzed for VOCs. The results for the various analyses were submitted as sample delivery group (SDG) KPS056. The samples contained in SDG KPS056 are listed below:

**KPS056**

| | |
|---|---|
| CPA-MW-4D-0210 | BSA-MW-5D-0210 |
| 1Q10 LTM Trip Blank #1 | BSA-MW-4D-0210 |
| CPA-MW-5D-0210 | BSA-MW-3D-0210 |
| BSA-MW-2D-0210 | BSA-MW-3D-0210-EB |
| 1Q10 LTM Trip Blank #2 | BSA-MW-1S-0210 |
| CPA-MW-1D-0210 | CPA-MW-2D-0210 |
| CPA-MW-2D-0210-AD | 1Q10 LTM Trip Blank #3 |
| CPA-MW-3D-0210 | 1Q10 LTM Trip Blank #4 |

Evaluation of the groundwater analytical data followed procedures outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods

Data Review (USEPA 2008), USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 2004), and the Revised Long-Term Monitoring Program (LTMP) Work Plan (Solutia 2009).

Based on the above mentioned criteria, groundwater results reported for the analyses performed were accepted for their intended use. Acceptable levels of accuracy and precision, based on matrix spike/matrix spike duplicate (MS/MSD), laboratory control sample (LCS), surrogate and field duplicate data were achieved for these SDGs to meet the project objectives. Completeness which is defined to be the percentage of analytical results which are judged to be valid, including estimated detect/nondetect (**J/UJ**) data was 100 percent.

For surface water and sediment, a total of 13 samples (six investigative [three surface water and three sediment]), two field duplicates, two MS/MSD pairs, and one equipment blank) were prepared and analyzed by TestAmerica for combinations of VOCs and SVOCs. In addition, one trip blank was included in the cooler that contained surface water samples for VOC analysis. The results for the various analyses were submitted as SDGs KRS009 and KRS010 (**Appendix F**).

The samples contained in each SDG are listed below:

| **KRS009** | **KRS010** |
|---|---|
| SW-R2007-3-0210 | SED-R2007-3-0210 |
| SW-R2007-2-0210 | SED-R2007-2-0210 |
| SW-R2007-1-0210 | SED-R2007-1-0210 |
| SW-R2007-1-0210 AD | SED-R2007-1-0210 AD |
| SW-R2007-1-0210 EB | |
| Trip Blank 021710 | |

Evaluation of the surface water and sediment analytical data followed procedures outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, (USEPA 2008) and the Revised Long Term Monitoring Program (LTMP) Work Plan (Solutia 2009).

Based on the above mentioned criteria, surface water and sediment results reported for the analyses performed were accepted for their intended use. Acceptable levels of accuracy and precision, based on MS/MSD, LCS, surrogate and field duplicate data were achieved for these SDGs to meet the project objectives. Completeness which is defined to be the percentage of analytical results which are judged to be valid, including estimated detect/nondetect (**J/UJ**) data was 100 percent.

## 5.0 OBSERVATIONS

Groundwater analytical detections and MNA results for the 1Q10 LTMP sampling event are presented in **Tables 2** and **3,** respectively. Benzene, chlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,4-dioxane, 4-chloroaniline, 2-chlorophenol and 1,2,4-trichlorobenzene were detected in samples collected from one or more of the ten LTMP wells during this sampling event. Each of these constituents is discussed below:

**Benzene** - Benzene was detected in collected samples at levels above the laboratory reporting limit in eight of the ten wells sampled in 1Q10, ranging from 37 µg/L (CPA-MW-4D) to 730,000 µg/L (BSA-MW-1S).

Downgradient of the Former Benzene Storage Area, benzene was detected in the DHU at concentrations of 150,000 µg/L (BSA-MW-2D) and 87 µg/L (BSA-MW-3D). Near the river north of the Sauget Area 2 Groundwater Migration Control System (SA2 GMCS), benzene was detected in the DHU at concentrations of 73 µg/L (BSA-MW-4D).

Benzene was detected at the Former Chlorobenzene Process Area at concentrations of 7,300 µg/L (CPA-MW-1D) and 1,100/1,100 µg/L (CPA-MW-2D and duplicate) at the North Tank Farm. Downgradient of the Former Chlorobenzene Storage Area, benzene was detected in the DHU at a concentration of 180 µg/L (CPA-MW-3D) and 12 µg/L (CPA-MW-4D). Benzene was not detected near the river north of the SA2 GMCS in DHU well CPA-MW-5D.

**Chlorobenzenes (Total)** - Total chlorobenzenes (e.g., sum of chlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4, dichlorobenzene) were detected at levels above the laboratory reporting limit in nine of the ten wells sampled in 1Q10, ranging from 696 µg/L (BSA-MW-5D) to 55,700 µg/L (CPA-MW-1D).

Downgradient of the Former Chlorobenzene Storage Area, total chlorobenzenes were detected in the DHU at concentrations of 766 µg/L (CPA-MW-3D) and 858 µg/L (CPA-MW-4D). Total chlorobenzenes were detected in the DHU near the river north of SA2 GMCS at a concentration of 1,941 µg/L (CPA-MW-5D).

Downgradient of the Former Benzene Storage Area, total chlorobenzenes were detected at concentrations of 2,700 µg/L (BSA-MW-2D) and 1,696 µg/L (BSA-MW-3D). North of the SA2 GMCS, near the river, total chlorobenzenes were detected in the DHU at concentrations of 2,790 µg/L (BSA-MW-4D) and 696 µg/L (BSA-MW-5D).

**Figure 4** displays benzene and total chlorobenzenes results from the 1Q10 sampling event.

**1,4-Dioxane** - Groundwater samples were collected from four monitoring wells downgradient of the Former Benzene and Chlorobenzene Storage Area to analyze for 1,4-dioxane (BSA-MW-

2D, BSA-MW-3D, BSA-MW-4D, and BSA-MW-5D). 1,4-Dioxane was detected in monitoring wells BSA-MW-2D and BSA-MW-4D at concentrations of 26 µg/L and 31 µg/L, respectively.

**4-Chloroaniline** - Groundwater samples for 4-chloroaniline analysis were collected from monitoring wells CPA-MW-3D, CPA-MW-4D and CPA-MW-5D. 4-chloroaniline was detected in monitoring wells CPA-MW-3D (36 µg/L) and CPA-MW-4D (170 µg/L).

**2-Chlorophenol** - Of the ten samples available for analysis during 1Q10, 2-chlorophenol was detected in four of the LTMP wells at concentrations ranging from 9.9 µg/L (CPA-MW-5D) to 29 µg/L (CPA-MW-2D). 2-Chlorophenol was also detected in monitoring wells BSA-MW-3D and BSA-MW-4D at concentrations of 11 µg/L and 13 µg/L, respectively.

**1,2,4-Trichlorobenzene** – Samples from the ten LTMP wells were analyzed for 1,2,4-Trichlorobenzene. Of the wells sampled, only the sample from monitoring well CPA-MW-1D indicated a detection, with a concentration of 870 µg/L.

**Surface Water and Sediment Monitoring -** Surface water and sediment samples were analyzed for VOCs benzene, chlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene along with SVOCs 4-chloroaniline, 2-chlorophenol, 1,4-dioxane and 1,2,4-trichlorobenzene. The results are summarized as follows**:**

- The surface water samples from locations R2007-2 and R2007-3 indicated estimated 1,4-Dichlorobenzene concentrations of 0.35 µg/L and 0.37 µg/L, respectively. All other constituents were non-detect in the samples (variable reporting limits). Sample locations R2007-2 and R2007-3 are approximately 150 feet from the shoreline, and downgradient from monitoring wells BSA-MW-5D and BSA-MW-4D, respectively.
- None of these constituents were detected in the sediment samples (variable reporting limits).

These results indicate that constituents are attenuating prior to discharge to the river.

**Monitored Natural Attenuation -** The MNA results for this quarter are presented in **Table 3**. PLFA and SIP laboratory results are included in **Appendix G**. These data were compared to other quarterly sampling data in the first annual natural attenuation evaluation report submitted in October 2009 and will be compared again in the second such report following 2Q10 sampling.

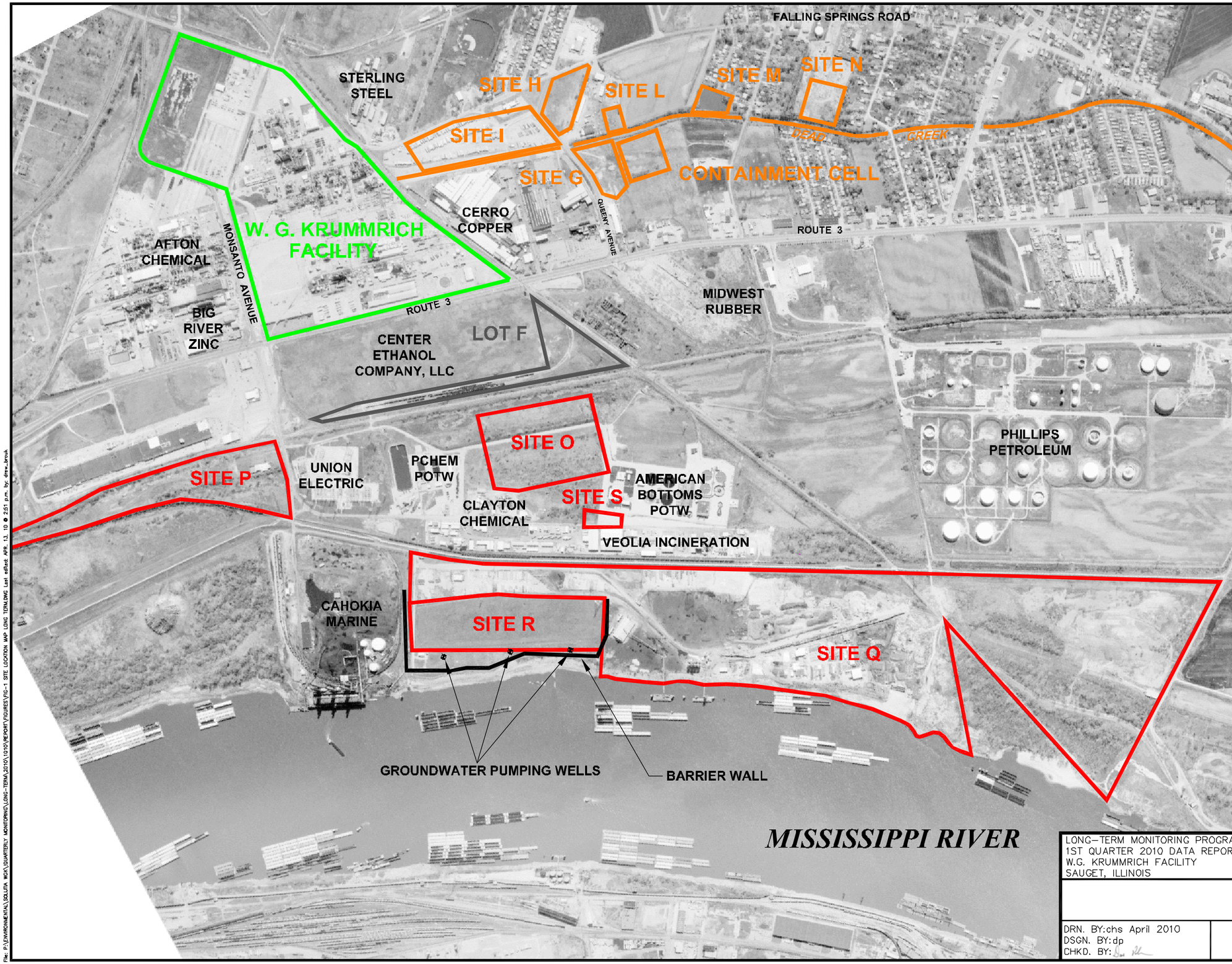
## 6.0 REFERENCES

Solutia Inc, 2009. Revised Long Term Monitoring Program, Solutia, Inc., W.G. Krummrich Facility, Sauget, Illinois, May 2009.

USEPA, 2004. Contract Laboratory Program National Functional Guidelines for Inorganic Data Review.

USEPA, 2008. Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review

# Figures



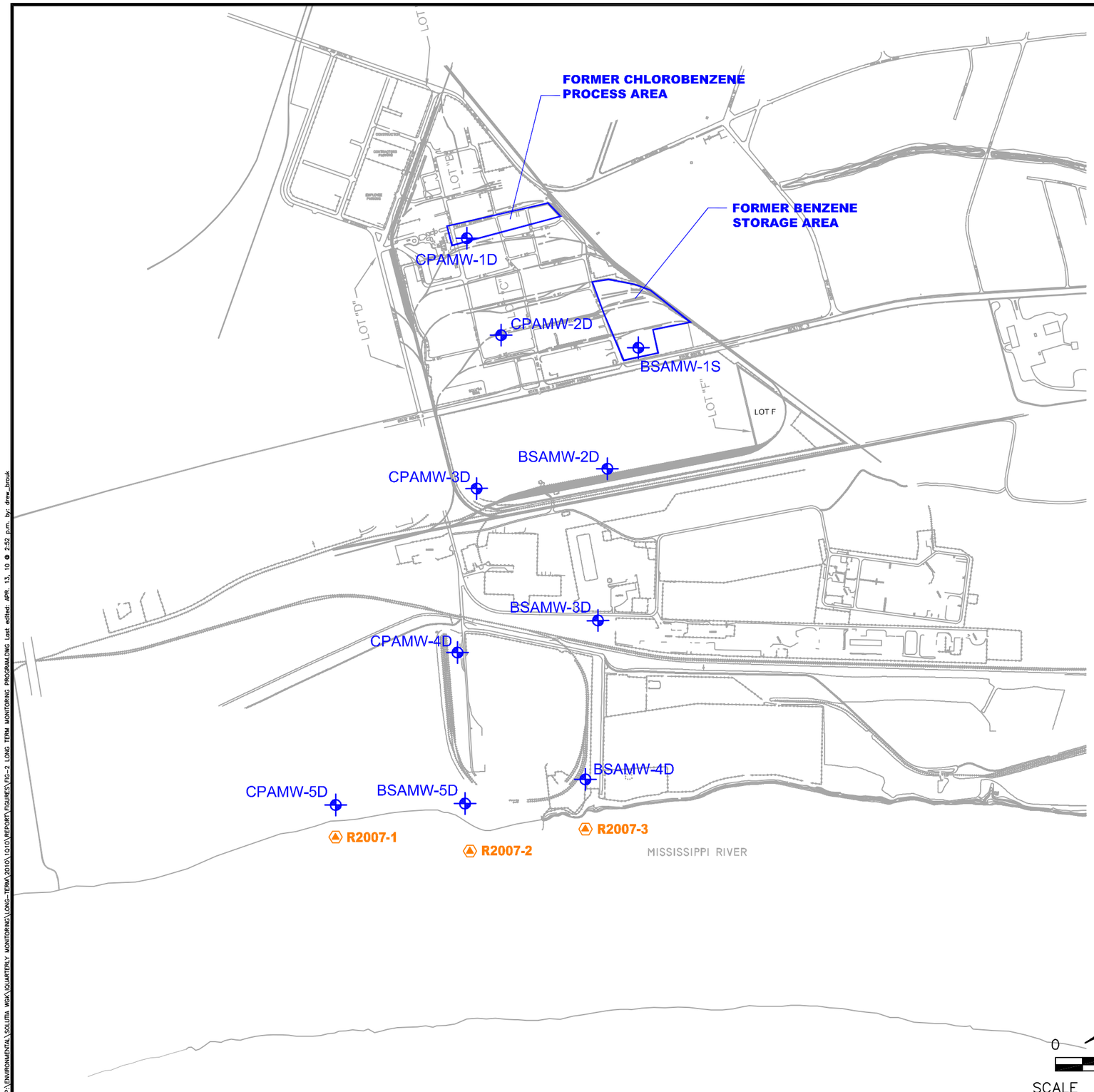

LEGEND

- W.G. KRUMMRICH FACILITY
- SAUGET AREA #1
- SAUGET AREA #2

0 1000
SCALE FEET

| | |
|---|---|
| LONG-TERM MONITORING PROGRAM<br>1ST QUARTER 2010 DATA REPORT<br>W.G. KRUMMRICH FACILITY<br>SAUGET, ILLINOIS | PROJECT NO.<br>21562154 |
| URS | |
| DRN. BY:chs April 2010<br>DSGN. BY:dp<br>CHKD. BY: | Site Location Map |
| | FIG. NO.<br>1 |

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\LONG-TERM\2010\1010\REPORT\FIGURES\FIG-1 SITE LOCATION MAP LONG TERMLONG Last edited: APR. 13, 10 @ 2:51 p.m. by: drew_brook




LEGEND

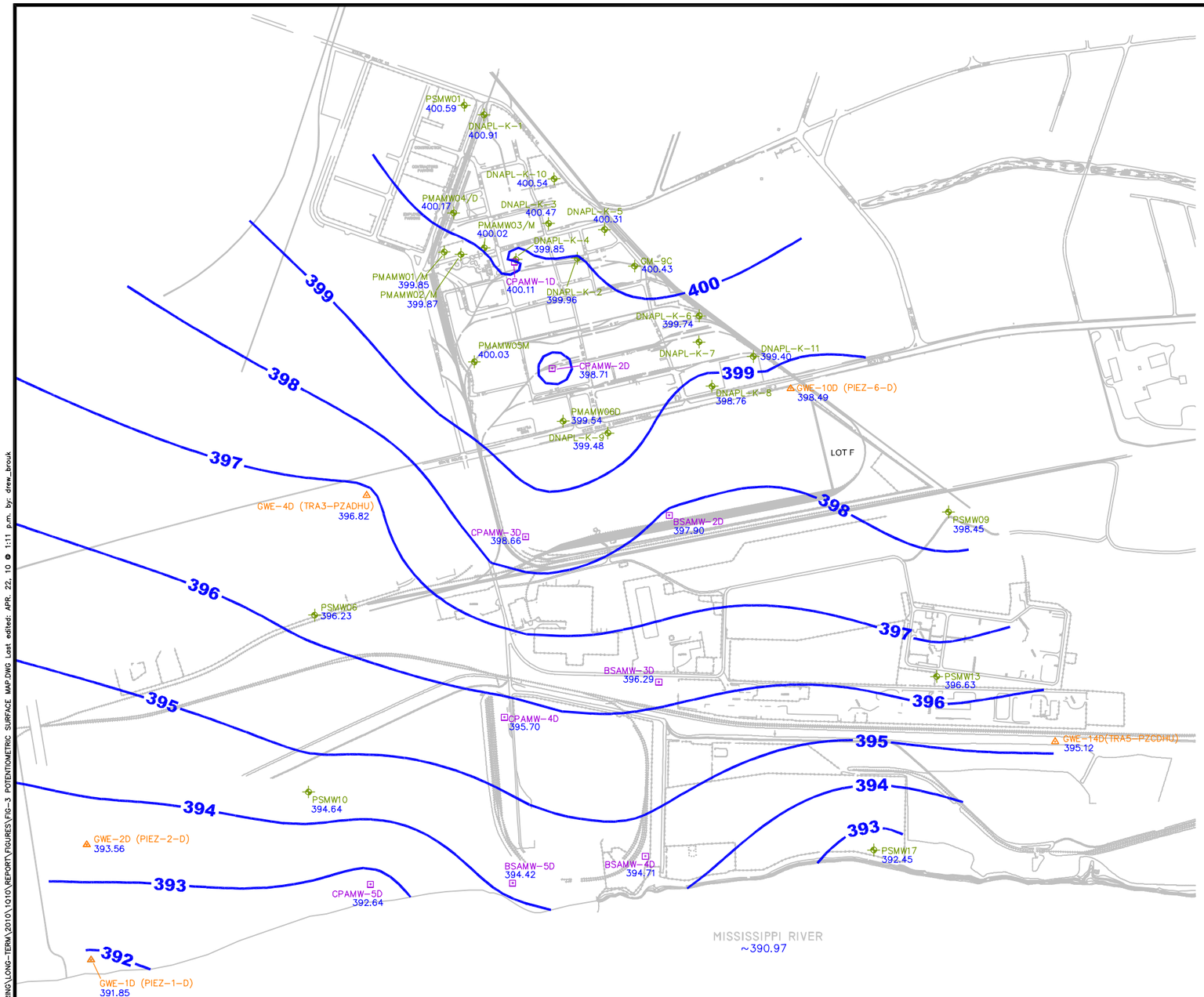
- LONG-TERM MONITORING WELL LOCATION
- LONG-TERM MONITORING PROGRAM SURFACE WATER / SEDIMENT SAMPLING LOCATION

NOTES:

1. LOCATIONS DEPICTED ARE THOSE USED TO DEVELOP GROUNDWATER CONTOUR MAPS FOR MHU/DHU.
2. REFER TO TABLE 1 FOR MONITORING WELL CONSTRUCTION INFORMATION.

| | |
|---|---|
| LONG-TERM MONITORING PROGRAM<br>1ST QUARTER 2010 DATA REPORT<br>W.G. KRUMMRICH FACILITY<br>SAUGET, ILLINOIS | PROJECT NO.<br>21562154 |
| URS | |
| DRN. BY:chs April 2010<br>DSGN. BY:dp<br>CHKD. BY: | Long-Term Monitoring Program Well Locations |
| | FIG. NO.<br>2 |

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\LONG-TERM\2010\1Q10\REPORT\FIGURES\FIG-2 LONG TERM MONITORING PROGRAM.DWG Last edited: APR. 13, 10 @ 2:52 p.m. by: drew_brook




LEGEND

- LONG-TERM MONITORING WELL USED FOR GROUNDWATER CONTOURING
- OTHER MONITORING WELL USED FOR GROUNDWATER CONTOURING
- PIEZOMETER CLUSTER USED FOR GROUNDWATER CONTOURING
- —393— GROUNDWATER ELEVATION CONTOUR (FT NAVD)

NOTES:

1. GROUNDWATER LEVELS WERE MEASURED FEBRUARY 12, 2010.
2. CONTOURS GENERATED PRIMARILY USING SURFER SOFTWARE VERSION 8. SOME INTERPRETATION WAS DONE USING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
3. THE MISSISSIPPI RIVER STAGE ELEVATION PRESENTED ON THE FIGURE IS AN AVERAGE ELEVATION FOR THE TIME OF THE GAUGING EVENT. THE INFORMATION WAS OBTAINED FROM THE SITE R BUBBLER.
4. LOCATIONS WITH WELLS SCREENED IN BOTH THE MHU AND DHU UTILIZED THE DHU WELL FOR DEVELOPMENT OF THE POTENTIOMETRIC SURFACE MAP.

N

0 1000

SCALE FEET

LONG-TERM MONITORING PROGRAM
1ST QUARTER 2010 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562401

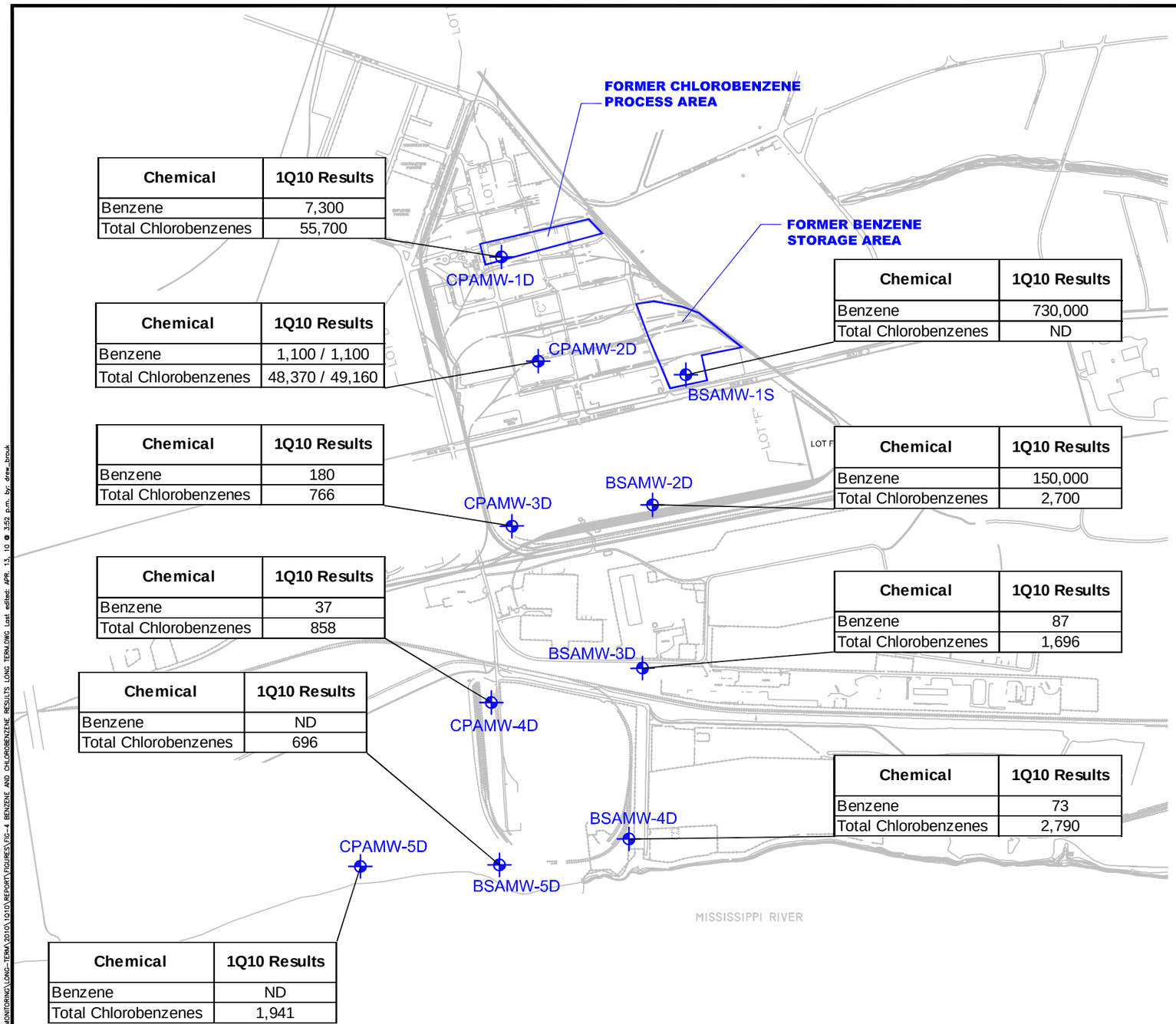
URS

DRN. BY:chs April 2010
DSGN. BY:dp
CHKD. BY:

Potentiometric Surface Map
Middle/Deep Hydrogeologic Unit

FIG. NO. 3

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\LONG-TERM\2010\1Q10\REPORT\FIGURES\FIG-3 POTENTIOMETRIC SURFACE MAP.DWG Last edited: APR. 22, 10 @ 1:11 p.m. by: drew_brouk




| Chemical | 1Q10 Results |
|---|---|
| Benzene | 7,300 |
| Total Chlorobenzenes | 55,700 |

| Chemical | 1Q10 Results |
|---|---|
| Benzene | 1,100 / 1,100 |
| Total Chlorobenzenes | 48,370 / 49,160 |

| Chemical | 1Q10 Results |
|---|---|
| Benzene | 180 |
| Total Chlorobenzenes | 766 |

| Chemical | 1Q10 Results |
|---|---|
| Benzene | 37 |
| Total Chlorobenzenes | 858 |

| Chemical | 1Q10 Results |
|---|---|
| Benzene | ND |
| Total Chlorobenzenes | 696 |

| Chemical | 1Q10 Results |
|---|---|
| Benzene | ND |
| Total Chlorobenzenes | 1,941 |

| Chemical | 1Q10 Results |
|---|---|
| Benzene | 730,000 |
| Total Chlorobenzenes | ND |

| Chemical | 1Q10 Results |
|---|---|
| Benzene | 150,000 |
| Total Chlorobenzenes | 2,700 |

| Chemical | 1Q10 Results |
|---|---|
| Benzene | 87 |
| Total Chlorobenzenes | 1,696 |

| Chemical | 1Q10 Results |
|---|---|
| Benzene | 73 |
| Total Chlorobenzenes | 2,790 |

LEGEND

BSAMW-1D — LONG–TERM MONITORING WELL LOCATION

NOTES:

1. TOTAL CHLOROBENZENES RESULTS INCLUDE THE SUM OF MONOCHLOROBENZENE, 1,2–DICHLOROBENZENE, 1,3–DICHLOROBENZENE, AND 1,4–DICHLOROBENZENE.
2. RESULTS SHOWN ARE IN ug/L.
3. ND DENOTES ANALYTE OR ANALYTES NOT DETECTED.
4. MULTIPLE SAMPLE RESULTS INDICATE A DUPLICATE SAMPLE.
5. "D" DENOTES RESULTS FROM A DILUTED SAMPLE

0 1000
SCALE FEET

LONG–TERM MONITORING PROGRAM
1ST QUARTER 2010 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562154

URS

DRN. BY: dab April 2010
DSGN. BY: dp
CHKD. BY:

Benzene and Total Chlorobenzenes Results

FIG. NO. 4

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\LONG-TERM 2010\1Q10\REPORT\FIGURES\FIG-4 BENZENE AND CHLOROBENZENE RESULTS LONG TERM.DWG Last edited: APR. 13, 10 @ 3:52 p.m. by: drew_brouk

# Tables

See last page of table for notes.

# Table 1
## Monitoring Well Gauging Information

| Well ID | Construction Details | | | | | | February 12, 2010 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Ground Elevation (feet)* | Casing Elevation* (feet) | Depth to Top of Screen (feet bgs) | Depth to Bottom of Screen (feet bgs) | Top of Screen Elevation* (feet) | Bottom of Screen Elevation* (feet) | Depth to Water (feet btoc) | Depth to Bottom (feet btoc) | Water Elevation* (feet) |
| **Shallow Hydrogeologic Unit (SHU 395-380 feet NAVD 88)** | | | | | | | | | |
| BSA-MW-1S | 409.49 | 412.31 | 19.68 | 24.68 | 389.81 | 384.81 | 13.22 | 27.31 | 399.09 |
| **Middle Hydrogeologic Unit (MHU 380-350 feet NAVD 88)** | | | | | | | | | |
| PMA-MW-1M | 410.32 | 410.08 | 54.54 | 59.54 | 355.78 | 350.78 | 10.23 | 59.61 | 399.85 |
| PMA-MW-2M | 412.26 | 411.93 | 56.87 | 61.87 | 355.39 | 350.39 | 12.06 | 61.53 | 399.87 |
| PMA-MW-3M | 412.36 | 412.10 | 57.07 | 62.07 | 355.29 | 350.29 | 12.08 | 61.80 | 400.02 |
| PMA-MW-5M | 411.27 | 410.97 | 52.17 | 57.17 | 359.10 | 354.10 | 10.94 | 56.97 | 400.03 |
| PSMW-1 | 409.37 | 412.59 | 37.78 | 42.78 | 371.59 | 366.59 | 12.00 | 46.04 | 400.59 |
| **Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock)** | | | | | | | | | |
| BSA-MW-2D | 412.00 | 415.13 | 68.92 | 73.92 | 343.08 | 338.08 | 17.23 | 77.02 | 397.90 |
| BSA-MW-3D | 412.91 | 415.74 | 107.02 | 112.02 | 305.89 | 300.89 | 19.45 | 114.80 | 396.29 |
| BSA-MW-4D | 425.00 | 424.69 | 118.54 | 123.54 | 306.46 | 301.46 | 29.98 | 123.18 | 394.71 |
| BSA-MW-5D | 420.80 | 420.49 | 115.85 | 120.85 | 304.95 | 299.95 | 26.07 | 120.95 | 394.42 |
| CPA-MW-1D | 408.62 | 408.32 | 66.12 | 71.12 | 342.50 | 337.50 | 8.21 | 70.73 | 400.11 |
| CPA-MW-2D | 408.51 | 408.20 | 99.96 | 104.96 | 308.55 | 303.55 | 9.49 | 104.65 | 398.71 |
| CPA-MW-3D | 410.87 | 410.67 | 108.20 | 113.20 | 302.67 | 297.67 | 12.01 | 112.84 | 398.66 |
| CPA-MW-4D | 421.57 | 421.20 | 116.44 | 121.44 | 305.13 | 300.13 | 25.50 | 121.00 | 395.70 |
| CPA-MW-5D | 411.03 | 413.15 | 107.63 | 112.63 | 303.40 | 298.40 | 20.51 | 114.67 | 392.64 |
| DNAPL-K-1 | 413.07 | 415.56 | 108.20 | 123.20 | 304.87 | 289.87 | 14.65 | 123.16 | 400.91 |
| DNAPL-K-2 | 407.94 | 407.72 | 97.63 | 112.63 | 310.31 | 295.31 | 7.76 | 112.36 | 399.96 |
| DNAPL-K-3 | 412.13 | 411.91 | 104.80 | 119.80 | 307.33 | 292.33 | 11.44 | 119.25 | 400.47 |
| DNAPL-K-4 | 409.48 | 409.15 | 102.55 | 117.55 | 306.93 | 291.93 | 9.30 | 115.59 | 399.85 |
| DNAPL-K-5 | 412.27 | 411.91 | 102.15 | 117.15 | 310.12 | 295.12 | 11.60 | 116.48 | 400.31 |
| DNAPL-K-6 | 410.43 | 410.09 | 102.47 | 117.47 | 307.96 | 292.96 | 10.35 | 116.94 | 399.74 |
| DNAPL-K-7 | 408.32 | 407.72 | 100.40 | 115.40 | 307.92 | 292.92 | NG | NG | NG |
| DNAPL-K-8 | 408.56 | 411.38 | 102.65 | 117.65 | 305.91 | 290.91 | 12.62 | 117.59 | 398.76 |
| DNAPL-K-9 | 406.45 | 405.97 | 97.42 | 112.42 | 309.03 | 294.03 | 6.49 | 111.23 | 399.48 |
| DNAPL-K-10 | 413.50 | 413.25 | 105.43 | 120.43 | 308.07 | 293.07 | 12.71 | 120.27 | 400.54 |
| DNAPL-K-11 | 412.20 | 411.78 | 105.46 | 120.46 | 306.74 | 291.74 | 12.38 | 120.25 | 399.40 |
| GM-9C | 409.54 | 411.21 | 88.00 | 108.00 | 321.54 | 301.54 | 10.78 | 23.75 | 400.43 |

See last page of table for notes.

# Table 1
## Monitoring Well Gauging Information

| Well ID | Construction Details | | | | | | February 12, 2010 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Ground Elevation (feet)* | Casing Elevation* (feet) | Depth to Top of Screen (feet bgs) | Depth to Bottom of Screen (feet bgs) | Top of Screen Elevation* (feet) | Bottom of Screen Elevation* (feet) | Depth to Water (feet btoc) | Depth to Bottom (feet btoc) | Water Elevation* (feet) |
| **Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock) (continued)** | | | | | | | | | |
| GWE-1D (PIEZ-1D) | 412.80 | 415.60 | 117.00 | 127.00 | 295.80 | 285.80 | 23.75 | 128.53 | 391.85 |
| GWE-2D (PIEZ-2D) | 417.45 | 417.14 | 127.00 | 137.00 | 290.45 | 280.45 | 23.58 | 136.67 | 393.56 |
| GWE-4D (TRA3-PZADHU) | 406.05 | 405.74 | 74.00 | 80.00 | 332.05 | 326.05 | 8.92 | 78.78 | 396.82 |
| GWE-10D (PIEZ-6D) | 410.15 | 412.87 | 102.50 | 112.50 | 307.65 | 297.65 | 14.38 | 114.85 | 398.49 |
| GWE-14D (TRA5-PZCDHU) | 420.47 | 422.90 | 90.00 | 96.00 | 330.47 | 324.47 | 27.78 | 98.78 | 395.12 |
| PMA-MW-4D | 411.22 | 410.88 | 68.84 | 73.84 | 342.38 | 337.38 | 10.71 | 73.35 | 400.17 |
| PMA-MW-6D | 407.63 | 407.32 | 96.49 | 101.49 | 311.14 | 306.14 | 7.78 | 101.29 | 399.54 |
| PSMW-6 | 404.11 | 406.63 | 99.80 | 104.80 | 304.31 | 299.31 | 10.40 | 109.85 | 396.23 |
| PSMW-9 | 403.92 | 403.52 | 100.40 | 105.40 | 303.52 | 298.52 | 5.07 | 105.13 | 398.45 |
| PSMW-10 | 409.63 | 412.18 | 101.23 | 106.23 | 308.40 | 303.40 | 17.54 | 111.28 | 394.64 |
| PSMW-13 | 405.80 | 405.53 | 106.08 | 111.08 | 299.72 | 294.72 | 8.90 | 110.13 | 396.63 |
| PSMW-17 | 420.22 | 423.26 | 121.25 | 126.25 | 298.97 | 293.97 | 30.81 | 134.84 | 392.45 |

Notes:
* - Elevation based upon North American Vertical Datum (NAVD) 88 datum
bgs - below ground surface
btoc - Below top of casing

# Table 2
# Groundwater Analytical Results

| | | VOC (µg/L) | | | | | SVOC (µg/L) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **Sample Date** | **Benzene** | **Chlorobenzene** | **1,2-Dichlorobenzene** | **1,3-Dichlorobenzene** | **1,4-Dichlorobenzene** | **4-Chloroaniline** | **2-Chlorophenol** | **1,4-Dioxane** | **1,2,4-Trichlorobenzene** |
| **BENZENE STORAGE AREA** | | | | | | | | | | |
| BSA-MW-1S-0210 | 2/17/2010 | **730,000** | <5,000 | <5,000 | <5,000 | <5,000 | NA | <9.7 | NA | <9.7 |
| BSA-MW-2D-0210 | 2/16/2010 | **150,000** | **2,700** | <1,000 | <1,000 | <1,000 | NA | <9.5 | **26** | <9.5 |
| BSA-MW-3D-0210 | 2/16/2010 | **87** | **1,200** | **46** | **20** | **430** | NA | **11** | <9.7 | <9.7 |
| BSA-MW-4D-0210 | 2/16/2010 | **73** | **2,700** | **22** | <20 | **68** | NA | **13** | **31** | <9.4 |
| BSA-MW-5D-0210 | 2/15/2010 | <5 | **350** | **190** | **16** | **140** | NA | <9.4 | <9.4 | <9.4 |
| **CHLOROBENZENE PROCESS AREA** | | | | | | | | | | |
| CPA-MW-1D-0210 | 2/17/2010 | **7,300** | **18,000** | **22,000** | **1,700** | **14,000** | NA | <95 | NA | **870** |
| CPA-MW-2D-0210 | 2/17/2010 | **1,100** | **29,000** | **2,700** | **670** | **16,000** | NA | **29** | NA | <9.7 |
| CPA-MW-2D-0210-AD | 2/17/2010 | **1,100** | **30,000** | **2,500** | **660** | **16,000** | NA | <97 | NA | <97 |
| CPA-MW-3D-0210 | 2/18/2010 | **180** | **660** | **37** | **5.2** | **64** | **36** | <10 | NA | <10 |
| CPA-MW-4D-0210 | 2/15/2010 | **37** | **800** | **23** | <10 | **35** | **170** | <9.8 | NA | <9.8 |
| CPA-MW-5D-0210 | 2/16/2010 | <10 | **1,700** | **130** | **11** | **100** | <19 | **9.9** | NA | <9.7 |

Notes:
µg/L = micrograms per liter
< = Result is non-detect, less than the reporting limit given.
**BOLD** indicates concentration greater than reporting limit.
AD = Analytical Duplicate
NA = sample not analyzed for select analyte in accordance with Revised LTMP Work Plan

# Table 3
## Monitored Natural Attenuation Results Summary

| Sample ID | Sample Date | Alkalinity (mg/L) | Carbon Dioxide (mg/L) | Chloride (mg/L) | Dissolved Oxygen (mg/L) | Ethane (ug/L) | Ethylene (ug/L) | Ferrous Iron (mg/L) | Iron (mg/L) | Iron, Dissolved (mg/L) | Manganese (mg/L) | Manganese, Dissolved (mg/L) | Methane (ug/L) | Nitrogen, Nitrate (mg/L) | Sulfate as SO4 (mg/L) | Dissolved Organic Carbon (mg/L) | Total Organic Carbon (mg/L) | ORP (mV) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Benzene Storage Area** | | | | | | | | | | | | | | | | | | |
| BSA-MW-1S-0210 | 2/17/2010 | 920 | 33 | 100 | 0.06 | <0.33 | 0.38 | | 2.4 | | 0.4 | | 8,700 | <0.05 | <5 | | 8.4 | -145.9 |
| BSA-MW-1S-F(0.2)-0210 | 2/17/2010 | | | | | | | 1.17 | | 2.2 | | 0.39 | | | | 8.3 | | |
| BSA-MW-2D-0210 | 2/16/2010 | 700 | 57 | 93 | 0.09 | 12 | 0.67 | | 1.9 | | 0.31 | | 9,100 | <0.05 | <5 | | 5.6 | -160.6 |
| BSA-MW-2D-F(0.2)-0210 | 2/16/2010 | | | | | | | 1.87 | | 1.8 | | 0.32 | | | | 5.7 | | |
| BSA-MW-3D-0210 | 2/16/2010 | 490 | 48 | 71 | 0.15 | 2 | 6.2 | | 9.8 | | 0.51 | | 290 | <0.05 | 170 | | 3.5 | -148.7 |
| BSA-MW-3D-F(0.2)-0210 | 2/16/2010 | | | | | | | >5 | | 9.4 | | 0.5 | | | | 3.4 | | |
| BSA-MW-4D-0210 | 2/16/2010 | 610 | 63 | 120 | 0.20 | 6.1 | 1.4 | | 7.2 | | 0.56 | | 220 | <0.05 | 120 | | 5.8 | -155.0 |
| BSA-MW-4D-F(0.2)-0210 | 2/16/2010 | | | | | | | >5 | | 8.2 | | 0.65 | | | | 5.7 | | |
| BSA-MW-5D-0210 | 2/15/2010 | 790 | 31 | 300 | 0.12 | 22 | <0.33 | | 14 | | 0.44 | | 14,000 | <0.05 | <5 | | 5.7 | -153.3 |
| BSA-MW-5D-F(0.2)-0210 | 2/15/2010 | | | | | | | >5 | | 15 | | 0.46 | | | | 5.6 | | |
| **Chlorobenzene Process Area** | | | | | | | | | | | | | | | | | | |
| CPA-MW-1D-0210 | 2/17/2010 | 1,000 | <5 | 120 | 0.02 | 59 | 2.3 | | 1.2 | | 0.079 | | 23,000 | <0.05 | 5.7 | | 12 | -66.6 |
| CPA-MW-1D-F(0-2)-0210 | 2/17/2010 | | | | | | | 0.69 | | 0.98 | | 0.064 | | | | 11 | | |
| CPA-MW-2D-0210 | 2/17/2010 | 610 | 36 | 63 | 0.19 | 8.8 | 0.75 | | 6.1 | | 0.37 | | 2,200 | <0.05 | <5 | | 11 | -122.9 |
| CPA-MW-2D-F(0-2)-0210 | 2/17/2010 | | | | | | | >5 | | 6 | | 0.37 | | | | 12 | | |
| CPA-MW-3D-0210 | 2/18/2010 | 660 | 63 | 240 | 0.09 | 31 | <0.33 | | 15 | | 0.75 | | 26,000 | <0.05 | <5 | | 9.9 | -137.9 |
| CPA-MW-3D-F(0.2)-0210 | 2/18/2010 | | | | | | | >5 | | 14 | | 0.71 | | | | 9.7 | | |
| CPA-MW-4D-0210 | 2/15/2010 | 810 | 43 | 290 | 0.20 | 15 | <0.33 | | 9.3 | | 0.25 | | 6,000 | <0.05 | <5 | | 6.8 | -148.4 |
| CPA-MW-4D-F(0.2)-0210 | 2/15/2010 | | | | | | | >5 | | 9.7 | | 0.26 | | | | 6.4 | | |
| CPA-MW-5D-0210 | 2/16/2010 | 310 | 170 | 350 | 0.11 | 5.6 | <0.33 | | 78 | | 2.8 | | 21 | <0.05 | 1,500 | | 3.4 | -109.2 |
| CPA-MW-5D-F(0.2)-0210 | 2/16/2010 | | | | | | | >5 | | 79 | | 2.9 | | | | 3.4 | | |

Notes:
DO and ORP were measured in the field using YSI 6920 equipped with a flow-thru cell. Values presented represent final measurements before sampling
Ferrous Iron readings were measured in the field using a LaMotte Colorimeter after the groundwater passed through a 0.2 µm filter.
J = Estimated value
mg/L = milligrams per liter
ug/L = micrograms per liter
< = Result is non-detect, less than the reporting limit given.
A blank space indicates sample not analyzed for select analyte.
F(0.2) = Sample was filtered utilizing a 0.2 µm filter during sample collection.
mV = millivolts

# Appendix A

# Groundwater Purging and Sampling Forms

LOW FLOW GROUNDWA SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00001 FIELD PERSONNEL: Mike Corbett, Nathan McNurlen
DATE: 2/17/10 WEATHER: cloudy, 22°F
MONITORING WELL ID: BSAMW01S SAMPLE ID: BSAMW01S-0210

## INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 27.31 ft
Constructed Well Depth (btoc): 27.50 ft
Depth to Water (btoc): 13.61 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 22.50 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 13.70 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 25.00 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell ): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.3 ppm
Wellbore PID/FID Reading: 151 ppm

## PURGE DATA

Pump Type: Stainless Steel Monsoon

| Purge Volume (mL) | Time | Depth to Water (ft) | Color | Odor | pH | Temp (°C) | Cond. (ms/cm) | Turbidity (NTUs) | DO (mg/l) | ORP (mv) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1026 | 13.75 | colorless | hydrocarbon | 7.09 | 14.05 | 1.820 | -2.6 | 0.53 | -71.7 |
| 1200 | 1030 | ↓ | ↓ | ↓ | 7.19 | 14.15 | 1.839 | 17.0 | 0.19 | -118.0 |
| 2400 | 1034 | | | | 7.19 | 14.04 | 1.842 | 12.0 | 0.14 | -130.0 |
| 3600 | 1038 | | | | 7.25 | 13.98 | 1.851 | 7.3 | 0.11 | -139.5 |
| 4800 | 1042 | | | | 7.23 | 13.99 | 1.853 | 5.5 | 0.10 | -143.5 |
| 6000 | 1046 | | | | 7.23 | 13.99 | 1.856 | 4.3 | 0.06 | -145.9 |

MEC

Start Time: 1026
Stop Time: 1046
Elapsed Time: 20
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/17/10

## SAMPLING DATA

Sample Date: 2/17/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace ☒ Initials: MC
Sample Time: 1050
Sample Flow Rate: 300 mL/min
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: none

COMMENTS:
MNA – Alkalinity, $CO_2$, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = 1.17 ppm

LOW FLOW GROUNDWA . SAMPLING DATA SHEET

PROJECT NAME: LMT Program PROJECT NUMBER: 21562401.00001 FIELD PERSONNEL: Mike Corbett, Nathan McNurlen
DATE: 2/16/10 WEATHER: mostly cloudy, 25°F
MONITORING WELL ID: BSAMW02D SAMPLE ID: BSAMW02D-0210

## INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 77.02 ft
Constructed Well Depth (btoc): 77.05 ft
Depth to Water (btoc): 17.60 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 72.05 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 59.42 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 74.55 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell ): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 40.1 ppm

## PURGE DATA

Pump Type: Stainless Steel Monsoon

| Purge Volume (mL) | Time | Depth to Water (ft) | Color | Odor | pH | Temp (°C) | Cond. (ms/cm) | Turbidity (NTUs) | DO (mg/l) | ORP (mv) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1502 | 17.60 | colorless | hydrocarbon | 7.16 | 13.37 | 1.461 | 7.9 | 0.81 | -153.7 |
| 1200 | 1506 | ↓ | ↓ | ↓ | 7.10 | 14.89 | 1.462 | 23.3 | 0.39 | -153.3 |
| 2400 | 1510 | | | | 7.09 | 15.75 | 1.546 | 16.2 | 0.21 | -154.3 |
| 3600 | 1514 | | | | 7.08 | 15.76 | 1.547 | 1.7 | 0.24 | -157.5 |
| 4800 | 1518 | | | | 7.08 | 15.77 | 1.544 | -0.5 | 0.10 | -159.3 |
| 6000 | 1522 | | | | 7.08 | 15.93 | 1.543 | -0.9 | 0.09 | -160.6 |

MEC

Start Time: 1502
Stop Time: 1522
Elapsed Time: 20 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/16/10

## SAMPLING DATA

Sample Date: 2/16/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace ☒ Initials: MC
Sample Time: 1530
Sample Flow Rate: 300 mL/min.
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: none

COMMENTS:
MNA – Alkalinity, $CO_2$, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = 1.87 ppm

LOW FLOW GROUNDWA . SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00001 FIELD PERSONNEL: Mike Corbett, Nathan McNurlen
DATE: 2/16/10 WEATHER: cloudy, 23°F
MONITORING WELL ID: BSAMW03D SAMPLE ID: BSAMW03D-0210

## INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 114.80 ft
Constructed Well Depth (btoc): 114.85 ft
Depth to Water (btoc): 20.21 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 109.85 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 94.59 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 112.35 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell ): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

## PURGE DATA

Pump Type: Stainless Steel Monsoon

| Purge Volume (mL) | Time | Depth to Water (ft) | Color | Odor | pH | Temp (°C) | Cond. (ms/cm) | Turbidity (NTUs) | DO (mg/l) | ORP (mv) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1331 | 20.22 | colorless | hydrocarbon | 6.83 | 13.68 | 1.493 | 3.7 | 0.96 | -127.8 |
| 1200 | 1335 | | | | 6.83 | 13.98 | 1.466 | 2.6 | 0.49 | -137.9 |
| 2400 | 1339 | | | | 6.83 | 13.99 | 1.464 | 0.8 | 0.31 | -143.2 |
| 3600 | 1343 | | | | 6.87 | 14.07 | 1.464 | -0.1 | 0.22 | -145.7 |
| 4800 | 1347 | | | | 6.82 | 14.10 | 1.464 | -0.8 | 0.18 | -147.2 |
| 6000 | 1351 | | | | 6.86 | 14.13 | 1.464 | -1.2 | 0.15 | -148.7 |

MEC

Start Time: 1331
Stop Time: 1351
Elapsed Time: 20 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/16/10

## SAMPLING DATA

Sample Date: 2/16/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace ☒ Initials: MC
Sample Time: 1400
Sample Flow Rate: 300 mL/min.
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: EB before this well – BSAMW03D-0210 @ 1245

COMMENTS:
MNA – Alkalinity, $CO_2$, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = Overrange

LOW FLOW GROUNDW. . SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00001 FIELD PERSONNEL: Mike Corbett
DATE: 2/16/10 WEATHER: mostly cloudy, 23°F
MONITORING WELL ID: BSAMW04D SAMPLE ID: BSAMW04D-0210, BSAMW04D-0210-MS, BSAMW04D-0210-MSD

## INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 123.18 ft
Constructed Well Depth (btoc): 123.23 ft
Depth to Water (btoc): 31.59 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 118.23 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 91.59 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 120.73 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell ): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

## PURGE DATA

Pump Type: Stainless Steel Monsoon

| Purge Volume (mL) | Time | Depth to Water (ft) | Color | Odor | pH | Temp (°C) | Cond. (ms/cm) | Turbidity (NTUs) | DO (mg/l) | ORP (mv) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0909 | 31.59 | H. gray | hydrocarbon | 6.73 | 13.92 | 1.656 | 1.2 | 1.42 | -159.3 |
| 1200 | 0913 | | | | 6.74 | 13.74 | 1.667 | -0.7 | 0.77 | -161.7 |
| 2400 | 0917 | | | | 6.75 | 13.77 | 1.674 | -1.2 | 1.09 | -161.1 |
| 3600 | 0921 | | | | 6.76 | 14.45 | 1.652 | -1.5 | 0.85 | -159.5 |
| 4800 | 0925 | | | | 6.77 | 14.82 | 1.662 | -1.6 | 0.53 | -162.4 |
| 6000 | 0929 | | | | 6.78 | 14.60 | 1.674 | -1.7 | 0.33 | -163.2 |
| 7200 | 0933 | | | | 6.79 | 14.15 | 1.675 | -1.7 | 0.52 | -163.3 |
| 8400 | 0937 | | | | 6.78 | 14.34 | 1.671 | -1.8 | 0.19 | -163.4 |
| 9600 | 0941 | | | | 6.80 | 14.24 | 1.675 | -1.8 | 0.21 | -165.3 |
| 10800 | 0945 | | | | 6.81 | 14.00 | 1.673 | -1.7 | 0.28 | -162.4 |
| 12000 | 0949 | | | | 6.81 | 14.28 | 1.653 | 21.0 | 0.32 | -157.0 |
| 13200 | 0953 | | | | 6.81 | 14.74 | 1.669 | 16.7 | 0.19 | -153.9 |
| 14400 | 0957 | | | | 6.79 | 14.77 | 1.668 | 7.5 | 0.20 | -155.0 |

MEC

Start Time: 0909
Stop Time: 0957
Elapsed Time: 48 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/16/10

## SAMPLING DATA

Sample Date: 2/16/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace ☒ Initials: MC
Sample Time: 1010
Sample Flow Rate: 300 mL/min
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: MS/MSD

COMMENTS:
MNA – Alkalinity, $CO_2$, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = overrange

# LOW FLOW GROUNDWA SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00001 FIELD PERSONNEL: Mike Corbett, Nathan McNurlen
DATE: 2/15/10 WEATHER: cloudy, 25°F
MONITORING WELL ID: BSAMW05D SAMPLE ID: BSAMW05D-0210

## INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 120.95 ft
Constructed Well Depth (btoc): 120.54 ft
Depth to Water (btoc): 27.63 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 115.54 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 93.32 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 118.04 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell ): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.2 ppm
Wellbore PID/FID Reading: 0.2 ppm

## PURGE DATA

Pump Type: Stainless Steel Monsoon

| Purge Volume (mL) | Time | Depth to Water (ft) | Color | Odor | pH | Temp (°C) | Cond. (ms/cm) | Turbidity (NTUs) | DO (mg/l) | ORP (mv) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1607 | 27.63 | colorless | hydrocarbon | 6.87 | 14.50 | 2.455 | 2.5 | 0.92 | -151.5 |
| 1200 | 1611 | ↓ | ↓ | ↓ | 6.85 | 14.29 | 2.465 | 1.0 | 0.25 | -150.8 |
| 2400 | 1615 | | | | 6.85 | 14.26 | 2.467 | 0.6 | 0.20 | -151.3 |
| 3600 | 1619 | | | | 6.84 | 14.36 | 2.462 | 0.8 | 0.20 | -152.7 |
| 4800 | 1623 | | | | 6.85 | 14.50 | 2.465 | 0.7 | 0.12 | -153.3 |

MEC

Start Time: 1607
Stop Time: 1623
Elapsed Time: 16 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/15/10

## SAMPLING DATA

Sample Date: 2/15/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace ☒ Initials: MC
Sample Time: 1630
Sample Flow Rate: 300 mL/min
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: none

## COMMENTS:

MNA – Alkalinity, $CO_2$, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = overrange

LOW FLOW GROUNDWA SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00001 FIELD PERSONNEL: Mike Corbett, Nathan McNurlen
DATE: 2/17/10 WEATHER: cloudy, 23°F
MONITORING WELL ID: CPAMW01D SAMPLE ID: CPAMW01D-0210

## INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 70.73 ft
Constructed Well Depth (btoc): 70.82 ft
Depth to Water (btoc): 8.60 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 65.82 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 62.13 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 68.32 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell ): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.1 ppm
Wellbore PID/FID Reading: 17.4 ppm

## PURGE DATA

Pump Type: Stainless Steel Monsoon

| Purge Volume (mL) | Time | Depth to Water (ft) | Color | Odor | pH | Temp (°C) | Cond. (ms/cm) | Turbidity (NTUs) | DO (mg/l) | ORP (mv) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1231 | 8.65 | light brown | hydrocarbon | 9.72 | 14.89 | 1.663 | 38.4 | 0.57 | 2.1 |
| 1200 | 1235 | 8.60 | ↓ | ↓ | 9.45 | 14.88 | 1.833 | 19.9 | 0.31 | -11.0 |
| 2400 | 1239 | ↓ | ↓ | ↓ | 9.20 | 14.98 | 2.029 | 9.6 | 0.10 | -33.8 |
| 3600 | 1243 | ↓ | ↓ | ↓ | 9.18 | 15.16 | 2.101 | 8.7 | 0.08 | -44.1 |
| 4800 | 1247 | ↓ | ↓ | ↓ | 9.16 | 15.14 | 2.122 | 8.0 | 0.06 | -50.3 |
| 6000 | 1251 | ↓ | ↓ | ↓ | 9.16 | 15.01 | 2.148 | 6.9 | 0.10 | -57.7 |
| 7200 | 1255 | ↓ | ↓ | ↓ | 9.17 | 14.56 | 2.174 | 7.4 | 0.05 | -65.2 |
| 8400 | 1259 | ↓ | ↓ | ↓ | 9.17 | 14.39 | 2.169 | 9.0 | 0.02 | -66.6 |

MEC

Start Time: 1231
Stop Time: 1259
Elapsed Time: 28 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/17/10

## SAMPLING DATA

Sample Date: 2/17/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace ☒ Initials: MC
Sample Time: 1305
Sample Flow Rate: 300 mL/min
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: none

COMMENTS:
MNA – Alkalinity, $CO_2$, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = 0.69 ppm

LOW FLOW GROUNDWA SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00001 FIELD PERSONNEL: Mike Corbett, Nathan McNurlen
DATE: 2/17/10 WEATHER: cloudy, 25°F
MONITORING WELL ID: CPAMW02D SAMPLE ID: CPAMW02D-0210

## INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 104.65 ft
Constructed Well Depth (btoc): 104.65 ft
Depth to Water (btoc): 9.94 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 99.65 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 94.71 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 102.15 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell ): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.3 ppm
Wellbore PID/FID Reading: 0.3 ppm

## PURGE DATA

Pump Type: Stainless Steel Monsoon

| Purge Volume (mL) | Time | Depth to Water (ft) | Color | Odor | pH | Temp (°C) | Cond. (ms/cm) | Turbidity (NTUs) | DO (mg/l) | ORP (mv) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1417 | 9.94 | Colorless | odorless | 7.65 | 16.34 | 1.030 | 17.4 | 1.43 | -113.9 |
| 1200 | 1421 | ↓ | ↓ | hydrocarbon | 7.13 | 16.03 | 1.210 | 12.3 | 0.75 | -119.7 |
| 2400 | 1425 | | | ↓ | 7.05 | 16.19 | 1.244 | 8.3 | 0.45 | -120.8 |
| 3600 | 1429 | | | | 6.98 | 16.10 | 1.270 | 5.5 | 0.30 | -120.9 |
| 4800 | 1433 | | | | 6.95 | 16.31 | 1.287 | 3.8 | 0.31 | -121.6 |
| 6000 | 1437 | | | | 6.93 | 16.32 | 1.299 | 2.7 | 0.25 | -122.3 |
| 7200 | 1441 | | | | 6.91 | 16.29 | 1.307 | 2.1 | 0.19 | -122.9 |

MEC

Start Time: 1417
Stop Time: 1441
Elapsed Time: 24 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/17/10

## SAMPLING DATA

Sample Date: 2/17/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace ☒ Initials: MC
Sample Time: 1450
Sample Flow Rate: 300 mL/min
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: AD – CPAMW02D-0210-AD

COMMENTS:
MNA – Alkalinity, $CO_2$, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = Overrange

# LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00001 FIELD PERSONNEL: Mike Corbett, Nathan McNurlen
DATE: 2/18/10 WEATHER: Sunny, 27°F
MONITORING WELL ID: CPAMW03D SAMPLE ID: CPAMW03D-0210

## INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 112.84 ft
Constructed Well Depth (btoc): 113.00 ft
Depth to Water (btoc): 12.84 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 108.00 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 100.00 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 110.50 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell ): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

## PURGE DATA

Pump Type: Stainless Steel Monsoon

| Purge Volume (mL) | Time | Depth to Water (ft) | Color | Odor | pH | Temp (°C) | Cond. (ms/cm) | Turbidity (NTUs) | DO (mg/l) | ORP (mv) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0910 | 12.84 | colorless | hydrocarbon | 6.51 | ~~2.024~~ 14.27 | 2.091 | 74.1 | 0.62 | -111.7 |
| 1200 | 0914 | ↓ | ↓ | ↓ | 6.56 | 14.06 | 2.062 | 46.5 | 0.30 | -122.0 |
| 2400 | 0918 | | | | 6.59 | 13.35 | 2.051 | 17.5 | 0.24 | -129.0 |
| 3600 | 0922 | | | | 6.59 | 12.92 | 2.052 | 12.4 | 0.24 | -131.8 |
| 4800 | 0926 | | | | 6.61 | 12.53 | 2.051 | 15.6 | 0.21 | -132.4 |
| 6000 | 0930 | | | | 6.59 | 13.47 | 2.024 | 17.5 | 0.21 | -133.8 |
| 7200 | 0934 | | | | 6.59 | 14.28 | 2.010 | 33.4 | 0.14 | -134.6 |
| 8400 | 0938 | | | | 6.64 | 14.59 | 2.007 | 8.4 | 0.09 | -137.9 |

MEC

Start Time: 0910
Stop Time: 0938
Elapsed Time: 28 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/18/10

## SAMPLING DATA

Sample Date: 2/18/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace ☒ Initials: MC
Sample Time: 0945
Sample Flow Rate: 300 mL/min.
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: none

COMMENTS:
MNA – Alkalinity, $CO_2$, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = overrange

LOW FLOW GROUNDWA: SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00001 FIELD PERSONNEL: Mike Corbett, Nathan McNurlen
DATE: 2/15/10 WEATHER: clouds, light snow, windy, 19°F
MONITORING WELL ID: CPAMW04D SAMPLE ID: CPAMW04D-0210

## INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 121.00 ft
Constructed Well Depth (btoc): 121.07 ft
Depth to Water (btoc): 26.11 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 116.07 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 94.89 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet, 118.57
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ~~123.57~~ MC ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell ): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.2 ppm
Wellbore PID/FID Reading: 0.5 ppm

## PURGE DATA

Pump Type: Stainless Steel Monsoon

| Purge Volume (mL) | Time | Depth to Water (ft) | Color | Odor | pH | Temp (°C) | Cond. (ms/cm) | Turbidity (NTUs) | DO (mg/l) | ORP (mv) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1124 | 26.11 | colorless | none | 6.71 | 14.59 | 2.433 | 0.4 | 0.75 | -122.2 |
| 1200 | 1128 | ↓ | ↓ | ↓ | 6.79 | 13.80 | 2.457 | -1.2 | 0.33 | -135.0 |
| 2400 | 1132 | | | | 6.80 | 13.70 | 2.460 | -1.5 | 0.29 | -141.7 |
| 3600 | 1136 | | | | 6.81 | 13.60 | 2.463 | -1.8 | 0.24 | -145.9 |
| 4800 | 1140 | | | | 6.83 | 13.76 | 2.464 | -2.0 | 0.20 | -148.4 |

MEC

Start Time: 1124
Stop Time: 1140
Elapsed Time: 16 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/15/10

## SAMPLING DATA

Sample Date: 2/15/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace ☒ Initials: MC
Sample Time: 1150
Sample Flow Rate: 300 mL/min
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: none

COMMENTS:
MNA – Alkalinity, $CO_2$, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, TOC
Ferrous Iron (Filtered 0.2 micron) = overrange

LOW FLOW GROUNDW/ SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00001 FIELD PERSONNEL: Mike Corbett, Nathan McNurlen
DATE: 2/16/10 WEATHER: mostly cloudy, 27°F
MONITORING WELL ID: CPAMW05D SAMPLE ID: CPAMW05D-0210

## INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 114.67 ft
Constructed Well Depth (btoc): 114.75 ft
Depth to Water (btoc): 23.04 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 109.75 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 91.63 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 112.25 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell ): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

## PURGE DATA

Pump Type: Stainless Steel Monsoon

| Purge Volume (mL) | Time | Depth to Water (ft) | Color | Odor | pH | Temp (°C) | Cond. (ms/cm) | Turbidity (NTUs) | DO (mg/l) | ORP (mv) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1120 | 23.04 | colorless | hydrocarbon | 6.84 | 13.53 | 3.575 | -4.2 | 3.25 | -81.6 |
| 1200 | 1124 | ↓ | ↓ | ↓ | 6.24 | 13.25 | 4.020 | 0.9 | 1.08 | -95.6 |
| 2400 | 1128 | | | | 6.36 | 13.15 | 4.060 | -0.9 | 0.55 | -101.1 |
| 3600 | 1132 | | | | 6.34 | 13.17 | 4.068 | -1.5 | 0.29 | -104.3 |
| 4800 | 1136 | | | | 6.33 | 13.18 | 4.067 | -1.7 | 0.34 | -105.3 |
| 6000 | 1140 | | | | 6.35 | 13.09 | 4.076 | -1.8 | 0.20 | -106.9 |
| 7200 | 1144 | | | | 6.33 | 13.10 | 4.075 | -1.8 | 0.13 | -107.7 |
| 8400 | 1148 | | | | 6.33 | 13.10 | 4.076 | -1.8 | 0.12 | -108.4 |
| 9600 | 1152 | | | | 6.33 | 13.10 | 4.080 | -1.9 | 0.11 | -109.2 |

MEC

Start Time: 1120
Stop Time: 1152
Elapsed Time: 32 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/16/10

## SAMPLING DATA

Sample Date: 2/16/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace ☒ Initials: MC
Sample Time: 1200
Sample Flow Rate: 300 mL/min
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: none

COMMENTS:
MNA – Alkalinity, $CO_2$, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = overrange

# Appendix B

# Chains-of-Custody

**Savannah**
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Dave Palmer | Site Contact: Mike Corbett | Date: 2/15/10 | COC No: |
|---|---|---|---|---|
| URS Corporation | Tel/Fax: (314) 743-4154 | Lab Contact: Lidya Gulizia | Carrier: Fed Ex | 1 of 1 COCs |
| 1001 Highlands Plaza Drive West, Suite 300 | Analysis Turnaround Time | | | Job No. 21562401.00001 |
| St. Louis, MO 63110 | Calendar ( C ) or Work Days (W) | | | |
| (314) 429-0100 Phone | TAT if different from Below Standard | | | SDG No. |
| (314) 429-0462 FAX | ☐ 2 weeks | | | |
| Project Name: 1Q10 LTM GW Sampling | ☐ 1 week | | | |
| Site: Solutia WG Krummrich Facility | ☐ 2 days | | | |
| P O # | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample | VOCs by 8260 | SVOCs by 8270C* | Total Fe/Mn by 6010B | Alk/CO2 by 310.1 | Chloride by 325.2/Sulfate by 375.4 | Methane, Ethane, Ethene by RSK 175 | Nitrate by 353.2 | TOC by 415.1 | Dissolved Fe/Mn by 6010B | DOC by 415.1 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPA -MW-4D-0210 | 2/15/10 | 1150 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | *SVOCs per semi-annual list |
| CPA -MW-4D-F(0.2)-0210 | | 1150 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| BSA -MW-5D-0210 | | 1630 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| BSA -MW-5D-F(0.2)-0210 | ↓ | 1630 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 1Q10 LTM Trip Blank # 1 | | | | Water | 2 | | 2 | | | | | | | | | | 680-55082 |
| | | | | | | | 2 | 1 | 4 | 1 | 1 | 1 | 3,1 | 2 | 4 | 2 | |

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

*Possible Hazard Identification*
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

**Special Instructions/QC Requirements & Comments:** Level 4 Data Package

Temp 5.2

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| [signature] | URS | 2/15/10 1800 | [signature] | TA SAV | 2/16/10 0919 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |

**Savannah**
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

**Client Contact**
URS Corporation
1001 Highlands Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100 Phone
(314) 429-0462 FAX
Project Name: 1Q10 LTM GW Sampling
Site: Solutia WG Krummrich Facility
P O #

Project Manager: Dave Palmer
Tel/Fax: (314) 743-4154

**Analysis Turnaround Time**
Calendar ( C ) or Work Days (W) _____
TAT if different from Below Standard
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

Site Contact: Mike Corbett
Lab Contact: Lidya Gulizia

Date: 2/16/10
Carrier: FedEx

COC No: 1 of 1 COCs
Job No. 21562401.00001
SDG No.

| Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample | VOCs by 8260 | SVOCs by 8270C* | Total Fe/Mn by 6010B | Alk/CO2 by 310.1 | Chloride by 325.2/Sulfate by 375.4 | Methane, Ethane, Ethene by RSK 175 | Nitrate by 353.2 | TOC by 415.1 | Dissolved Fe/Mn by 6010B | DOC by 415.1 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BSA-MW-4D-0210 | 2/16/10 | 1010 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | *SVOCs per semi-annual list |
| BSA-MW-4D-F(0.2)-0210 | | 1010 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| CPA-MW-5D-0210 | | 1200 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| CPA-MW-5D-F(0.2)-0210 | | 1200 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| BSA-MW-3D-0210 | | 1400 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| BSA-MW-3D-F(0.2)-0210 | | 1400 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| BSA-MW-2D-0210 | | 1530 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| BSA-MW-2D-F(0.2)-0210 | | 1530 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| BSA-MW-4D-0210-MS | | 1010 | G | Water | 5 | | 3 | 2 | | | | | | | | | |
| BSA-MW-4D-0210-MSD | | 1010 | G | Water | 5 | | 3 | 2 | | | | | | | | | |
| BSA-MW-3D-0210-EB | | 1245 | G | Water | 5 | | 3 | 2 | | | | | | | | | |
| 1Q10 LTM Trip Blank # 2 | ↓ | — | — | Water | 2 | | 2 | | | | | | | | | | |
| | | | | | | | 2 | 1 | 4 | 1 | 1 | 1 | 3,1 | 2 | 4 | 2 | |

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

*Possible Hazard Identification*
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

**Special Instructions/QC Requirements & Comments:** Level 4 Data Package

680-55111 0.8/1.4/2.0

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| [signature] | URS | 2/16/10 1700 | [signature] | TA | 2/16/10 1700 |
| [signature] | TA | 2/16/10 1715 | | | |
| | | | [signature] | TA SV | 2/17/10 0907 |

**Savannah**
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

| Client Contact | Project Manager: Dave Palmer | Site Contact: Mike Corbett | Date: 2/17/10 | COC No: |
|---|---|---|---|---|
| URS Corporation | Tel/Fax: (314) 743-4154 | Lab Contact: Lidya Gulizia | Carrier: FedEx | 1 of 1 COCs |
| 1001 Highlands Plaza Drive West, Suite 300 | Analysis Turnaround Time | | | Job No. 21562401.00001 |
| St. Louis, MO 63110 | Calendar ( C ) or Work Days (W) | | | SDG No. |
| (314) 429-0100 Phone | TAT if different from Below Standard | | | |
| (314) 429-0462 FAX | ☐ 2 weeks | | | |
| Project Name: 1Q10 LTM GW Sampling | ☐ 1 week | | | |
| Site: Solutia WG Krummrich Facility | ☐ 2 days | | | |
| PO# | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample (Y/N) | VOCs by 8260 | SVOCs by 8270C* | Total Fe/Mn by 6010B | Alk/CO2 by 310.1 | Chloride by 325.2/Sulfate by 375.4 | Methane, Ethane, Ethene by RSK 175 | Nitrate by 353.2 | TOC by 415.1 | Dissolved Fe/Mn by 6010B | DOC by 415.1 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BSA -MW-1S -0210 | 2/17/10 | 1050 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | *SVOCs per semi-annual list |
| BSA -MW-1S -F(0.2)-0210 | | 1050 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| CPA -MW-1D -0210 | | 1305 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| CPA -MW-1D -F(0.2)-0210 | | 1305 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| CPA -MW-2D -0210 | | 1450 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| CPA -MW-2D -F(0.2)-0210 | | 1450 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| CPA -MW-2D -0210-AD | 2/17/10 | 1450 | G | Water | 5 | | 3 | 2 | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 1Q10 LTM Trip Blank # 3 | 2/17/10 | — | — | Water | 2 | | 2 | | | | | | | | | | |
| | | | | | | | 2 | 1 | 4 | 1 | 1 | 1 | 3,1 | 2 | 4 | 2 | |

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

*Possible Hazard Identification*
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

**Special Instructions/QC Requirements & Comments:** Level 4 Data Package

Temperature 2.4 2.2

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| M Clt | URS | 2/17/10 1700 | M. Goldgalter | TA | 2/18/10 09:59 |
| Relinquished by: | Company: | Date/Time: | Received by: 680-55143 | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |

**Savannah**
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

| Client Contact | Project Manager: Dave Palmer | Site Contact: Mike Corbett | Date: 2/18/10 | COC No: |
|---|---|---|---|---|
| URS Corporation | Tel/Fax: (314) 743-4154 | Lab Contact: Lidya Gulizia | Carrier: FedEx | 1 of 1 COCs |
| 1001 Highlands Plaza Drive West, Suite 300 | Analysis Turnaround Time | | | Job No. 21562401.00001 |
| St. Louis, MO 63110 | Calendar ( C ) or Work Days (W) | | | |
| (314) 429-0100 Phone | TAT if different from Below Standard | | | SDG No. |
| (314) 429-0462 FAX | ☐ 2 weeks | | | |
| Project Name: 1Q10 LTM GW Sampling | ☐ 1 week | | | |
| Site: Solutia WG Krummrich Facility | ☐ 2 days | | | |
| P O # | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample (Y/N) | VOCs by 8260 | SVOCs by 8270C* | Total Fe/Mn by 6010B | Alk/CO2 by 310.1 | Chloride by 325.2/Sulfate by 375.4 | Methane, Ethane, Ethene by RSK 175 | Nitrate by 353.2 | TOC by 415.1 | Dissolved Fe/Mn by 6010B | DOC by 415.1 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPA -MW-3D-0210 | 2/18/10 | 0945 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | *SVOCs per semi-annual list |
| CPA -MW-3D-F(0.2)-0210 | ↓ | 0945 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 1Q10 LTM Trip Blank # 4 | 2/18/10 | — | — | Water | 2 | | 2 | | | | | | | | | | |
| Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other | | | | | | | 2 | 1 | 4 | 1 | 1 | 1 | 3,1 | 2 | 4 | 2 | 680-55185 |

*Possible Hazard Identification*
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: Level 4 Data Package

Temp 2.0/1.6/0.9

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| [signature] | URS | 2/18/10 1515 | Bertha Daughtry | TA SAV | 2.19.10 @ 0930 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |

Serial Number 026327

# 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: WGK 1st QTR 2010 River | PROJECT NO.: 21562401.00005 | PROJECT LOCATION (STATE): IL |
| TAL (LAB) PROJECT MANAGER: LIDYA GUTIZIA | P.O. NUMBER: | CONTRACT NO.: |
| CLIENT (SITE) PM: Dave Palmer | CLIENT PHONE: 314 429 0100 | CLIENT FAX: 314 429 0462 |
| CLIENT NAME: URS Corp. | CLIENT E-MAIL: dave_palmer@urscorp.com | |
| CLIENT ADDRESS: 1001 Highlands Plaza Drive West Louis MO 63110 | | |
| COMPANY CONTRACTING THIS WORK (if applicable) | | |

PAGE 1 OF 2

STANDARD REPORT DELIVERY ☒

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ◯

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 3

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, ...) | VOC 8260B (Sod Thio HCl) | SVOC 8270C (Sod Thio) | VOC 8260B (Sod Bis 1M2Th) | SVOC 8270C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/17/10 | 0910 | SW-R2007-3-0210 | G | X | | | | 3 | 2 | | |
| | 1035 | SED-R2007-3-0210 | G | | X | | | | | 3 | 1 |
| | 0910 | SW-R2007-3-0210 MS | G | X | | | | 3 | 2 | | |
| | 1035 | SED-R2007-3-0210 MS | G | | X | | | | | 3 | 1 |
| | 0910 | SW-R2007-3-0210 MSD | G | X | | | | 3 | 2 | | |
| | 1035 | SED-R2007-3-0210 MSD | G | | X | | | | | 3 | 1 |
| | 1120 | SW-R2007-2-0210 | G | X | | | | 3 | 2 | | |
| | 1200 | SED-R2007-2-0210 | G | | X | | | | | 3 | 1 |
| | 1250 | SW-R2007-1-0210 | G | X | | | | 3 | 2 | | |
| | 1450 | SED-R2007-1-0210 | G | | X | | | | | 3 | 1 |
| | 1250 | SW-R2007-1-0210 AD | G | X | | | | 3 | 2 | | |
| | 1450 | SED-R2007-1-0210 AD | G | | X | | | | | 3 | 1 |

PRESERVATIVE

REMARKS

VOC= Benzene Chlorobenzene ~~1,2 Dichlorobenzene~~ (DC 1,3 DCB + 1,4 DCB

SVOC= 4-chloroaniline 2-chlorophenol 1,4-Dioxane 1,2,4-Trichlorobenzene

| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME |
|---|---|---|---|---|---|---|---|---|
| [signature] | 2/17/10 | 1900 | | | | | | |
| **RECEIVED BY: (SIGNATURE)** | **DATE** | **TIME** | **RECEIVED BY: (SIGNATURE)** | **DATE** | **TIME** | **RECEIVED BY: (SIGNATURE)** | **DATE** | **TIME** |
| Fedex | | | | | | | | |

LABORATORY USE ONLY

| RECEIVED FOR LABORATORY BY: (SIGNATURE) | DATE | TIME | CUSTODY INTACT | CUSTODY SEAL NO. | SAVANNAH LOG NO. | LABORATORY REMARKS |
|---|---|---|---|---|---|---|
| [signature] | 2/18/10 | 0459 | YES ◯ NO ◯ | | 680-55137 | 1.0/1.6/1.4 |

TAL8240-680 (1207)

Serial Number 026878

# 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: WGK 1st QTR 2010 River | PROJECT NO.: 21562401.00005 | PROJECT LOCATION (STATE): IL | PAGE: 2 OF 2 |
| TAL (LAB) PROJECT MANAGER: LIDYA Galizia | P.O. NUMBER | CONTRACT NO. | STANDARD REPORT DELIVERY ○ |
| CLIENT (SITE) PM: Dave Palmer | CLIENT PHONE: 314 429 0100 | CLIENT FAX | DATE DUE |
| CLIENT NAME: URS Corp | CLIENT E-MAIL: dave_palmer@urscorp.com | | EXPEDITED REPORT DELIVERY (SURCHARGE) ○ |
| CLIENT ADDRESS: 1001 Highlands Plaza DR W St. Louis MO 63110 | | | DATE DUE |
| COMPANY CONTRACTING THIS WORK (if applicable) | | | NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 3 |

| SAMPLE DATE | SAMPLE TIME | SAMPLE IDENTIFICATION | COMPOSITE (C) OR GRAB (G) INDICATE | AQUEOUS (WATER) | SOLID OR SEMISOLID | AIR | NONAQUEOUS LIQUID (OIL, SOLVENT, ...) | VOC (8260B) | SVOC (8270C) | VOC (8260B) | SVOC (8270C) | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Sod Thio HCl | Sod Thio | Sod Bis meth | | | | | | | | |
| 2/17/10 | 1540 | SED-R2007-1-0210EB | G | X | | | | 3 | 2 | | | | | | | | | For VOC + SVOC lists see Page 1 |
| ↓ | 0910 | TRIPBLANK 021710 | G | X | | | | 2 | | | | | | | | | | |

PRESERVATIVE

NUMBER OF CONTAINERS SUBMITTED

Page 31 of 32

2/17/10

| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME |
|---|---|---|---|---|---|---|---|---|
| | 2/17/10 | 1900 | | | | | | |
| RECEIVED BY: (SIGNATURE) Fed Ex | 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 |
|---|---|---|---|---|---|---|
| George K Conner | | | YES ○ NO ○ | | 630-55157 | |

TAL8240-680 (1207)

# Appendix C

# Surface Water and Sediment Sampling Forms

**URS**

## Surface Water / Sediment Sampling Field Data Sheet

| | |
|---|---|
| **Project Number:** | **Sampling Event:** 1st QTR 2010 |
| **Sampling Personnel:** K Pulley B Crafton | **Sample Location:** R-2007-1 |
| **Sample Date/Time:** 2/17/10<br>SW: 1250 Sed: 1450 | **Sample Coordinates:** Approx 20' away |

**Field Descriptions and Observations:** fine grained sand & silty clay (Brown & Tan) intermixed in Rip RAP
Took approx. 12 pulls of PONAR

**Weather Conditions:** Partly Sunny Temp 25°F Wind 15-20 MPH

**Water Quality Parameters** 20

| | |
|---|---|
| Specific Conductance (~~µmhos~~ mS/cm): 0.795 | pH: 7.88 |
| Water Temperature (°C) 0.5 | Dissolved Oxygen (mg/L): 11.75 |

**Sample Collected (check)**

| SW | Sed | | SW | Sed | |
|---|---|---|---|---|---|
| X | X | Volatile Orgaic Compounds | | | Pesticides |
| X | X | Semi-volatile Organic Compounds | | | Metals |
| | | Herbicides | | | Other _____ |

**Photographs**

| Photo Date/Time: | | | Camera/Disk ID: | | |
|---|---|---|---|---|---|
| Number | Direction | Description | Number | Direction | Description |
| 3 | | Sed @ #1 | | | |
| 4 | | RipRap encountered @ #1 | | | |
| | | | | | |

**Comments/Notes:**
Dup collected here

**URS**

# Surface Water / Sediment Sampling Field Data Sheet

| | |
|---|---|
| **Project Number:** | **Sampling Event:** 1st Qtr 2010 |
| **Sampling Personnel:** K Pulley & B Crafton | **Sample Location:** R 2007-2 |
| **Sample Date/Time:** 2/17/10<br>SW: 1120 Sed: 1200 | **Sample Coordinates:** Approx 12' from location |

**Field Descriptions and Observations:** Took approx 9 pulls to get sample due to swift velocity preventing ~~clam~~ Poner from closing. Sed Coarse sand (Tan/Brown) w some gravel. water is clear. Depth = 32'

**Weather Conditions:** Mostly Cloudy Temp 25°F Wind 10-15 MPH

**Water Quality Parameters** Turb 17

| | |
|---|---|
| Specific Conductance ~~(µmhos)~~ mS/cm: 0.799 | pH: 7.66 |
| Water Temperature (°C) 0.3 | Dissolved Oxygen (mg/L): 11.82 |

**Sample Collected (check)**

| SW | Sed | | SW | Sed | |
|---|---|---|---|---|---|
| X | X | Volatile Orgaic Compounds | | | Pesticides |
| X | X | Semi-volatile Organic Compounds | | | Metals |
| | | Herbicides | | | Other _____ |

**Photographs**

| Photo Date/Time: | | | Camera/Disk ID: | | |
|---|---|---|---|---|---|
| Number | Direction | Description | Number | Direction | Description |
| 2 | | | | | |
| | | | | | |
| | | | | | |

**Comments/Notes:**

**URS**

## Surface Water / Sediment Sampling Field Data Sheet

| | |
|---|---|
| **Project Number:** | **Sampling Event:** 1st Qtr 2010 |
| **Sampling Personnel:** K. Pulley B Crafton | **Sample Location:** R-2007-3 |
| **Sample Date/Time:** 2/17/10 | **Sample Coordinates:** Aff 7' from s.fc |
| SW: 0910 / Sed: 1035 | |

**Field Descriptions and Observations:** Sed is Coarse sand Brown & Tan Depth = 23.0
Water is clear.

**Weather Conditions:** Partly Sunny Temp 20°F Wind 10-15 MPH from West

**Water Quality Parameters** Turb = 19

| | |
|---|---|
| Specific Conductance ~~(µmhos)~~ mS/cm: 0.800 | pH: 7.58 |
| Water Temperature (°C) 0.3 | Dissolved Oxygen (mg/L): 11.58 |

**Sample Collected (check)**

| SW | Sed | | SW | Sed | |
|---|---|---|---|---|---|
| X | X | Volatile Orgaic Compounds | | | Pesticides |
| X | X | Semi-volatile Organic Compounds | | | Metals |
| | | Herbicides | | | Other _____ |

**Photographs**

| Photo Date/Time: | | | Camera/Disk ID: | | |
|---|---|---|---|---|---|
| Number | Direction | Description | Number | Direction | Description |
| 1 | | | | | |
| | | | | | |
| | | | | | |

**Comments/Notes:**
MS/MSD from this location

# Appendix D

# Quality Assurance Report

QUALITY ASSURANCE REPORT

# Solutia Inc.
# W.G. Krummrich Facility
# Sauget, Illinois

# Long-Term Monitoring Program
# 1st Quarter 2010 Data Report

*Prepared for*

Solutia Inc.
575 Maryville Centre Drive
St. Louis, MO 63141

April 2010

URS Corporation
1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100
**Project # 21562401**

1.0 INTRODUCTION ..... 1

2.0 RECEIPT CONDITION AND SAMPLE HOLDING TIMES ..... 4

3.0 TRIP BLANKS, LABORATORY METHOD BLANK AND EQUIPMENT BLANK SAMPLES. 4

4.0 SURROGATE SPIKE RECOVERIES ..... 5

5.0 LABORATORY CONTROL SAMPLE RECOVERIES ..... 5

6.0 MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) SAMPLES ..... 5

7.0 FIELD DUPLICATE RESULTS ..... 6

8.0 INTERNAL STANDARD RESPONSES ..... 6

9.0 RESULTS REPORTED FROM DILUTIONS ..... 7

## 1.0 INTRODUCTION

This Quality Assurance Report presents the findings of a review of analytical data for groundwater samples and surface water/sediment samples collected in February of 2010 at the Solutia W.G. Krummrich plant and Mississippi River as part of the 1st Quarter 2010 Long-Term Monitoring Program. The samples were collected by URS Corporation personnel and analyzed by TestAmerica Laboratories located in Savannah, Georgia using USEPA methods, Standard Methods and USEPA SW-846 methodologies. Groundwater samples were tested for volatile organic compounds (VOCs), semivolatile compounds (SVOCs), metals, dissolved gasses, and general chemistry parameters. Surface water and sediment samples were tested for VOCs and SVOCs.

One hundred percent of the data were subjected to a data quality review (Level III review). The Level III reviews were performed in order to confirm that the analytical data provided by Test America were acceptable in quality for their intended use.

A total of 14 groundwater samples (10 investigative samples, one field duplicate pair, one MS/MSD pair, and one equipment blank) were analyzed by Test America. In addition, four trip blank sets were included in the coolers that contained groundwater samples for VOC analysis and were analyzed for VOCs by USEPA SW-846 Method 8260B. These samples were analyzed as one Sample Delivery Group (SDG) KPS056 utilizing the following USEPA SW-846 Methods:

- Method 8260B for VOCs (Benzene, Chlorobenzene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene and 1,4-Dichlorobenzene)
- Method 8270C for SVOCs (1,2,4-Trichlorobenzene, 1,4-Dioxane, 2-Chlorophenol, and 4-Chloroaniline)
- Method 6010B for total and dissolved iron and manganese

Samples were also analyzed for dissolved gasses and general chemistry parameters by the following methods:

- Method RSK-175 for Dissolved Gasses (Ethane, Ethylene, and Methane)
- USEPA Method 310.1 for Alkalinity and Free Carbon Dioxide
- USEPA Method 325.2 for Chloride
- USEPA Method 353.2 for Nitrogen, Nitrate
- USEPA Method 375.4 for Sulfate
- USEPA Method 415.1 for Total and Dissolved Organic Carbon

A total of 13 surface water and sediment samples (six investigative surface water and sediment), two field duplicates, two MS/MSD pairs and one equipment blank) were analyzed by TestAmerica for combinations of VOCs and SVOCs. In addition, one trip blank set was included in the cooler that contained surface water samples for VOC analysis and were analyzed for VOCs by USEPA SW-846 Method 8260B. The results were analyzed as two Sample Delivery Groups (SDGs) KRS009 and KRS010 utilizing the following USEPA SW-846 Methods:

- Method 8260 for VOCs (benzene, chlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene).
- Method 8270C for SVOCs (2-chlorophenol, 4-chloroaniline, 1,4-dioxane, and 1,2,4-trichlorobenzene).

Samples were reviewed following procedures outlined in the USEPA National Functional Guidelines for Superfund Organic Methods Data Review, June 2008, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004 and the Revised Long-Term Monitoring Program (LTMP) Work Plan (Solutia 2009).

The above guidelines provided the criteria to review the data. Additional quantitative criteria are given in the analytical methods. Qualifiers if assigned by the data reviewer are applied to the laboratory reporting forms (Form-1s). The qualifiers indicate data that did not meet acceptance criteria and corrective actions were not successful or not performed. The various qualifiers are explained in **Tables 1** and **2** below:

**TABLE 1 Laboratory Data Qualifiers**

| Lab Qualifier | Definition |
|---|---|
| U | Analyte was not detected at or above the reporting limit. |
| * | LCS, LCSD, MS, MSD, MD or surrogate exceeds the control limits. |
| E | Result exceeded the calibration range, secondary dilution required. |
| D | Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| X | Spike recovery exceeds upper or lower control limits. |
| F | MS, MSD or RPD exceeds upper or lower control limits. |
| P | The difference between the results of the two GC columns is greater than 40% |
| H | Sample was prepped or analyzed beyond the specified holding time. |
| 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. |

**TABLE 2 URS Data Qualifiers**

| | Definition |
|---|---|
| U | The analyte was analyzed for but was not detected. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. |

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy, precision, and representativeness (based on MS/MSD, LCS, surrogate compounds and field duplicate results) were achieved for this data set, except where noted in this report. In addition, analytical completeness, defined as the percentage of analytical results that are judged to be valid, including estimated detect/non-detect (**J/UJ**) data was 100 percent, which meets the completeness goal of 95 percent.

The data review included evaluation of the following criteria:

**Organics**

- Receipt condition and sample holding times
- Laboratory method blanks, field equipment blanks and trip blank samples
- Surrogate spike recoveries
- Laboratory control sample (LCS) recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) sample recoveries and relative percent difference (RPD) values
- Field duplicate results
- Results reported from dilutions
- Internal standard responses

**Inorganics/General chemistry**

- Receipt condition and sample holding times
- Laboratory method blank and field equipment blank samples

- LCS recoveries
- MS/MSD sample recoveries and matrix duplicate RPD values
- Field duplicate and laboratory duplicate results
- Results reported from dilutions

The following sections present the results of the data review.

## 2.0 RECEIPT CONDITION AND SAMPLE HOLDING TIMES

Sample holding time requirements for the analyses performed are presented in the methods and/or in the data review guidelines. Review of the sample collection, extraction and analysis dates involved comparing the chain-of-custody and the laboratory data summary forms for accuracy, consistency, and holding time compliance.

Upon review of the KPS056 data, the laboratory case narrative indicated that samples designated for TOC/DOC analyses were received by the laboratory with insufficient preservative in the sample containers. Additional acid preservative was added by the laboratory upon arrival of the samples to the laboratory. No qualification of data was required. Four out of nine coolers were received by the laboratory at temperatures below the 4ºC ± 2ºC criteria. Samples received were in good condition and not frozen; therefore, no qualification of data was required.

Upon review of the KRS009 and KRS010 data, the cooler receipt form indicated that three out of three coolers were received by the laboratory at temperatures below the 4ºC ± 2ºC criteria. Samples received were in good condition and not frozen; therefore, no qualification of data was required. Upon review of the KRS010 data, although not indicated in the laboratory case narrative, sample SED-R2007-1-0210 AD was extracted approximately 6 days outside holding time criteria (7 days). Qualifications due to holding time criteria are included in the table below.

| Sample ID | Parameter | Analyte | Qualification |
|---|---|---|---|
| SED-R2007-1-0210 AD | SVOCs | 4-Chloroaniline | **UJ** |
| SED-R2007-1-0210 AD | SVOCs | 2-Chlorophenol | **UJ** |
| SED-R2007-1-0210 AD | SVOCs | 1,2,4-Trichlorobenzene | **UJ** |
| SED-R2007-1-0210 AD | SVOCs | 1,4-Dioxane | **UJ** |

## 3.0 TRIP BLANKS, LABORATORY METHOD BLANK AND EQUIPMENT BLANK SAMPLES

Trip blank samples are used to assess VOC cross contamination of samples during shipment to the laboratory. Trip blanks were submitted with each cooler shipped containing samples for VOC analyses for a total of five trip blank sample sets. Trip blank samples were nondetect; therefore, no qualification of data was required.

Laboratory method blank samples evaluate the existence and magnitude of contamination problems resulting from laboratory activities. All laboratory method blank samples were analyzed at the method prescribed frequencies. Method blank samples were nondetect; therefore, no qualification of data was required.

Equipment blank samples are used to assess the effectiveness of equipment decontamination procedures. Equipment blank samples were nondetect with the exceptions summarized in the following table.

| SDG | Blank ID | Parameter | Analyte | Concentration | Units |
|---|---|---|---|---|---|
| KPS056 | BSA-MW-3D-0210-EB | VOCs | Benzene | 2.8 | µg/L |
| KPS056 | BSA-MW-3D-0210-EB | VOCs | Chlorobenzene | 2.3 | µg/L |

Analytical data were reported non-detect or at concentrations greater than (5X) the associated blank concentration and did not require qualification. No qualification of data was required.

## 4.0 SURROGATE SPIKE RECOVERIES

Surrogate compounds are used to evaluate overall laboratory performance for sample preparation efficiency on a per sample basis. Samples analyzed for VOCs were spiked with surrogate compounds during sample preparation. USEPA National Functional Guidelines for Superfund Organic Methods Data Review state how data is qualified, if surrogate spike recoveries do not meet acceptance criteria.

Groundwater VOC surrogate recoveries were within evaluation criteria. Groundwater SVOC surrogates were diluted out and not recovered in samples CPA-MW-1D-0210 and CPA-MW-2D-0210-AD. Surrogates that were diluted out and not recovered did not require qualification. No qualification of data was required.

Surface water and sediment surrogate recoveries were within evaluation criteria; therefore, no qualification of data was required.

## 5.0 LABORATORY CONTROL SAMPLE RECOVERIES

Groundwater laboratory control samples (LCS) are analyzed with each analytical batch to assess the accuracy of the analytical process. LCS recoveries were within evaluation criteria. No qualification of data was required.

## 6.0 MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) SAMPLES

MS/MSD samples are analyzed to assess the accuracy and precision of the analytical process on an analytical sample in a particular matrix. MS/MSD samples were required to be collected at a frequency of one per 20 investigative samples in accordance with the work plan. URS

Corporation submitted one MS/MSD sample set for 10 investigative samples, meeting the work plan frequency requirement (one per 20 investigative samples or 5 percent). One MS/MSD sample set was also submitted for the surface water/sediment samples.

No qualifications were made to the data if the MS/MSD percent RPD was the only factor out of criteria. Also, USEPA National Functional Guidelines for Superfund Organic Methods Data Review (2008) states that organic data does not need to be qualified based on MS/MSD criteria alone. Therefore, if recoveries were outside evaluation criterion due to matrix interference or abundance of analytes, no qualifiers were assigned unless these analytes had other quality control criteria outside evaluation criteria.

Groundwater samples spiked and analyzed as MS/MSDs and their respective recoveries are discussed further in data reviews in Appendix E. No qualification of data was required.

Surface water and sediment samples spiked and analyzed as MS/MSDs and their respective recoveries are discussed further in data reviews in Appendix F. No qualification of data was required.

## 7.0 FIELD DUPLICATE RESULTS

Field duplicate results are used to evaluate precision of the entire data collection activity, including sampling, analysis and site heterogeneity. When results for both duplicate and sample values are greater than five times the practical quantitation limit (PQL), satisfactory precision is indicated by an RPD less than or equal to 25 percent for aqueous samples. Where one or both of the results of a field duplicate pair are reported at less than five times the PQL, satisfactory precision is indicated if the field duplicate results agree within 2 times the quantitation limit. Field duplicate results that do not meet these criteria may indicate unsatisfactory precision of the results.

One pair of field duplicate samples were collected for the 10 investigative groundwater samples. This satisfies the requirement in the work plan (one per 10 investigative samples or 10 percent). Groundwater field duplicate RPDs were within evaluation criteria.

Two pairs of field duplicate samples were collected for the 6 investigative surface water and sediment samples (3 surface water and 3 sediment). This satisfies the requirement in the work plan (one per 10 investigative samples or 10 percent). Surface water and sediment field duplicate RPDs were within evaluation criteria; therefore, no qualification of data was required.

## 8.0 INTERNAL STANDARD RESPONSES

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. IS areas must be within -50 percent to +100 percent for VOCs.

The internal standards area responses for VOCs and SVOCs were verified for the data review. VOC IS responses met the criteria described above for groundwater samples. Groundwater SVOC internal standard area recovery for perylene-$d_{12}$ was outside evaluation criteria in quality control sample, LCS 680-161413/7-A. Quality control standards do not require qualification; therefore, no qualification of data was required.

VOC and SVOC IS responses met the criteria as described above for water and sediment samples. No qualification of data was required.

## 9.0 RESULTS REPORTED FROM DILUTIONS

VOC, SVOC, chloride, and sulfate results for groundwater samples were diluted when high levels of target analytes were present (relative to instrument performance). The diluted sample results for these analytes were reported for the associated samples.

Surface water and sediment samples did not require a dilution.

# Appendix E

## Groundwater Analytical Results
## (with Data Review Reports)

# SDG KPS056

Results of Samples from Monitoring Wells:

BSA-MW-1S
BSA-MW-2D
BSA-MW-3D
BSA-MW-4D
BSA-MW-5D
CPA-MW-1D
CPA-MW-2D
CPA-MW-3D
CPA-MW-4D
CPA-MW-5D

# Solutia Krummrich Data Review
# WGK LTM 1Q10

**Laboratory SDG: KPS056**

**Reviewer: Elizabeth Kunkel**

**Date Reviewed: 4/1/2010**

**Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008. USEPA National Functional Guidelines for Inorganic Data Review 2004**

**Applicable Work Plan: Revised Long-Term Monitoring Program (LTMP) Work Plan (Solutia 2009)**

| Sample Identification | Sample Identification |
|---|---|
| CPA-MW-4D-0210 | CPA-MW-4D-F(0.2)-0210 |
| BSA-MW-5D-0210 | BSA-MW-5D-F(0.2)-0210 |
| 1Q10 LTM Trip Blank #1 | BSA-MW-4D-0210 |
| BSA-MW-4D-F(0.2)-0210 | CPA-MW-5D-0210 |
| CPA-MW-5D-F(0.2)-0210 | BSA-MW-3D-0210 |
| BSA-MW-3D-F(0.2)-0210 | BSA-MW-2D-0210 |
| BSA-MW-2D-F(0.2)-0210 | BSA-MW-3D-0210-EB |
| 1Q10 LTM Trip Blank #2 | BSA-MW-1S-0210 |
| BSA-MW-1S-F(0.2)-0210 | CPA-MW-1D-0210 |
| CPA-MW-1D-F(0.2)-0210 | CPA-MW-2D-0210 |
| CPA-MW-2D-F(0.2)-0210 | CPA-MW-2D-0210-AD |
| 1Q10 LTM Trip Blank #3 | CPA-MW-3D-0210 |
| CPA-MW-3D-F(0.2)-0210 | 1Q10 LTM Trip Blank #4 |

## 1.0 Data Package Completeness

*Were all items delivered as specified in the QAPP and COC as appropriate?*

Yes

## 2.0 Laboratory Case Narrative \ Cooler Receipt Form

*Were problems noted in the laboratory case narrative or cooler receipt form?*

Yes, the laboratory case narrative indicated VOCs were detected in the equipment blank. SVOC surrogates were diluted out and not recovered in samples CPA-MW-1D-0210 and CPA-MW-2D-0210-AD. The MS/MSD RPD for the compound 4-chloroaniline was outside evaluation criteria in sample BSA-MW-4D-0210. Additionally, several samples were diluted due to high levels of target analytes. These issues are addressed further in the appropriate sections below.

The cooler receipt form indicated that samples designated for TOC/DOC analyses were received by the laboratory with insufficient preservation. Additional acid preservative was added by the laboratory upon arrival of the samples to the laboratory. No

qualification of data was required. Four out of nine coolers were received by the laboratory at temperatures below the 4ºC ± 2ºC criteria. Samples received were in good condition and not frozen; therefore, no qualification of data was required.

## 3.0 Holding Times

W*ere samples extracted/analyzed within applicable limits?*

Yes

## 4.0 Blank Contamination

*Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?*

Yes

| Blank ID | Parameter | Analyte | Concentration | Units |
|---|---|---|---|---|
| BSA-MW-3D-0210-EB | VOCs | Benzene | 2.8 | µg/L |
| BSA-MW-3D-0210-EB | VOCs | Chlorobenzene | 2.3 | µg/L |

Analytical data were reported non-detect or at concentrations greater than (5X) the associated blank concentration and did not require qualification. No qualification of data was required.

## 5.0 Laboratory Control Sample

*Were LCS recoveries within evaluation criteria?*

Yes

## 6.0 Surrogate Recoveries

*Were surrogate recoveries within evaluation criteria?*

No, SVOC surrogates were diluted out and not recovered in the following samples: CPA-MW-1D-0210 and CPA-MW-2D-0210-AD. No qualification of data was required.

## 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

*Were MS/MSD samples collected as part of this SDG?*

Yes, samples BSA-MW-4D-0210 and CPA-MW-3D-0210 were spiked and analyzed for SVOCs. Sample BSA-MW-4D-0210 was spiked and analyzed for VOCs. Sample CPA-MW-4D-0210 was spiked and analyzed for chloride and nitrate. Sample BSA-MW-1S-0210 was spiked and analyzed for total and dissolved iron, and total and dissolved manganese.

*Were MS/MSD recoveries within evaluation criteria?*

No

| MS/MSD ID | Parameter | Analyte | MS/MSD Recovery | RPD | MS/MSD RPD Criteria |
|---|---|---|---|---|---|
| BSA-MW-4D-0210 | SVOCs | 4-Chloroaniline | 29/45 | **43** | 10-110/40 |

Chloride MS/MSD recoveries in sample CPA-MW-4D-0210 could not be evaluated because the sample concentrations were greater than four times (4X) the matrix spike concentration. USEPA National Functional Guidelines for Superfund Organic methods

Data Review indicates that organic data does not require qualification based on MS/MSD data alone and LCS recoveries were within evaluation criteria; therefore, no qualification of data was required.

## 8.0 Internal Standard (IS) Recoveries

*Were internal standard area recoveries within evaluation criteria?*

No

| Sample ID | Parameter | Analyte | IS Area Recovery | IS Criteria |
|---|---|---|---|---|
| LCS 680-161413/7-A | SVOCs | Perylene-$d_{12}$ | 1260335 | 233682-934728 |

LCS samples are quality control samples and do not require qualification; therefore, no qualification of data is required.

## 9.0 Laboratory Duplicate Results

*Were laboratory duplicate samples collected as part of this SDG?*

Yes, sample BSA-MW-5D-F(0.2)-0210 was duplicated and analyzed for dissolved organic carbon.

*Were laboratory duplicate sample relative percent differences (RPDs) within criteria?*

Yes

## 10.0 Field Duplicate Results

*Were field duplicate samples collected as part of this SDG?*

Yes

| Field ID | Field Duplicate ID |
|---|---|
| CPA-MW-2D-0210 | CPA-MW-2D-0210-AD |

*Were field duplicates within evaluation criteria?*

Yes

## 11.0 Sample Dilutions

*For samples that were diluted and nondetect, were undiluted results also reported?*

Not applicable; analytes were detected in samples that were diluted.

## 12.0 Additional Qualifications

*Were additional qualifications applied?*

No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

Job Number: 680-55082-1

SDG Number: KPS056

Job Description: WGK LTM 1Q10 - FEB 2010

For:
Solutia Inc.
575 Maryville Centre Dr.
Saint Louis, MO 63141

Attention: Mr. Jerry Rinaldi

Lidya Gulizia

Approved for release.
Lidya Gulizia
Project Manager I
3/22/2010 4:23 PM

Lidya Gulizia
Project Manager I
lidya.gulizia@testamericainc.com
03/22/2010

Reviewed on

MAR 23 2010 ELK

cc: Mr. Thomas Adams
Mr. Bob Billman
Dave Palmer
Mr. Richard Williams

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**
TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404
Tel (912) 354-7858 Fax (912) 352-0165 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

**Job Narrative**
**680-55082-1 / SDG KPS056**

**Receipt**
All samples were received in good condition within temperature requirements.

**GC/MS VOA**
Method(s) 8260B: The equipment blank associated with these samples contained a detection above the reporting limit (RL) for the following analytes: benzene and chlorobenzene.

No other analytical or quality issues were noted.

**GC/MS Semi VOA**
Method(s) 8270C: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for 4 analytes to recover outside criteria for this method when a full list spike is utilized. The MS/MSD associated with batch 161121 had 1 analyte outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8270C: Internal standard (ISTD) response for the following sample(s) was outside control limits: LCS 680-161413/7-A. The sample(s) was re-analyzed with concurring results. The original set of data has been reported.

Method(s) 8270C: Manual integration was performed on the following sample(s): BSA-MW-4D-0210 (680-55111-1).

Method(s) 8270C: Sample CPA-MW-1D-0210 (680-55143-3), CPA-MW-2D-0210-AD (680-55143-7) was diluted due to the nature of the sample matrix. As such, surrogate recoveries are not reported, and elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

**GC VOA**
No analytical or quality issues were noted.

**Metals**
Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-161109 were outside control limits for iron. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) precision for batch 680-161109 was outside control limits for manganese. Non-homogeneity of the sample matrix is suspected.

No other analytical or quality issues were noted.

**General Chemistry**
TOC/DOC samples were received with insufficient preservation. The samples were properly preserved in the lab by adding acid preservative.

Method(s) 325.2, SM 4500 Cl- E: Due to the high concentration of chloride, the matrix spike / matrix spike duplicate (MS/MSD) for batch 162285 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 375.4: Due to the high concentration of sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for batch 161667 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

No other analytical or quality issues were noted.

**Comments**
No additional comments.

MAR 23 2010 ERR

# METHOD SUMMARY

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

| Description | Lab Location | Method | Preparation Method |
|---|---|---|---|
| **Matrix: Water** | | | |
| Volatile Organic Compounds (GC/MS) | TAL SAV | SW846 8260B | |
| Purge and Trap | TAL SAV | | SW846 5030B |
| Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) | TAL SAV | SW846 8270C | |
| Liquid-Liquid Extraction (Continuous) | TAL SAV | | SW846 3520C |
| Dissolved Gases (GC) | TAL SAV | RSK RSK-175 | |
| Metals (ICP) | TAL SAV | SW846 6010B | |
| Sample Filtration, Field | TAL SAV | | FIELD_FLTRD |
| Preparation, Total Recoverable or Dissolved Metals | TAL SAV | | SW846 3005A |
| Alkalinity | TAL SAV | MCAWW 310.1 | |
| Chloride | TAL SAV | MCAWW 325.2 | |
| Nitrogen, Nitrate-Nitrite | TAL SAV | MCAWW 353.2 | |
| Sulfate | TAL SAV | MCAWW 375.4 | |
| DOC | TAL SAV | MCAWW 415.1 | |
| TOC | TAL SAV | MCAWW 415.1 | |
| Sample Filtration, Field | TAL SAV | | FIELD_FLTRD |

**Lab References:**

TAL SAV = TestAmerica Savannah

**Method 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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

# METHOD / ANALYST SUMMARY

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

| Method | Analyst | Analyst ID |
|---|---|---|
| SW846 8260B | Bearden, Robert | RB |
| SW846 8260B | Lanier, Carolyn | CL |
| SW846 8270C | Davis, Nancy | ND |
| SW846 8270C | Haynes, Carion | CRH |
| RSK RSK-175 | Moncrief, Amy | AEM |
| SW846 6010B | Bland, Brian | BCB |
| MCAWW 310.1 | Vasquez, Juana | JV |
| MCAWW 325.2 | Ross, Jon | JR |
| MCAWW 353.2 | Ross, Jon | JR |
| MCAWW 375.4 | Ross, Jon | JR |
| MCAWW 415.1 | Blackshear, Kim | KB |

## SAMPLE SUMMARY

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

| Lab Sample ID | Client Sample ID | Client Matrix | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|
| 680-55082-1 | CPA-MW-4D-0210 | Water | 02/15/2010 1150 | 02/16/2010 0919 |
| 680-55082-2 | CPA-MW-4D-F(0.2)-0210 | Water | 02/15/2010 1150 | 02/16/2010 0919 |
| 680-55082-3 | BSA-MW-5D-0210 | Water | 02/15/2010 1630 | 02/16/2010 0919 |
| 680-55082-4 | BSA-MW-5D-F(0.2)-0210 | Water | 02/15/2010 1630 | 02/16/2010 0919 |
| 680-55082-5 | 1Q10 LTM Trip Blank #1 | Water | 02/15/2010 0000 | 02/16/2010 0919 |
| 680-55111-1 | BSA-MW-4D-0210 | Water | 02/16/2010 1010 | 02/17/2010 0907 |
| 680-55111-1MS | BSA-MW-4D-0210-MS | Water | 02/16/2010 1010 | 02/17/2010 0907 |
| 680-55111-1MSD | BSA-MW-4D-0210-MSD | Water | 02/16/2010 1010 | 02/17/2010 0907 |
| 680-55111-2 | BSA-MW-4D-F(0.2)-0210 | Water | 02/16/2010 1010 | 02/17/2010 0907 |
| 680-55111-3 | CPA-MW-5D-0210 | Water | 02/16/2010 1200 | 02/17/2010 0907 |
| 680-55111-4 | CPA-MW-5D-F(0.2)-0210 | Water | 02/16/2010 1200 | 02/17/2010 0907 |
| 680-55111-5 | BSA-MW-3D-0210 | Water | 02/16/2010 1400 | 02/17/2010 0907 |
| 680-55111-6 | BSA-MW-3D-F(0.2)-0210 | Water | 02/16/2010 1400 | 02/17/2010 0907 |
| 680-55111-7 | BSA-MW-2D-0210 | Water | 02/16/2010 1530 | 02/17/2010 0907 |
| 680-55111-8 | BSA-MW-2D-F(0.2)-0210 | Water | 02/16/2010 1530 | 02/17/2010 0907 |
| 680-55111-9 | BSA-MW-3D-0210-EB | Water | 02/16/2010 1245 | 02/17/2010 0907 |
| 680-55111-10 | 1Q10 LTM Trip Blank #2 | Water | 02/16/2010 0000 | 02/17/2010 0907 |
| 680-55143-1 | BSA-MW-1S-0210 | Water | 02/17/2010 1050 | 02/18/2010 0959 |
| 680-55143-2 | BSA-MW-1S-F(0.2)-0210 | Water | 02/17/2010 1050 | 02/18/2010 0959 |
| 680-55143-3 | CPA-MW-1D-0210 | Water | 02/17/2010 1305 | 02/18/2010 0959 |
| 680-55143-4 | CPA-MW-1D-F(0.2)-0210 | Water | 02/17/2010 1305 | 02/18/2010 0959 |
| 680-55143-5 | CPA-MW-2D-0210 | Water | 02/17/2010 1450 | 02/18/2010 0959 |
| 680-55143-6 | CPA-MW-2D-F-(0.2)-0210 | Water | 02/17/2010 1450 | 02/18/2010 0959 |
| 680-55143-7FD | CPA-MW-2D-0210-AD | Water | 02/17/2010 1450 | 02/18/2010 0959 |
| 680-55143-8TB | 1Q10-LTM Trip Blank #3 | Water | 02/17/2010 0000 | 02/18/2010 0959 |
| 680-55185-1 | CPA-MW-3D-0210 | Water | 02/18/2010 0945 | 02/19/2010 0930 |
| 680-55185-2 | CPA-MW-3D-F(0.2)-0210 | Water | 02/18/2010 0945 | 02/19/2010 0930 |
| 680-55185-3TB | 1Q10 LTM Trip Blank #4 | Water | 02/18/2010 0000 | 02/19/2010 0930 |



MAR 23 2010 ELR

# SAMPLE RESULTS

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-4D-0210**

Lab Sample ID: 680-55082-1
Client Matrix: Water

Date Sampled: 02/15/2010 1150
Date Received: 02/16/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161124 | Instrument ID: | MSO |
| Preparation: | 5030B | | Lab File ID: | o0297.d |
| Dilution: | 10 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/18/2010 1517 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/18/2010 1517 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 37 | | 10 |
| Chlorobenzene | 800 | | 10 |
| 1,2-Dichlorobenzene | 23 | | 10 |
| 1,3-Dichlorobenzene | 10 | U | 10 |
| 1,4-Dichlorobenzene | 35 | | 10 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 96 | | 75 - 120 |
| Dibromofluoromethane | 102 | | 75 - 121 |
| Toluene-d8 (Surr) | 104 | | 75 - 120 |

MAR 23 2010 EKR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-5D-0210**

Lab Sample ID: 680-55082-3
Client Matrix: Water

Date Sampled: 02/15/2010 1630
Date Received: 02/16/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161124 | Instrument ID: | MSO |
| Preparation: | 5030B | | Lab File ID: | o0299.d |
| Dilution: | 5.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/18/2010 1546 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/18/2010 1546 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 5.0 | U | 5.0 |
| Chlorobenzene | 350 | | 5.0 |
| 1,2-Dichlorobenzene | 190 | | 5.0 |
| 1,3-Dichlorobenzene | 16 | | 5.0 |
| 1,4-Dichlorobenzene | 140 | | 5.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 94 | | 75 - 120 |
| Dibromofluoromethane | 104 | | 75 - 121 |
| Toluene-d8 (Surr) | 106 | | 75 - 120 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **1Q10 LTM Trip Blank #1**

Lab Sample ID: 680-55082-5
Client Matrix: Water

Date Sampled: 02/15/2010 0000
Date Received: 02/16/2010 0919

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161124 | Instrument ID: | MSO |
| Preparation: | 5030B | | Lab File ID: | o0295.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/18/2010 1448 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/18/2010 1448 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 1.0 | U | 1.0 |
| Chlorobenzene | 1.0 | U | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 91 | | 75 - 120 |
| Dibromofluoromethane | 111 | | 75 - 121 |
| Toluene-d8 (Surr) | 103 | | 75 - 120 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-4D-0210**

Lab Sample ID: 680-55111-1
Client Matrix: Water

Date Sampled: 02/16/2010 1010
Date Received: 02/17/2010 0907

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161234 | Instrument ID: | MSO2 |
| Preparation: | 5030B | | Lab File ID: | o0346.d |
| Dilution: | 20 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1912 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1912 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 73 | | 20 |
| Chlorobenzene | 2700 | | 20 |
| 1,2-Dichlorobenzene | 22 | | 20 |
| 1,3-Dichlorobenzene | 20 | U | 20 |
| 1,4-Dichlorobenzene | 68 | | 20 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 93 | | 75 - 120 |
| Dibromofluoromethane | 102 | | 75 - 121 |
| Toluene-d8 (Surr) | 108 | | 75 - 120 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-5D-0210**

Lab Sample ID: 680-55111-3
Client Matrix: Water

Date Sampled: 02/16/2010 1200
Date Received: 02/17/2010 0907

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161234 | Instrument ID: | MSO2 |
| Preparation: | 5030B | | Lab File ID: | o0348.d |
| Dilution: | 10 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1941 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1941 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 10 | U | 10 |
| Chlorobenzene | 1700 | | 10 |
| 1,2-Dichlorobenzene | 130 | | 10 |
| 1,3-Dichlorobenzene | 11 | | 10 |
| 1,4-Dichlorobenzene | 100 | | 10 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 93 | | 75 - 120 |
| Dibromofluoromethane | 108 | | 75 - 121 |
| Toluene-d8 (Surr) | 108 | | 75 - 120 |

MAR 23 2010 ETR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-3D-0210**

Lab Sample ID: 680-55111-5
Client Matrix: Water

Date Sampled: 02/16/2010 1400
Date Received: 02/17/2010 0907

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161527 | Instrument ID: | MSO |
| Preparation: | 5030B | | Lab File ID: | o0357.d |
| Dilution: | 10 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/22/2010 2026 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/22/2010 2026 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 87 | | 10 |
| Chlorobenzene | 1200 | | 10 |
| 1,2-Dichlorobenzene | 46 | | 10 |
| 1,3-Dichlorobenzene | 20 | | 10 |
| 1,4-Dichlorobenzene | 430 | | 10 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 89 | | 75 - 120 |
| Dibromofluoromethane | 105 | | 75 - 121 |
| Toluene-d8 (Surr) | 109 | | 75 - 120 |



MAR 23 2010 ETK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-2D-0210**

Lab Sample ID: 680-55111-7
Client Matrix: Water

Date Sampled: 02/16/2010 1530
Date Received: 02/17/2010 0907

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161527 | Instrument ID: | MSO |
| Preparation: | 5030B | | Lab File ID: | o0359.d |
| Dilution: | 1000 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/22/2010 2055 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/22/2010 2055 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 150000 | | 1000 |
| Chlorobenzene | 2700 | | 1000 |
| 1,2-Dichlorobenzene | 1000 | U | 1000 |
| 1,3-Dichlorobenzene | 1000 | U | 1000 |
| 1,4-Dichlorobenzene | 1000 | U | 1000 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 91 | | 75 - 120 |
| Dibromofluoromethane | 110 | | 75 - 121 |
| Toluene-d8 (Surr) | 107 | | 75 - 120 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-3D-0210-EB**

Lab Sample ID: 680-55111-9
Client Matrix: Water

Date Sampled: 02/16/2010 1245
Date Received: 02/17/2010 0907

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161233 | Instrument ID: | MSO |
| Preparation: | 5030B | | Lab File ID: | o0327.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1437 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1437 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 2.8 | | 1.0 |
| Chlorobenzene | 2.3 | | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 95 | | 75 - 120 |
| Dibromofluoromethane | 113 | | 75 - 121 |
| Toluene-d8 (Surr) | 103 | | 75 - 120 |

MAR 23 2010 ELL

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **1Q10 LTM Trip Blank #2**

Lab Sample ID: 680-55111-10
Client Matrix: Water

Date Sampled: 02/16/2010 0000
Date Received: 02/17/2010 0907

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161233 | Instrument ID: | MSO |
| Preparation: | 5030B | | Lab File ID: | o0317.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1212 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1212 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 1.0 | U | 1.0 |
| Chlorobenzene | 1.0 | U | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 92 | | 75 - 120 |
| Dibromofluoromethane | 109 | | 75 - 121 |
| Toluene-d8 (Surr) | 105 | | 75 - 120 |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-1S-0210**

Lab Sample ID: 680-55143-1
Client Matrix: Water

Date Sampled: 02/17/2010 1050
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161320 | Instrument ID: | MSP |
| Preparation: | 5030B | | Lab File ID: | p0007.d |
| Dilution: | 5000 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1440 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1440 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 730000 | | 5000 |
| Chlorobenzene | 5000 | U | 5000 |
| 1,2-Dichlorobenzene | 5000 | U | 5000 |
| 1,3-Dichlorobenzene | 5000 | U | 5000 |
| 1,4-Dichlorobenzene | 5000 | U | 5000 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 101 | | 75 - 120 |
| Dibromofluoromethane | 103 | | 75 - 121 |
| Toluene-d8 (Surr) | 100 | | 75 - 120 |

MAR 23 2010 ERR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-1D-0210**

Lab Sample ID: 680-55143-3
Client Matrix: Water

Date Sampled: 02/17/2010 1305
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161320 | Instrument ID: | MSP |
| Preparation: | 5030B | | Lab File ID: | p0009.d |
| Dilution: | 200 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1510 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1510 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 7300 | | 200 |
| Chlorobenzene | 18000 | | 200 |
| 1,2-Dichlorobenzene | 22000 | | 200 |
| 1,3-Dichlorobenzene | 1700 | | 200 |
| 1,4-Dichlorobenzene | 14000 | | 200 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 106 | | 75 - 120 |
| Dibromofluoromethane | 101 | | 75 - 121 |
| Toluene-d8 (Surr) | 100 | | 75 - 120 |



MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-2D-0210**

Lab Sample ID: 680-55143-5
Client Matrix: Water

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161320 | Instrument ID: | MSP |
| Preparation: | 5030B | | Lab File ID: | p0011.d |
| Dilution: | 200 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1540 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1540 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 1100 | | 200 |
| Chlorobenzene | 29000 | | 200 |
| 1,2-Dichlorobenzene | 2700 | | 200 |
| 1,3-Dichlorobenzene | 670 | | 200 |
| 1,4-Dichlorobenzene | 16000 | | 200 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 106 | | 75 - 120 |
| Dibromofluoromethane | 98 | | 75 - 121 |
| Toluene-d8 (Surr) | 102 | | 75 - 120 |

MAR 23 2010 EJK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-2D-0210-AD**

Lab Sample ID: 680-55143-7FD
Client Matrix: Water

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161320 | Instrument ID: | MSP |
| Preparation: | 5030B | | Lab File ID: | p0015.d |
| Dilution: | 200 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1642 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1642 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 1100 | | 200 |
| Chlorobenzene | 30000 | | 200 |
| 1,2-Dichlorobenzene | 2500 | | 200 |
| 1,3-Dichlorobenzene | 660 | | 200 |
| 1,4-Dichlorobenzene | 16000 | | 200 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 105 | | 75 - 120 |
| Dibromofluoromethane | 98 | | 75 - 121 |
| Toluene-d8 (Surr) | 102 | | 75 - 120 |



MAR 23 2010 ER

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **1Q10-LTM Trip Blank #3**

Lab Sample ID: 680-55143-8TB
Client Matrix: Water

Date Sampled: 02/17/2010 0000
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161320 | Instrument ID: | MSP |
| Preparation: | 5030B | | Lab File ID: | p0001.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1315 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1315 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 1.0 | U | 1.0 |
| Chlorobenzene | 1.0 | U | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 102 | | 75 - 120 |
| Dibromofluoromethane | 104 | | 75 - 121 |
| Toluene-d8 (Surr) | 100 | | 75 - 120 |



MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-3D-0210**

Lab Sample ID: 680-55185-1
Client Matrix: Water

Date Sampled: 02/18/2010 0945
Date Received: 02/19/2010 0930

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161453 | Instrument ID: | MSP2 |
| Preparation: | 5030B | | Lab File ID: | p0060.d |
| Dilution: | 5.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/22/2010 1842 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/22/2010 1842 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 180 | | 5.0 |
| Chlorobenzene | 660 | | 5.0 |
| 1,2-Dichlorobenzene | 37 | | 5.0 |
| 1,3-Dichlorobenzene | 5.2 | | 5.0 |
| 1,4-Dichlorobenzene | 64 | | 5.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 109 | | 75 - 120 |
| Dibromofluoromethane | 98 | | 75 - 121 |
| Toluene-d8 (Surr) | 109 | | 75 - 120 |



MAR 23 2010 EL

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **1Q10 LTM Trip Blank #4**

Lab Sample ID: 680-55185-3TB
Client Matrix: Water

Date Sampled: 02/18/2010 0000
Date Received: 02/19/2010 0930

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161453 | Instrument ID: | MSP2 |
| Preparation: | 5030B | | Lab File ID: | p0054.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/22/2010 1712 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/22/2010 1712 | | | |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Benzene | 1.0 | U | 1.0 |
| Chlorobenzene | 1.0 | U | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 101 | | 75 - 120 |
| Dibromofluoromethane | 109 | | 75 - 121 |
| Toluene-d8 (Surr) | 107 | | 75 - 120 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-4D-0210**

Lab Sample ID: 680-55082-1
Client Matrix: Water

Date Sampled: 02/15/2010 1150
Date Received: 02/16/2010 0919

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161551 | Instrument ID: | MSF |
| Preparation: | 3520C | Prep Batch: 680-161121 | Lab File ID: | f4540.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 1020 mL |
| Date Analyzed: | 02/23/2010 1925 | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/18/2010 1519 | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 4-Chloroaniline | 170 | | 20 |
| 2-Chlorophenol | 9.8 | U | 9.8 |
| 1,2,4-Trichlorobenzene | 9.8 | U | 9.8 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 79 | | 38 - 116 |
| 2-Fluorophenol | 76 | | 36 - 110 |
| 2,4,6-Tribromophenol | 91 | | 40 - 139 |
| Nitrobenzene-d5 | 79 | | 45 - 112 |
| 2-Fluorobiphenyl | 75 | | 50 - 113 |
| Terphenyl-d14 | 43 | | 10 - 121 |

MAR 23 2010 ELR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-5D-0210**

Lab Sample ID: 680-55082-3
Client Matrix: Water

Date Sampled: 02/15/2010 1630
Date Received: 02/16/2010 0919

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161551 | Instrument ID: | MSF |
| Preparation: | 3520C | Prep Batch: 680-161121 | Lab File ID: | f4541.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 1060 mL |
| Date Analyzed: | 02/23/2010 1948 | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/18/2010 1519 | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 2-Chlorophenol | 9.4 | U | 9.4 |
| 1,4-Dioxane | 9.4 | U | 9.4 |
| 1,2,4-Trichlorobenzene | 9.4 | U | 9.4 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 62 | | 38 - 116 |
| 2-Fluorophenol | 40 | | 36 - 110 |
| 2,4,6-Tribromophenol | 84 | | 40 - 139 |
| Nitrobenzene-d5 | 71 | | 45 - 112 |
| 2-Fluorobiphenyl | 67 | | 50 - 113 |
| Terphenyl-d14 | 41 | | 10 - 121 |

MAR 23 2010 ELR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-4D-0210**

Lab Sample ID: 680-55111-1
Client Matrix: Water

Date Sampled: 02/16/2010 1010
Date Received: 02/17/2010 0907

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161551 | Instrument ID: | MSF |
| Preparation: | 3520C | Prep Batch: 680-161121 | Lab File ID: | f4542.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 1060 mL |
| Date Analyzed: | 02/23/2010 2012 | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/18/2010 1519 | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 1,2,4-Trichlorobenzene | 9.4 | U | 9.4 |
| 1,4-Dioxane | 31 | | 9.4 |
| 2-Chlorophenol | 13 | | 9.4 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 70 | | 38 - 116 |
| 2,4,6-Tribromophenol | 81 | | 40 - 139 |
| 2-Fluorobiphenyl | 72 | | 50 - 113 |
| 2-Fluorophenol | 78 | | 36 - 110 |
| Nitrobenzene-d5 | 77 | | 45 - 112 |
| Terphenyl-d14 | 40 | | 10 - 121 |



MAR 23 2010 EL R

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-5D-0210**

Lab Sample ID: 680-55111-3
Client Matrix: Water

Date Sampled: 02/16/2010 1200
Date Received: 02/17/2010 0907

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161551 | Instrument ID: | MSF |
| Preparation: | 3520C | Prep Batch: 680-161121 | Lab File ID: | f4543.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 1030 mL |
| Date Analyzed: | 02/23/2010 2035 | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/18/2010 1519 | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 4-Chloroaniline | 19 | U | 19 |
| 2-Chlorophenol | 9.9 | | 9.7 |
| 1,2,4-Trichlorobenzene | 9.7 | U | 9.7 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 79 | | 38 - 116 |
| 2-Fluorophenol | 76 | | 36 - 110 |
| 2,4,6-Tribromophenol | 90 | | 40 - 139 |
| Nitrobenzene-d5 | 83 | | 45 - 112 |
| 2-Fluorobiphenyl | 77 | | 50 - 113 |
| Terphenyl-d14 | 43 | | 10 - 121 |

MAR 23 2010 ERR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-3D-0210**

Lab Sample ID: 680-55111-5
Client Matrix: Water

Date Sampled: 02/16/2010 1400
Date Received: 02/17/2010 0907

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161551 | Instrument ID: | MSF |
| Preparation: | 3520C | Prep Batch: 680-161121 | Lab File ID: | f4544.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 1030 mL |
| Date Analyzed: | 02/23/2010 2058 | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/18/2010 1519 | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 1,2,4-Trichlorobenzene | 9.7 | U | 9.7 |
| 1,4-Dioxane | 9.7 | U | 9.7 |
| 2-Chlorophenol | 11 | | 9.7 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 74 | | 38 - 116 |
| 2,4,6-Tribromophenol | 87 | | 40 - 139 |
| 2-Fluorobiphenyl | 72 | | 50 - 113 |
| 2-Fluorophenol | 72 | | 36 - 110 |
| Nitrobenzene-d5 | 78 | | 45 - 112 |
| Terphenyl-d14 | 37 | | 10 - 121 |



MAR 23 2010 ERR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-2D-0210**

Lab Sample ID: 680-55111-7
Client Matrix: Water

Date Sampled: 02/16/2010 1530
Date Received: 02/17/2010 0907

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161551 | Instrument ID: | MSF |
| Preparation: | 3520C | Prep Batch: 680-161121 | Lab File ID: | f4545.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 1050 mL |
| Date Analyzed: | 02/23/2010 2122 | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/18/2010 1519 | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 1,2,4-Trichlorobenzene | 9.5 | U | 9.5 |
| 1,4-Dioxane | 26 | | 9.5 |
| 2-Chlorophenol | 9.5 | U | 9.5 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 78 | | 38 - 116 |
| 2,4,6-Tribromophenol | 91 | | 40 - 139 |
| 2-Fluorobiphenyl | 74 | | 50 - 113 |
| 2-Fluorophenol | 73 | | 36 - 110 |
| Nitrobenzene-d5 | 79 | | 45 - 112 |
| Terphenyl-d14 | 39 | | 10 - 121 |

MAR 23 2010 ERK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-3D-0210-EB**

Lab Sample ID: 680-55111-9
Client Matrix: Water

Date Sampled: 02/16/2010 1245
Date Received: 02/17/2010 0907

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161641 | Instrument ID: | MSF |
| Preparation: | 3520C | Prep Batch: 680-161121 | Lab File ID: | f4559.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 1020 mL |
| Date Analyzed: | 02/24/2010 1531 | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/18/2010 1519 | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 1,2,4-Trichlorobenzene | 9.8 | U | 9.8 |
| 1,4-Dioxane | 9.8 | U | 9.8 |
| 2-Chlorophenol | 9.8 | U | 9.8 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 72 | | 38 - 116 |
| 2,4,6-Tribromophenol | 79 | | 40 - 139 |
| 2-Fluorobiphenyl | 80 | | 50 - 113 |
| 2-Fluorophenol | 75 | | 36 - 110 |
| Nitrobenzene-d5 | 82 | | 45 - 112 |
| Terphenyl-d14 | 83 | | 10 - 121 |



MAR 23 2010 ELK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-1S-0210**

Lab Sample ID: 680-55143-1
Client Matrix: Water

Date Sampled: 02/17/2010 1050
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161991 | Instrument ID: | MSG |
| Preparation: | 3520C | Prep Batch: 680-161199 | Lab File ID: | g0170.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 1030 mL |
| Date Analyzed: | 03/01/2010 2015 | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 2-Chlorophenol | 9.7 | U | 9.7 |
| 1,2,4-Trichlorobenzene | 9.7 | U | 9.7 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 65 | | 38 - 116 |
| 2-Fluorophenol | 58 | | 36 - 110 |
| 2,4,6-Tribromophenol | 85 | | 40 - 139 |
| Nitrobenzene-d5 | 75 | | 45 - 112 |
| 2-Fluorobiphenyl | 64 | | 50 - 113 |
| Terphenyl-d14 | 56 | | 10 - 121 |

MAR 23 2010 E-2

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-1D-0210**

Lab Sample ID: 680-55143-3
Client Matrix: Water

Date Sampled: 02/17/2010 1305
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-162040 | | Instrument ID: | MSN |
| Preparation: | 3520C | Prep Batch: 680-161199 | | Lab File ID: | n6520.d |
| Dilution: | 10 | | | Initial Weight/Volume: | 1050 mL |
| Date Analyzed: | 03/02/2010 1549 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 2-Chlorophenol | 95 | U | 95 |
| 1,2,4-Trichlorobenzene | 870 | | 95 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 0 | D | 38 - 116 |
| 2-Fluorophenol | 0 | D | 36 - 110 |
| 2,4,6-Tribromophenol | 0 | D | 40 - 139 |
| Nitrobenzene-d5 | 0 | D | 45 - 112 |
| 2-Fluorobiphenyl | 0 | D | 50 - 113 |
| Terphenyl-d14 | 0 | D | 10 - 121 |

MAR 23 2010 ELK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-2D-0210**

Lab Sample ID: 680-55143-5
Client Matrix: Water

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161991 | Instrument ID: | MSG |
| Preparation: | 3520C | Prep Batch: 680-161199 | Lab File ID: | g0172.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 1030 mL |
| Date Analyzed: | 03/01/2010 2109 | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 2-Chlorophenol | 29 | | 9.7 |
| 1,2,4-Trichlorobenzene | 9.7 | U | 9.7 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 87 | | 38 - 116 |
| 2-Fluorophenol | 78 | | 36 - 110 |
| 2,4,6-Tribromophenol | 86 | | 40 - 139 |
| Nitrobenzene-d5 | 72 | | 45 - 112 |
| 2-Fluorobiphenyl | 65 | | 50 - 113 |
| Terphenyl-d14 | 50 | | 10 - 121 |

MAR 23 2010 ZZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-2D-0210-AD**

Lab Sample ID: 680-55143-7FD
Client Matrix: Water

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-162040 | Instrument ID: | MSN |
| Preparation: | 3520C | Prep Batch: 680-161199 | Lab File ID: | n6521.d |
| Dilution: | 10 | | Initial Weight/Volume: | 1030 mL |
| Date Analyzed: | 03/02/2010 1613 | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 2-Chlorophenol | 97 | U | 97 |
| 1,2,4-Trichlorobenzene | 97 | U | 97 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 0 | D | 38 - 116 |
| 2-Fluorophenol | 0 | D | 36 - 110 |
| 2,4,6-Tribromophenol | 0 | D | 40 - 139 |
| Nitrobenzene-d5 | 0 | D | 45 - 112 |
| 2-Fluorobiphenyl | 0 | D | 50 - 113 |
| Terphenyl-d14 | 0 | D | 10 - 121 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-3D-0210**

Lab Sample ID: 680-55185-1
Client Matrix: Water

Date Sampled: 02/18/2010 0945
Date Received: 02/19/2010 0930

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161650 | Instrument ID: | MSG |
| Preparation: | 3520C | Prep Batch: 680-161413 | Lab File ID: | g0136.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 500 mL |
| Date Analyzed: | 02/25/2010 1453 | | Final Weight/Volume: | 0.5 mL |
| Date Prepared: | 02/23/2010 1319 | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| 4-Chloroaniline | 36 | | 20 |
| 2-Chlorophenol | 10 | U | 10 |
| 1,2,4-Trichlorobenzene | 10 | U | 10 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 62 | | 38 - 116 |
| 2-Fluorophenol | 67 | | 36 - 110 |
| 2,4,6-Tribromophenol | 84 | | 40 - 139 |
| Nitrobenzene-d5 | 78 | | 45 - 112 |
| 2-Fluorobiphenyl | 72 | | 50 - 113 |
| Terphenyl-d14 | 95 | | 10 - 121 |

MAR 23 2010 EL

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-4D-0210**

Lab Sample ID: 680-55082-1
Client Matrix: Water

Date Sampled: 02/15/2010 1150
Date Received: 02/16/2010 0919

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161547 | Instrument ID: | VGUFID2 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1111 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Ethane | 15 | | 0.35 |
| Ethylene | 0.33 | U | 0.33 |

MAR 23 2010

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-4D-0210**

Lab Sample ID: 680-55082-1
Client Matrix: Water

Date Sampled: 02/15/2010 1150
Date Received: 02/16/2010 0919

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161548 | Instrument ID: | VGUTCD1 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1111 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Methane | 6000 | | 0.19 |

MAR 23 2010 EGK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-5D-0210**

Lab Sample ID: 680-55082-3
Client Matrix: Water

Date Sampled: 02/15/2010 1630
Date Received: 02/16/2010 0919

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161547 | Instrument ID: | VGUFID2 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1124 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Ethane | 22 | | 0.35 |
| Ethylene | 0.33 | U | 0.33 |

MAR 23 2010 EVR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-5D-0210**

Lab Sample ID: 680-55082-3
Client Matrix: Water

Date Sampled: 02/15/2010 1630
Date Received: 02/16/2010 0919

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161548 | Instrument ID: | VGUTCD1 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1124 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Methane | 14000 | | 0.19 |

MAR 23 2010 ETK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-4D-0210**

Lab Sample ID: 680-55111-1
Client Matrix: Water

Date Sampled: 02/16/2010 1010
Date Received: 02/17/2010 0907

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161547 | Instrument ID: | VGUFID2 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1137 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Ethane | 6.1 | | 0.35 |
| Ethylene | 1.4 | | 0.33 |
| Methane | 220 | | 0.19 |



MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-5D-0210**

Lab Sample ID: 680-55111-3
Client Matrix: Water

Date Sampled: 02/16/2010 1200
Date Received: 02/17/2010 0907

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161547 | Instrument ID: | VGUFID2 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1150 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Ethane | 5.6 | | 0.35 |
| Ethylene | 0.33 | U | 0.33 |
| Methane | 21 | | 0.19 |

MAR 23 2010 ERK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-3D-0210**

Lab Sample ID: 680-55111-5
Client Matrix: Water

Date Sampled: 02/16/2010 1400
Date Received: 02/17/2010 0907

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161547 | Instrument ID: | VGUFID2 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1202 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Ethane | 2.0 | | 0.35 |
| Ethylene | 6.2 | | 0.33 |
| Methane | 290 | | 0.19 |

MAR 23 2010

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-2D-0210**

Lab Sample ID: 680-55111-7
Client Matrix: Water

Date Sampled: 02/16/2010 1530
Date Received: 02/17/2010 0907

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161547 | Instrument ID: | VGUFID2 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1215 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Ethane | 12 | | 0.35 |
| Ethylene | 0.67 | | 0.33 |

MAR 23 2010

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-2D-0210**

Lab Sample ID: 680-55111-7
Client Matrix: Water

Date Sampled: 02/16/2010 1530
Date Received: 02/17/2010 0907

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161548 | Instrument ID: | VGUTCD1 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1215 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Methane | 9100 | | 0.19 |

MAR 23 2010 ELK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-1S-0210**

Lab Sample ID: 680-55143-1
Client Matrix: Water

Date Sampled: 02/17/2010 1050
Date Received: 02/18/2010 0959

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161547 | Instrument ID: | VGUFID2 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1228 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Ethane | 0.35 | U | 0.35 |
| Ethylene | 0.38 | | 0.33 |



MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-1S-0210**

Lab Sample ID: 680-55143-1
Client Matrix: Water

Date Sampled: 02/17/2010 1050
Date Received: 02/18/2010 0959

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161548 | Instrument ID: | VGUTCD1 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1228 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Methane | 8700 | | 0.19 |



MAR 23 2010

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-1D-0210**

Lab Sample ID: 680-55143-3
Client Matrix: Water

Date Sampled: 02/17/2010 1305
Date Received: 02/18/2010 0959

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161547 | Instrument ID: | VGUFID2 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1241 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Ethane | 59 | | 0.35 |
| Ethylene | 2.3 | | 0.33 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-1D-0210**

Lab Sample ID: 680-55143-3
Client Matrix: Water

Date Sampled: 02/17/2010 1305
Date Received: 02/18/2010 0959

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161548 | Instrument ID: | VGUTCD1 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1241 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Methane | 23000 | | 0.19 |

MAR 23 2010 ELR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-2D-0210**

Lab Sample ID: 680-55143-5
Client Matrix: Water

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161547 | Instrument ID: | VGUFID2 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1254 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Ethane | 8.8 | | 0.35 |
| Ethylene | 0.75 | | 0.33 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-2D-0210**

Lab Sample ID: 680-55143-5
Client Matrix: Water

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161548 | Instrument ID: | VGUTCD1 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1254 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Methane | 2200 | | 0.19 |

MAR 23 2010 ELK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-3D-0210**

Lab Sample ID: 680-55185-1
Client Matrix: Water

Date Sampled: 02/18/2010 0945
Date Received: 02/19/2010 0930

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161547 | Instrument ID: | VGUFID2 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1332 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Ethane | 31 | | 0.35 |
| Ethylene | 0.33 | U | 0.33 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-3D-0210**

Lab Sample ID: 680-55185-1
Client Matrix: Water

Date Sampled: 02/18/2010 0945
Date Received: 02/19/2010 0930

**RSK-175 Dissolved Gases (GC)**

| | | | | |
|---|---|---|---|---|
| Method: | RSK-175 | Analysis Batch: 680-161548 | Instrument ID: | VGUTCD1 |
| Preparation: | N/A | | Initial Weight/Volume: | 17000 uL |
| Dilution: | 1.0 | | Final Weight/Volume: | 17 mL |
| Date Analyzed: | 02/24/2010 1332 | | Injection Volume: | 1 uL |
| Date Prepared: | | | Result Type: | PRIMARY |

| Analyte | Result (ug/L) | Qualifier | RL |
|---|---|---|---|
| Methane | 26000 | | 0.19 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-4D-0210**

Lab Sample ID: 680-55082-1
Client Matrix: Water

Date Sampled: 02/15/2010 1150
Date Received: 02/16/2010 0919

**6010B Metals (ICP)-Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2139 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron | 9.3 | | 0.050 |
| Manganese | 0.25 | | 0.010 |

MAR 23 2010 ZR

## Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-4D-F(0.2)-0210**

Lab Sample ID: 680-55082-2
Client Matrix: Water

Date Sampled: 02/15/2010 1150
Date Received: 02/16/2010 0919

**6010B Metals (ICP)-Dissolved**

| | | | | |
|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | Lab File ID: | N/A |
| Dilution: | 1.0 | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2145 | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron, Dissolved | 9.7 | | 0.050 |
| Manganese, Dissolved | 0.26 | | 0.010 |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-5D-0210**

Lab Sample ID: 680-55082-3
Client Matrix: Water

Date Sampled: 02/15/2010 1630
Date Received: 02/16/2010 0919

**6010B Metals (ICP)-Total Recoverable**

| | | | | |
|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | Lab File ID: | N/A |
| Dilution: | 1.0 | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2150 | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron | 14 | | 0.050 |
| Manganese | 0.44 | | 0.010 |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-5D-F(0.2)-0210**

Lab Sample ID: 680-55082-4
Client Matrix: Water

Date Sampled: 02/15/2010 1630
Date Received: 02/16/2010 0919

**6010B Metals (ICP)-Dissolved**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2205 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron, Dissolved | 15 | | 0.050 |
| Manganese, Dissolved | 0.46 | | 0.010 |

MAR 23 2010 ER

## Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-4D-0210**

Lab Sample ID: 680-55111-1
Client Matrix: Water

Date Sampled: 02/16/2010 1010
Date Received: 02/17/2010 0907

**6010B Metals (ICP)-Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2037 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron | 7.2 | | 0.050 |
| Manganese | 0.56 | | 0.010 |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-4D-F(0.2)-0210**

Lab Sample ID: 680-55111-2
Client Matrix: Water

Date Sampled: 02/16/2010 1010
Date Received: 02/17/2010 0907

**6010B Metals (ICP)-Dissolved**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2103 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron, Dissolved | 8.2 | | 0.050 |
| Manganese, Dissolved | 0.65 | | 0.010 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-5D-0210**

Lab Sample ID: 680-55111-3
Client Matrix: Water

Date Sampled: 02/16/2010 1200
Date Received: 02/17/2010 0907

**6010B Metals (ICP)-Total Recoverable**

| | | | | |
|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | Lab File ID: | N/A |
| Dilution: | 1.0 | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2108 | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron | 78 | | 0.050 |
| Manganese | 2.8 | | 0.010 |

MAR 23 2010 ERL

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-5D-F(0.2)-0210**

Lab Sample ID: 680-55111-4
Client Matrix: Water

Date Sampled: 02/16/2010 1200
Date Received: 02/17/2010 0907

**6010B Metals (ICP)-Dissolved**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2114 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron, Dissolved | 79 | | 0.050 |
| Manganese, Dissolved | 2.9 | | 0.010 |

MAR 23 2010 EMK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-3D-0210**

Lab Sample ID: 680-55111-5
Client Matrix: Water

Date Sampled: 02/16/2010 1400
Date Received: 02/17/2010 0907

**6010B Metals (ICP)-Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2119 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron | 9.8 | | 0.050 |
| Manganese | 0.51 | | 0.010 |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-3D-F(0.2)-0210**

Lab Sample ID: 680-55111-6
Client Matrix: Water

Date Sampled: 02/16/2010 1400
Date Received: 02/17/2010 0907

**6010B Metals (ICP)-Dissolved**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2124 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron, Dissolved | 9.4 | | 0.050 |
| Manganese, Dissolved | 0.50 | | 0.010 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-2D-0210**

Lab Sample ID: 680-55111-7
Client Matrix: Water

Date Sampled: 02/16/2010 1530
Date Received: 02/17/2010 0907

**6010B Metals (ICP)-Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2129 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron | 1.9 | | 0.050 |
| Manganese | 0.31 | | 0.010 |

MAR 23 2010 ERK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-2D-F(0.2)-0210**

Lab Sample ID: 680-55111-8
Client Matrix: Water

Date Sampled: 02/16/2010 1530
Date Received: 02/17/2010 0907

**6010B Metals (ICP)-Dissolved**

| | | | | |
|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161225 | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161109 | Lab File ID: | N/A |
| Dilution: | 1.0 | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2134 | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron, Dissolved | 1.8 | | 0.050 |
| Manganese, Dissolved | 0.32 | | 0.010 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-1S-0210**

Lab Sample ID: 680-55143-1
Client Matrix: Water

Date Sampled: 02/17/2010 1050
Date Received: 02/18/2010 0959

**6010B Metals (ICP)-Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161776 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161475 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/24/2010 2041 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/23/2010 1652 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron | 2.4 | | 0.050 |
| Manganese | 0.40 | | 0.010 |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **BSA-MW-1S-F(0.2)-0210**

Lab Sample ID: 680-55143-2
Client Matrix: Water

Date Sampled: 02/17/2010 1050
Date Received: 02/18/2010 0959

**6010B Metals (ICP)-Dissolved**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161776 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161475 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/24/2010 2107 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/23/2010 1652 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron, Dissolved | 2.2 | | 0.050 |
| Manganese, Dissolved | 0.39 | | 0.010 |

MAR 23 2010 EZ

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-1D-0210**

Lab Sample ID: 680-55143-3
Client Matrix: Water

Date Sampled: 02/17/2010 1305
Date Received: 02/18/2010 0959

**6010B Metals (ICP)-Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161776 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161475 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/24/2010 2112 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/23/2010 1652 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron | 1.2 | | 0.050 |
| Manganese | 0.079 | | 0.010 |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-1D-F(0.2)-0210**

Lab Sample ID: 680-55143-4
Client Matrix: Water

Date Sampled: 02/17/2010 1305
Date Received: 02/18/2010 0959

**6010B Metals (ICP)-Dissolved**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161776 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161475 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/24/2010 2117 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/23/2010 1652 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron, Dissolved | 0.98 | | 0.050 |
| Manganese, Dissolved | 0.064 | | 0.010 |

MAR 23 2010

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-2D-0210**

Lab Sample ID: 680-55143-5
Client Matrix: Water

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**6010B Metals (ICP)-Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161776 | | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161475 | | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/24/2010 2133 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/23/2010 1652 | | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron | 6.1 | | 0.050 |
| Manganese | 0.37 | | 0.010 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-2D-F-(0.2)-0210**

Lab Sample ID: 680-55143-6
Client Matrix: Water

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**6010B Metals (ICP)-Dissolved**

| | | | | |
|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161776 | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161475 | Lab File ID: | N/A |
| Dilution: | 1.0 | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/24/2010 2138 | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/23/2010 1652 | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron, Dissolved | 6.0 | | 0.050 |
| Manganese, Dissolved | 0.37 | | 0.010 |

MAR 23 2010 ZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-3D-0210**

Lab Sample ID: 680-55185-1
Client Matrix: Water

Date Sampled: 02/18/2010 0945
Date Received: 02/19/2010 0930

**6010B Metals (ICP)-Total Recoverable**

| | | | | |
|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161776 | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161475 | Lab File ID: | N/A |
| Dilution: | 1.0 | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/24/2010 2143 | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/23/2010 1652 | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron | 15 | | 0.050 |
| Manganese | 0.75 | | 0.010 |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Client Sample ID:** **CPA-MW-3D-F(0.2)-0210**

Lab Sample ID: 680-55185-2
Client Matrix: Water

Date Sampled: 02/18/2010 0945
Date Received: 02/19/2010 0930

**6010B Metals (ICP)-Dissolved**

| | | | | |
|---|---|---|---|---|
| Method: | 6010B | Analysis Batch: 680-161776 | Instrument ID: | ICPD |
| Preparation: | 3005A | Prep Batch: 680-161475 | Lab File ID: | N/A |
| Dilution: | 1.0 | | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/24/2010 2148 | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/23/2010 1652 | | | |

| Analyte | Result (mg/L) | Qualifier | RL |
|---|---|---|---|
| Iron, Dissolved | 14 | | 0.050 |
| Manganese, Dissolved | 0.71 | | 0.010 |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **CPA-MW-4D-0210**

Lab Sample ID: 680-55082-1
Client Matrix: Water

Date Sampled: 02/15/2010 1150
Date Received: 02/16/2010 0919

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Chloride | 290 | | mg/L | 5.0 | 5.0 | 325.2 |
| Analysis Batch: 680-162285 | Date Analyzed: 03/04/2010 1314 | | | | | |
| Nitrate as N | 0.050 | U | mg/L | 0.050 | 1.0 | 353.2 |
| Analysis Batch: 680-162120 | Date Analyzed: 02/16/2010 1229 | | | | | |
| Sulfate | 5.0 | U | mg/L | 5.0 | 1.0 | 375.4 |
| Analysis Batch: 680-161667 | Date Analyzed: 02/25/2010 1017 | | | | | |
| Total Organic Carbon | 6.8 | | mg/L | 1.0 | 1.0 | 415.1 |
| Analysis Batch: 680-161728 | Date Analyzed: 02/24/2010 1449 | | | | | |

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Alkalinity | 810 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161501 | Date Analyzed: 02/23/2010 1802 | | | | | |
| Carbon Dioxide, Free | 43 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161501 | Date Analyzed: 02/23/2010 1802 | | | | | |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **CPA-MW-4D-F(0.2)-0210**

Lab Sample ID: 680-55082-2
Client Matrix: Water

Date Sampled: 02/15/2010 1150
Date Received: 02/16/2010 0919

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 6.4 | | mg/L | 1.0 | 1.0 | 415.1 |

Analysis Batch: 680-161777 Date Analyzed: 02/16/2010 1529

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **BSA-MW-5D-0210**

Lab Sample ID: 680-55082-3
Client Matrix: Water

Date Sampled: 02/15/2010 1630
Date Received: 02/16/2010 0919

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Chloride | 300 | | mg/L | 5.0 | 5.0 | 325.2 |
| Analysis Batch: 680-162285 | Date Analyzed: 03/04/2010 1314 | | | | | |
| Nitrate as N | 0.050 | U | mg/L | 0.050 | 1.0 | 353.2 |
| Analysis Batch: 680-162120 | Date Analyzed: 02/16/2010 1229 | | | | | |
| Sulfate | 5.0 | U | mg/L | 5.0 | 1.0 | 375.4 |
| Analysis Batch: 680-161667 | Date Analyzed: 02/25/2010 1028 | | | | | |
| Total Organic Carbon | 5.7 | | mg/L | 1.0 | 1.0 | 415.1 |
| Analysis Batch: 680-161728 | Date Analyzed: 02/24/2010 1505 | | | | | |

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Alkalinity | 790 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161501 | Date Analyzed: 02/23/2010 1814 | | | | | |
| Carbon Dioxide, Free | 31 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161501 | Date Analyzed: 02/23/2010 1814 | | | | | |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **BSA-MW-5D-F(0.2)-0210**

Lab Sample ID: 680-55082-4
Client Matrix: Water

Date Sampled: 02/15/2010 1630
Date Received: 02/16/2010 0919

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 5.6 | | mg/L | 1.0 | 1.0 | 415.1 |

Analysis Batch: 680-161777 Date Analyzed: 02/16/2010 1529

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **BSA-MW-4D-0210**

Lab Sample ID: 680-55111-1
Client Matrix: Water

Date Sampled: 02/16/2010 1010
Date Received: 02/17/2010 0907

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Chloride | 120 | | mg/L | 2.0 | 2.0 | 325.2 |
| Analysis Batch: 680-162285 | Date Analyzed: 03/04/2010 1256 | | | | | |
| Nitrate as N | 0.050 | U | mg/L | 0.050 | 1.0 | 353.2 |
| Analysis Batch: 680-162120 | Date Analyzed: 02/18/2010 0941 | | | | | |
| Sulfate | 120 | | mg/L | 25 | 5.0 | 375.4 |
| Analysis Batch: 680-161667 | Date Analyzed: 02/25/2010 1103 | | | | | |
| Total Organic Carbon | 5.8 | | mg/L | 1.0 | 1.0 | 415.1 |
| Analysis Batch: 680-162884 | Date Analyzed: 03/10/2010 1138 | | | | | |

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Alkalinity | 610 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1250 | | | | | |
| Carbon Dioxide, Free | 63 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1250 | | | | | |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **BSA-MW-4D-F(0.2)-0210**

Lab Sample ID: 680-55111-2
Client Matrix: Water

Date Sampled: 02/16/2010 1010
Date Received: 02/17/2010 0907

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 5.7 | | mg/L | 1.0 | 1.0 | 415.1 |

Analysis Batch: 680-162889 Date Analyzed: 03/10/2010 1642

MAR 23 2010 EJR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **CPA-MW-5D-0210**

Lab Sample ID: 680-55111-3
Client Matrix: Water

Date Sampled: 02/16/2010 1200
Date Received: 02/17/2010 0907

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Chloride | 350 | | mg/L | 5.0 | 5.0 | 325.2 |
| Analysis Batch: 680-162285 | Date Analyzed: 03/04/2010 1315 | | | | | |
| Nitrate as N | 0.050 | U | mg/L | 0.050 | 1.0 | 353.2 |
| Analysis Batch: 680-162120 | Date Analyzed: 02/18/2010 0941 | | | | | |
| Sulfate | 1500 | | mg/L | 250 | 50 | 375.4 |
| Analysis Batch: 680-161667 | Date Analyzed: 02/25/2010 1114 | | | | | |
| Total Organic Carbon | 3.4 | | mg/L | 1.0 | 1.0 | 415.1 |
| Analysis Batch: 680-162884 | Date Analyzed: 03/10/2010 1155 | | | | | |

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Alkalinity | 310 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1257 | | | | | |
| Carbon Dioxide, Free | 170 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1257 | | | | | |

MAR 23 2010 ERR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **CPA-MW-5D-F(0.2)-0210**

Lab Sample ID: 680-55111-4
Client Matrix: Water

Date Sampled: 02/16/2010 1200
Date Received: 02/17/2010 0907

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 3.4 | | mg/L | 1.0 | 1.0 | 415.1 |

Analysis Batch: 680-162889 Date Analyzed: 03/10/2010 1642

MAR 23 2010 ECK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **BSA-MW-3D-0210**

Lab Sample ID: 680-55111-5
Client Matrix: Water

Date Sampled: 02/16/2010 1400
Date Received: 02/17/2010 0907

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Chloride | 71 | | mg/L | 1.0 | 1.0 | 325.2 |
| Analysis Batch: 680-162285 | Date Analyzed: 03/04/2010 1247 | | | | | |
| Nitrate as N | 0.050 | U | mg/L | 0.050 | 1.0 | 353.2 |
| Analysis Batch: 680-162120 | Date Analyzed: 02/18/2010 0941 | | | | | |
| Sulfate | 170 | | mg/L | 25 | 5.0 | 375.4 |
| Analysis Batch: 680-161667 | Date Analyzed: 02/25/2010 1103 | | | | | |
| Total Organic Carbon | 3.5 | | mg/L | 1.0 | 1.0 | 415.1 |
| Analysis Batch: 680-162884 | Date Analyzed: 03/10/2010 1212 | | | | | |

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Alkalinity | 490 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1306 | | | | | |
| Carbon Dioxide, Free | 48 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1306 | | | | | |

MAR 23 2010 ERR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **BSA-MW-3D-F(0.2)-0210**

Lab Sample ID: 680-55111-6
Client Matrix: Water

Date Sampled: 02/16/2010 1400
Date Received: 02/17/2010 0907

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 3.4 | | mg/L | 1.0 | 1.0 | 415.1 |

Analysis Batch: 680-162953 Date Analyzed: 03/11/2010 1026

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **BSA-MW-2D-0210**

Lab Sample ID: 680-55111-7
Client Matrix: Water

Date Sampled: 02/16/2010 1530
Date Received: 02/17/2010 0907

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Chloride | 93 | | mg/L | 1.0 | 1.0 | 325.2 |
| Analysis Batch: 680-162285 | Date Analyzed: 03/04/2010 1247 | | | | | |
| Nitrate as N | 0.050 | U | mg/L | 0.050 | 1.0 | 353.2 |
| Analysis Batch: 680-162120 | Date Analyzed: 02/18/2010 0941 | | | | | |
| Sulfate | 5.0 | U | mg/L | 5.0 | 1.0 | 375.4 |
| Analysis Batch: 680-161667 | Date Analyzed: 02/25/2010 1030 | | | | | |
| Total Organic Carbon | 5.6 | | mg/L | 1.0 | 1.0 | 415.1 |
| Analysis Batch: 680-162884 | Date Analyzed: 03/10/2010 1226 | | | | | |

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Alkalinity | 700 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1317 | | | | | |
| Carbon Dioxide, Free | 57 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1317 | | | | | |

MAR 23 2010 ERL

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **BSA-MW-2D-F(0.2)-0210**

Lab Sample ID: 680-55111-8
Client Matrix: Water

Date Sampled: 02/16/2010 1530
Date Received: 02/17/2010 0907

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 5.7 | | mg/L | 1.0 | 1.0 | 415.1 |

Analysis Batch: 680-162953 Date Analyzed: 03/11/2010 1026

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **BSA-MW-1S-0210**

Lab Sample ID: 680-55143-1
Client Matrix: Water

Date Sampled: 02/17/2010 1050
Date Received: 02/18/2010 0959

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Chloride | 100 | | mg/L | 2.0 | 2.0 | 325.2 |
| Analysis Batch: 680-162285 | Date Analyzed: 03/04/2010 1314 | | | | | |
| Nitrate as N | 0.050 | U | mg/L | 0.050 | 1.0 | 353.2 |
| Analysis Batch: 680-162120 | Date Analyzed: 02/18/2010 1432 | | | | | |
| Sulfate | 5.0 | U | mg/L | 5.0 | 1.0 | 375.4 |
| Analysis Batch: 680-161667 | Date Analyzed: 02/25/2010 1030 | | | | | |
| Total Organic Carbon | 8.4 | | mg/L | 1.0 | 1.0 | 415.1 |
| Analysis Batch: 680-162884 | Date Analyzed: 03/10/2010 1242 | | | | | |

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Alkalinity | 920 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1331 | | | | | |
| Carbon Dioxide, Free | 33 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1331 | | | | | |

MAR 23 2010 GRK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **BSA-MW-1S-F(0.2)-0210**

Lab Sample ID: 680-55143-2
Client Matrix: Water

Date Sampled: 02/17/2010 1050
Date Received: 02/18/2010 0959

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 8.3 | | mg/L | 1.0 | 1.0 | 415.1 |

Analysis Batch: 680-162889 Date Analyzed: 03/10/2010 1642

MAR 23 2010 ERR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **CPA-MW-1D-0210**

Lab Sample ID: 680-55143-3
Client Matrix: Water

Date Sampled: 02/17/2010 1305
Date Received: 02/18/2010 0959

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Chloride | 120 | | mg/L | 2.0 | 2.0 | 325.2 |
| Analysis Batch: 680-162285 | Date Analyzed: 03/04/2010 1256 | | | | | |
| Nitrate as N | 0.050 | U | mg/L | 0.050 | 1.0 | 353.2 |
| Analysis Batch: 680-162120 | Date Analyzed: 02/18/2010 1432 | | | | | |
| Sulfate | 5.7 | | mg/L | 5.0 | 1.0 | 375.4 |
| Analysis Batch: 680-161667 | Date Analyzed: 02/25/2010 1032 | | | | | |
| Total Organic Carbon | 12 | | mg/L | 1.0 | 1.0 | 415.1 |
| Analysis Batch: 680-162884 | Date Analyzed: 03/10/2010 1303 | | | | | |

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Alkalinity | 1000 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1345 | | | | | |
| Carbon Dioxide, Free | 5.0 | U | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1345 | | | | | |

MAR 23 2010 EUR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **CPA-MW-1D-F(0.2)-0210**

Lab Sample ID: 680-55143-4
Client Matrix: Water

Date Sampled: 02/17/2010 1305
Date Received: 02/18/2010 0959

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 11 | | mg/L | 1.0 | 1.0 | 415.1 |

Analysis Batch: 680-162889 Date Analyzed: 03/10/2010 1642

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **CPA-MW-2D-0210**

Lab Sample ID: 680-55143-5
Client Matrix: Water

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Chloride | 63 | | mg/L | 1.0 | 1.0 | 325.2 |
| Analysis Batch: 680-162285 | Date Analyzed: 03/04/2010 1247 | | | | | |
| Nitrate as N | 0.050 | U | mg/L | 0.050 | 1.0 | 353.2 |
| Analysis Batch: 680-162120 | Date Analyzed: 02/18/2010 1432 | | | | | |
| Sulfate | 5.0 | U | mg/L | 5.0 | 1.0 | 375.4 |
| Analysis Batch: 680-161667 | Date Analyzed: 02/25/2010 1032 | | | | | |
| Total Organic Carbon | 11 | | mg/L | 1.0 | 1.0 | 415.1 |
| Analysis Batch: 680-162884 | Date Analyzed: 03/10/2010 1350 | | | | | |

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Alkalinity | 610 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1355 | | | | | |
| Carbon Dioxide, Free | 36 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1355 | | | | | |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **CPA-MW-2D-F-(0.2)-0210**

Lab Sample ID: 680-55143-6
Client Matrix: Water

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 12 | | mg/L | 1.0 | 1.0 | 415.1 |

Analysis Batch: 680-162889 Date Analyzed: 03/10/2010 1642

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **CPA-MW-3D-0210**

Lab Sample ID: 680-55185-1
Client Matrix: Water

Date Sampled: 02/18/2010 0945
Date Received: 02/19/2010 0930

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Chloride | 240 | | mg/L | 5.0 | 5.0 | 325.2 |
| Analysis Batch: 680-162285 | Date Analyzed: 03/04/2010 1314 | | | | | |
| Nitrate as N | 0.050 | U | mg/L | 0.050 | 1.0 | 353.2 |
| Analysis Batch: 680-162120 | Date Analyzed: 02/19/2010 1643 | | | | | |
| Sulfate | 5.0 | U | mg/L | 5.0 | 1.0 | 375.4 |
| Analysis Batch: 680-161667 | Date Analyzed: 02/25/2010 1034 | | | | | |
| Total Organic Carbon | 9.9 | | mg/L | 1.0 | 1.0 | 415.1 |
| Analysis Batch: 680-162884 | Date Analyzed: 03/10/2010 1409 | | | | | |

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Alkalinity | 660 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1429 | | | | | |
| Carbon Dioxide, Free | 63 | | mg/L | 5.0 | 1.0 | 310.1 |
| Analysis Batch: 680-161368 | Date Analyzed: 02/22/2010 1429 | | | | | |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**General Chemistry**

**Client Sample ID:** **CPA-MW-3D-F(0.2)-0210**

Lab Sample ID: 680-55185-2
Client Matrix: Water

Date Sampled: 02/18/2010 0945
Date Received: 02/19/2010 0930

| Analyte | Result | Qual | Units | RL | Dil | Method |
|---|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 9.7 | | mg/L | 1.0 | 1.0 | 415.1 |

Analysis Batch: 680-162889 Date Analyzed: 03/10/2010 1642

MAR 23 2010 EZR

# DATA REPORTING QUALIFIERS

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

| Lab Section | Qualifier | Description |
|---|---|---|
| GC/MS VOA | | |
| | U | Indicates the analyte was analyzed for but not detected. |
| GC/MS Semi VOA | | |
| | U | Indicates the analyte was analyzed for but not detected. |
| | F | RPD of the MS and MSD exceeds the control limits |
| | 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 VOA | | |
| | U | Indicates the analyte was analyzed for but not detected. |
| Metals | | |
| | U | Indicates the analyte was analyzed for but not detected. |
| General Chemistry | | |
| | 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. |

# QUALITY CONTROL RESULTS

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **GC/MS VOA** | | | | | |
| **Analysis Batch:680-161124** | | | | | |
| LCS 680-161124/6 | Lab Control Sample | T | Water | 8260B | |
| LCSD 680-161124/7 | Lab Control Sample Duplicate | T | Water | 8260B | |
| MB 680-161124/9 | Method Blank | T | Water | 8260B | |
| 680-55082-1 | CPA-MW-4D-0210 | T | Water | 8260B | |
| 680-55082-3 | BSA-MW-5D-0210 | T | Water | 8260B | |
| 680-55082-5 | 1Q10 LTM Trip Blank #1 | T | Water | 8260B | |
| **Analysis Batch:680-161233** | | | | | |
| LCS 680-161233/5 | Lab Control Sample | T | Water | 8260B | |
| LCSD 680-161233/6 | Lab Control Sample Duplicate | T | Water | 8260B | |
| MB 680-161233/8 | Method Blank | T | Water | 8260B | |
| 680-55111-9 | BSA-MW-3D-0210-EB | T | Water | 8260B | |
| 680-55111-10 | 1Q10 LTM Trip Blank #2 | T | Water | 8260B | |
| **Analysis Batch:680-161234** | | | | | |
| LCS 680-161234/6 | Lab Control Sample | T | Water | 8260B | |
| LCSD 680-161234/7 | Lab Control Sample Duplicate | T | Water | 8260B | |
| MB 680-161234/9 | Method Blank | T | Water | 8260B | |
| 680-55111-1 | BSA-MW-4D-0210 | T | Water | 8260B | |
| 680-55111-3 | CPA-MW-5D-0210 | T | Water | 8260B | |
| **Analysis Batch:680-161320** | | | | | |
| LCS 680-161320/20 | Lab Control Sample | T | Water | 8260B | |
| LCSD 680-161320/21 | Lab Control Sample Duplicate | T | Water | 8260B | |
| MB 680-161320/23 | Method Blank | T | Water | 8260B | |
| 680-55143-1 | BSA-MW-1S-0210 | T | Water | 8260B | |
| 680-55143-3 | CPA-MW-1D-0210 | T | Water | 8260B | |
| 680-55143-5 | CPA-MW-2D-0210 | T | Water | 8260B | |
| 680-55143-7FD | CPA-MW-2D-0210-AD | T | Water | 8260B | |
| 680-55143-8TB | 1Q10-LTM Trip Blank #3 | T | Water | 8260B | |
| **Analysis Batch:680-161453** | | | | | |
| LCS 680-161453/15 | Lab Control Sample | T | Water | 8260B | |
| LCSD 680-161453/16 | Lab Control Sample Duplicate | T | Water | 8260B | |
| MB 680-161453/18 | Method Blank | T | Water | 8260B | |
| 680-55185-1 | CPA-MW-3D-0210 | T | Water | 8260B | |
| 680-55185-3TB | 1Q10 LTM Trip Blank #4 | T | Water | 8260B | |
| **Analysis Batch:680-161527** | | | | | |
| LCS 680-161527/7 | Lab Control Sample | T | Water | 8260B | |
| MB 680-161527/9 | Method Blank | T | Water | 8260B | |
| 680-55111-1MS | Matrix Spike | T | Water | 8260B | |
| 680-55111-1MSD | Matrix Spike Duplicate | T | Water | 8260B | |
| 680-55111-5 | BSA-MW-3D-0210 | T | Water | 8260B | |
| 680-55111-7 | BSA-MW-2D-0210 | T | Water | 8260B | |

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|

**Report Basis**
T = Total

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **GC/MS Semi VOA** | | | | | |
| **Prep Batch: 680-161121** | | | | | |
| LCS 680-161121/16-A | Lab Control Sample | T | Water | 3520C | |
| MB 680-161121/15-A | Method Blank | T | Water | 3520C | |
| 680-55082-1 | CPA-MW-4D-0210 | T | Water | 3520C | |
| 680-55082-3 | BSA-MW-5D-0210 | T | Water | 3520C | |
| 680-55111-1 | BSA-MW-4D-0210 | T | Water | 3520C | |
| 680-55111-1MS | Matrix Spike | T | Water | 3520C | |
| 680-55111-1MSD | Matrix Spike Duplicate | T | Water | 3520C | |
| 680-55111-3 | CPA-MW-5D-0210 | T | Water | 3520C | |
| 680-55111-5 | BSA-MW-3D-0210 | T | Water | 3520C | |
| 680-55111-7 | BSA-MW-2D-0210 | T | Water | 3520C | |
| 680-55111-9 | BSA-MW-3D-0210-EB | T | Water | 3520C | |
| **Prep Batch: 680-161199** | | | | | |
| LCS 680-161199/13-A | Lab Control Sample | T | Water | 3520C | |
| MB 680-161199/12-A | Method Blank | T | Water | 3520C | |
| 680-55143-1 | BSA-MW-1S-0210 | T | Water | 3520C | |
| 680-55143-3 | CPA-MW-1D-0210 | T | Water | 3520C | |
| 680-55143-5 | CPA-MW-2D-0210 | T | Water | 3520C | |
| 680-55143-7FD | CPA-MW-2D-0210-AD | T | Water | 3520C | |
| **Prep Batch: 680-161413** | | | | | |
| LCS 680-161413/7-A | Lab Control Sample | T | Water | 3520C | |
| MB 680-161413/6-A | Method Blank | T | Water | 3520C | |
| 680-55185-1 | CPA-MW-3D-0210 | T | Water | 3520C | |
| 680-55185-1MS | Matrix Spike | T | Water | 3520C | |
| 680-55185-1MSD | Matrix Spike Duplicate | T | Water | 3520C | |
| **Analysis Batch:680-161551** | | | | | |
| LCS 680-161121/16-A | Lab Control Sample | T | Water | 8270C | 680-161121 |
| MB 680-161121/15-A | Method Blank | T | Water | 8270C | 680-161121 |
| 680-55082-1 | CPA-MW-4D-0210 | T | Water | 8270C | 680-161121 |
| 680-55082-3 | BSA-MW-5D-0210 | T | Water | 8270C | 680-161121 |
| 680-55111-1 | BSA-MW-4D-0210 | T | Water | 8270C | 680-161121 |
| 680-55111-3 | CPA-MW-5D-0210 | T | Water | 8270C | 680-161121 |
| 680-55111-5 | BSA-MW-3D-0210 | T | Water | 8270C | 680-161121 |
| 680-55111-7 | BSA-MW-2D-0210 | T | Water | 8270C | 680-161121 |
| **Analysis Batch:680-161641** | | | | | |
| 680-55111-1MS | Matrix Spike | T | Water | 8270C | 680-161121 |
| 680-55111-9 | BSA-MW-3D-0210-EB | T | Water | 8270C | 680-161121 |

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **GC/MS Semi VOA** | | | | | |
| **Analysis Batch:680-161650** | | | | | |
| LCS 680-161413/7-A | Lab Control Sample | T | Water | 8270C | 680-161413 |
| MB 680-161413/6-A | Method Blank | T | Water | 8270C | 680-161413 |
| 680-55185-1 | CPA-MW-3D-0210 | T | Water | 8270C | 680-161413 |
| 680-55185-1MS | Matrix Spike | T | Water | 8270C | 680-161413 |
| 680-55185-1MSD | Matrix Spike Duplicate | T | Water | 8270C | 680-161413 |
| **Analysis Batch:680-161672** | | | | | |
| 680-55111-1MSD | Matrix Spike Duplicate | T | Water | 8270C | 680-161121 |
| **Analysis Batch:680-161991** | | | | | |
| LCS 680-161199/13-A | Lab Control Sample | T | Water | 8270C | 680-161199 |
| MB 680-161199/12-A | Method Blank | T | Water | 8270C | 680-161199 |
| 680-55143-1 | BSA-MW-1S-0210 | T | Water | 8270C | 680-161199 |
| 680-55143-5 | CPA-MW-2D-0210 | T | Water | 8270C | 680-161199 |
| **Analysis Batch:680-162040** | | | | | |
| 680-55143-3 | CPA-MW-1D-0210 | T | Water | 8270C | 680-161199 |
| 680-55143-7FD | CPA-MW-2D-0210-AD | T | Water | 8270C | 680-161199 |

**Report Basis**
T = Total

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **GC VOA** | | | | | |
| **Analysis Batch:680-161547** | | | | | |
| LCS 680-161547/15 | Lab Control Sample | T | Water | RSK-175 | |
| LCSD 680-161547/16 | Lab Control Sample Duplicate | T | Water | RSK-175 | |
| MB 680-161547/17 | Method Blank | T | Water | RSK-175 | |
| 680-55082-1 | CPA-MW-4D-0210 | T | Water | RSK-175 | |
| 680-55082-3 | BSA-MW-5D-0210 | T | Water | RSK-175 | |
| 680-55111-1 | BSA-MW-4D-0210 | T | Water | RSK-175 | |
| 680-55111-3 | CPA-MW-5D-0210 | T | Water | RSK-175 | |
| 680-55111-5 | BSA-MW-3D-0210 | T | Water | RSK-175 | |
| 680-55111-7 | BSA-MW-2D-0210 | T | Water | RSK-175 | |
| 680-55143-1 | BSA-MW-1S-0210 | T | Water | RSK-175 | |
| 680-55143-3 | CPA-MW-1D-0210 | T | Water | RSK-175 | |
| 680-55143-5 | CPA-MW-2D-0210 | T | Water | RSK-175 | |
| 680-55185-1 | CPA-MW-3D-0210 | T | Water | RSK-175 | |
| **Analysis Batch:680-161548** | | | | | |
| LCS 680-161548/9 | Lab Control Sample | T | Water | RSK-175 | |
| LCSD 680-161548/10 | Lab Control Sample Duplicate | T | Water | RSK-175 | |
| MB 680-161548/11 | Method Blank | T | Water | RSK-175 | |
| 680-55082-1 | CPA-MW-4D-0210 | T | Water | RSK-175 | |
| 680-55082-3 | BSA-MW-5D-0210 | T | Water | RSK-175 | |
| 680-55111-7 | BSA-MW-2D-0210 | T | Water | RSK-175 | |
| 680-55143-1 | BSA-MW-1S-0210 | T | Water | RSK-175 | |
| 680-55143-3 | CPA-MW-1D-0210 | T | Water | RSK-175 | |
| 680-55143-5 | CPA-MW-2D-0210 | T | Water | RSK-175 | |
| 680-55185-1 | CPA-MW-3D-0210 | T | Water | RSK-175 | |

**Report Basis**
T = Total

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **Metals** | | | | | |
| **Prep Batch: 680-161109** | | | | | |
| LCS 680-161109/17-A | Lab Control Sample | R | Water | 3005A | |
| MB 680-161109/16-A | Method Blank | R | Water | 3005A | |
| 680-55082-1 | CPA-MW-4D-0210 | R | Water | 3005A | |
| 680-55082-2 | CPA-MW-4D-F(0.2)-0210 | D | Water | 3005A | |
| 680-55082-3 | BSA-MW-5D-0210 | R | Water | 3005A | |
| 680-55082-4 | BSA-MW-5D-F(0.2)-0210 | D | Water | 3005A | |
| 680-55111-1 | BSA-MW-4D-0210 | R | Water | 3005A | |
| 680-55111-2 | BSA-MW-4D-F(0.2)-0210 | D | Water | 3005A | |
| 680-55111-3 | CPA-MW-5D-0210 | R | Water | 3005A | |
| 680-55111-4 | CPA-MW-5D-F(0.2)-0210 | D | Water | 3005A | |
| 680-55111-5 | BSA-MW-3D-0210 | R | Water | 3005A | |
| 680-55111-6 | BSA-MW-3D-F(0.2)-0210 | D | Water | 3005A | |
| 680-55111-7 | BSA-MW-2D-0210 | R | Water | 3005A | |
| 680-55111-8 | BSA-MW-2D-F(0.2)-0210 | D | Water | 3005A | |
| **Analysis Batch:680-161225** | | | | | |
| LCS 680-161109/17-A | Lab Control Sample | R | Water | 6010B | 680-161109 |
| MB 680-161109/16-A | Method Blank | R | Water | 6010B | 680-161109 |
| 680-55082-1 | CPA-MW-4D-0210 | R | Water | 6010B | 680-161109 |
| 680-55082-2 | CPA-MW-4D-F(0.2)-0210 | D | Water | 6010B | 680-161109 |
| 680-55082-3 | BSA-MW-5D-0210 | R | Water | 6010B | 680-161109 |
| 680-55082-4 | BSA-MW-5D-F(0.2)-0210 | D | Water | 6010B | 680-161109 |
| 680-55111-1 | BSA-MW-4D-0210 | R | Water | 6010B | 680-161109 |
| 680-55111-2 | BSA-MW-4D-F(0.2)-0210 | D | Water | 6010B | 680-161109 |
| 680-55111-3 | CPA-MW-5D-0210 | R | Water | 6010B | 680-161109 |
| 680-55111-4 | CPA-MW-5D-F(0.2)-0210 | D | Water | 6010B | 680-161109 |
| 680-55111-5 | BSA-MW-3D-0210 | R | Water | 6010B | 680-161109 |
| 680-55111-6 | BSA-MW-3D-F(0.2)-0210 | D | Water | 6010B | 680-161109 |
| 680-55111-7 | BSA-MW-2D-0210 | R | Water | 6010B | 680-161109 |
| 680-55111-8 | BSA-MW-2D-F(0.2)-0210 | D | Water | 6010B | 680-161109 |
| **Prep Batch: 680-161475** | | | | | |
| LCS 680-161475/16-A | Lab Control Sample | R | Water | 3005A | |
| MB 680-161475/15-A | Method Blank | R | Water | 3005A | |
| 680-55143-1 | BSA-MW-1S-0210 | R | Water | 3005A | |
| 680-55143-1MS | Matrix Spike | R | Water | 3005A | |
| 680-55143-1MSD | Matrix Spike Duplicate | R | Water | 3005A | |
| 680-55143-2 | BSA-MW-1S-F(0.2)-0210 | D | Water | 3005A | |
| 680-55143-3 | CPA-MW-1D-0210 | R | Water | 3005A | |
| 680-55143-4 | CPA-MW-1D-F(0.2)-0210 | D | Water | 3005A | |
| 680-55143-5 | CPA-MW-2D-0210 | R | Water | 3005A | |
| 680-55143-6 | CPA-MW-2D-F-(0.2)-0210 | D | Water | 3005A | |
| 680-55185-1 | CPA-MW-3D-0210 | R | Water | 3005A | |
| 680-55185-2 | CPA-MW-3D-F(0.2)-0210 | D | Water | 3005A | |

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **Metals** | | | | | |
| **Analysis Batch:680-161776** | | | | | |
| LCS 680-161475/16-A | Lab Control Sample | R | Water | 6010B | 680-161475 |
| MB 680-161475/15-A | Method Blank | R | Water | 6010B | 680-161475 |
| 680-55143-1 | BSA-MW-1S-0210 | R | Water | 6010B | 680-161475 |
| 680-55143-1MS | Matrix Spike | R | Water | 6010B | 680-161475 |
| 680-55143-1MSD | Matrix Spike Duplicate | R | Water | 6010B | 680-161475 |
| 680-55143-2 | BSA-MW-1S-F(0.2)-0210 | D | Water | 6010B | 680-161475 |
| 680-55143-3 | CPA-MW-1D-0210 | R | Water | 6010B | 680-161475 |
| 680-55143-4 | CPA-MW-1D-F(0.2)-0210 | D | Water | 6010B | 680-161475 |
| 680-55143-5 | CPA-MW-2D-0210 | R | Water | 6010B | 680-161475 |
| 680-55143-6 | CPA-MW-2D-F-(0.2)-0210 | D | Water | 6010B | 680-161475 |
| 680-55185-1 | CPA-MW-3D-0210 | R | Water | 6010B | 680-161475 |
| 680-55185-2 | CPA-MW-3D-F(0.2)-0210 | D | Water | 6010B | 680-161475 |

**Report Basis**
D = Dissolved
R = Total Recoverable

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **General Chemistry** | | | | | |
| **Analysis Batch:680-161368** | | | | | |
| LCS 680-161368/6 | Lab Control Sample | T | Water | 310.1 | |
| MB 680-161368/5 | Method Blank | T | Water | 310.1 | |
| 680-55111-1 | BSA-MW-4D-0210 | T | Water | 310.1 | |
| 680-55111-3 | CPA-MW-5D-0210 | T | Water | 310.1 | |
| 680-55111-5 | BSA-MW-3D-0210 | T | Water | 310.1 | |
| 680-55111-7 | BSA-MW-2D-0210 | T | Water | 310.1 | |
| 680-55143-1 | BSA-MW-1S-0210 | T | Water | 310.1 | |
| 680-55143-3 | CPA-MW-1D-0210 | T | Water | 310.1 | |
| 680-55143-5 | CPA-MW-2D-0210 | T | Water | 310.1 | |
| 680-55185-1 | CPA-MW-3D-0210 | T | Water | 310.1 | |
| **Analysis Batch:680-161501** | | | | | |
| LCS 680-161501/9 | Lab Control Sample | T | Water | 310.1 | |
| MB 680-161501/5 | Method Blank | T | Water | 310.1 | |
| 680-55082-1 | CPA-MW-4D-0210 | T | Water | 310.1 | |
| 680-55082-3 | BSA-MW-5D-0210 | T | Water | 310.1 | |
| **Analysis Batch:680-161667** | | | | | |
| LCS 680-161667/2 | Lab Control Sample | T | Water | 375.4 | |
| MB 680-161667/1 | Method Blank | T | Water | 375.4 | |
| 680-55082-1 | CPA-MW-4D-0210 | T | Water | 375.4 | |
| 680-55082-3 | BSA-MW-5D-0210 | T | Water | 375.4 | |
| 680-55111-1 | BSA-MW-4D-0210 | T | Water | 375.4 | |
| 680-55111-3 | CPA-MW-5D-0210 | T | Water | 375.4 | |
| 680-55111-5 | BSA-MW-3D-0210 | T | Water | 375.4 | |
| 680-55111-7 | BSA-MW-2D-0210 | T | Water | 375.4 | |
| 680-55143-1 | BSA-MW-1S-0210 | T | Water | 375.4 | |
| 680-55143-3 | CPA-MW-1D-0210 | T | Water | 375.4 | |
| 680-55143-5 | CPA-MW-2D-0210 | T | Water | 375.4 | |
| 680-55185-1 | CPA-MW-3D-0210 | T | Water | 375.4 | |
| **Analysis Batch:680-161728** | | | | | |
| LCS 680-161728/4 | Lab Control Sample | T | Water | 415.1 | |
| MB 680-161728/2 | Method Blank | T | Water | 415.1 | |
| 680-55082-1 | CPA-MW-4D-0210 | T | Water | 415.1 | |
| 680-55082-3 | BSA-MW-5D-0210 | T | Water | 415.1 | |
| **Analysis Batch:680-161777** | | | | | |
| LCS 680-161777/2 | Lab Control Sample | D | Water | 415.1 | |
| MB 680-161777/1 | Method Blank | D | Water | 415.1 | |
| 680-55082-2 | CPA-MW-4D-F(0.2)-0210 | D | Water | 415.1 | |
| 680-55082-4 | BSA-MW-5D-F(0.2)-0210 | D | Water | 415.1 | |
| 680-55082-4DU | Duplicate | D | Water | 415.1 | |

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **General Chemistry** | | | | | |
| **Analysis Batch:680-162120** | | | | | |
| LCS 680-162120/2 | Lab Control Sample | T | Water | 353.2 | |
| MB 680-162120/1 | Method Blank | T | Water | 353.2 | |
| 680-55082-1 | CPA-MW-4D-0210 | T | Water | 353.2 | |
| 680-55082-1MS | Matrix Spike | T | Water | 353.2 | |
| 680-55082-1MSD | Matrix Spike Duplicate | T | Water | 353.2 | |
| 680-55082-3 | BSA-MW-5D-0210 | T | Water | 353.2 | |
| 680-55111-1 | BSA-MW-4D-0210 | T | Water | 353.2 | |
| 680-55111-3 | CPA-MW-5D-0210 | T | Water | 353.2 | |
| 680-55111-5 | BSA-MW-3D-0210 | T | Water | 353.2 | |
| 680-55111-7 | BSA-MW-2D-0210 | T | Water | 353.2 | |
| 680-55143-1 | BSA-MW-1S-0210 | T | Water | 353.2 | |
| 680-55143-3 | CPA-MW-1D-0210 | T | Water | 353.2 | |
| 680-55143-5 | CPA-MW-2D-0210 | T | Water | 353.2 | |
| 680-55185-1 | CPA-MW-3D-0210 | T | Water | 353.2 | |
| **Analysis Batch:680-162285** | | | | | |
| LCS 680-162285/1 | Lab Control Sample | T | Water | 325.2 | |
| MB 680-162285/19 | Method Blank | T | Water | 325.2 | |
| 680-55082-1 | CPA-MW-4D-0210 | T | Water | 325.2 | |
| 680-55082-1MS | Matrix Spike | T | Water | 325.2 | |
| 680-55082-1MSD | Matrix Spike Duplicate | T | Water | 325.2 | |
| 680-55082-3 | BSA-MW-5D-0210 | T | Water | 325.2 | |
| 680-55111-1 | BSA-MW-4D-0210 | T | Water | 325.2 | |
| 680-55111-3 | CPA-MW-5D-0210 | T | Water | 325.2 | |
| 680-55111-5 | BSA-MW-3D-0210 | T | Water | 325.2 | |
| 680-55111-7 | BSA-MW-2D-0210 | T | Water | 325.2 | |
| 680-55143-1 | BSA-MW-1S-0210 | T | Water | 325.2 | |
| 680-55143-3 | CPA-MW-1D-0210 | T | Water | 325.2 | |
| 680-55143-5 | CPA-MW-2D-0210 | T | Water | 325.2 | |
| 680-55185-1 | CPA-MW-3D-0210 | T | Water | 325.2 | |
| **Analysis Batch:680-162884** | | | | | |
| LCS 680-162884/4 | Lab Control Sample | T | Water | 415.1 | |
| MB 680-162884/2 | Method Blank | T | Water | 415.1 | |
| 680-55111-1 | BSA-MW-4D-0210 | T | Water | 415.1 | |
| 680-55111-3 | CPA-MW-5D-0210 | T | Water | 415.1 | |
| 680-55111-5 | BSA-MW-3D-0210 | T | Water | 415.1 | |
| 680-55111-7 | BSA-MW-2D-0210 | T | Water | 415.1 | |
| 680-55143-1 | BSA-MW-1S-0210 | T | Water | 415.1 | |
| 680-55143-3 | CPA-MW-1D-0210 | T | Water | 415.1 | |
| 680-55143-5 | CPA-MW-2D-0210 | T | Water | 415.1 | |
| 680-55185-1 | CPA-MW-3D-0210 | T | Water | 415.1 | |

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **General Chemistry** | | | | | |
| **Analysis Batch:680-162889** | | | | | |
| LCS 680-162889/2 | Lab Control Sample | D | Water | 415.1 | |
| MB 680-162889/1 | Method Blank | D | Water | 415.1 | |
| 680-55111-2 | BSA-MW-4D-F(0.2)-0210 | D | Water | 415.1 | |
| 680-55111-4 | CPA-MW-5D-F(0.2)-0210 | D | Water | 415.1 | |
| 680-55143-2 | BSA-MW-1S-F(0.2)-0210 | D | Water | 415.1 | |
| 680-55143-4 | CPA-MW-1D-F(0.2)-0210 | D | Water | 415.1 | |
| 680-55143-6 | CPA-MW-2D-F-(0.2)-0210 | D | Water | 415.1 | |
| 680-55185-2 | CPA-MW-3D-F(0.2)-0210 | D | Water | 415.1 | |
| **Analysis Batch:680-162953** | | | | | |
| LCS 680-162953/2 | Lab Control Sample | D | Water | 415.1 | |
| MB 680-162953/1 | Method Blank | D | Water | 415.1 | |
| 680-55111-6 | BSA-MW-3D-F(0.2)-0210 | D | Water | 415.1 | |
| 680-55111-8 | BSA-MW-2D-F(0.2)-0210 | D | Water | 415.1 | |

**Report Basis**
D = Dissolved
T = Total

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## Surrogate Recovery Report

**8260B Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

| Lab Sample ID | Client Sample ID | BFB %Rec | DBFM %Rec | TOL %Rec |
|---|---|---|---|---|
| 680-55082-1 | CPA-MW-4D-0210 | 96 | 102 | 104 |
| 680-55082-3 | BSA-MW-5D-0210 | 94 | 104 | 106 |
| 680-55082-5 | 1Q10 LTM Trip Blank #1 | 91 | 111 | 103 |
| 680-55111-1 | BSA-MW-4D-0210 | 93 | 102 | 108 |
| 680-55111-3 | CPA-MW-5D-0210 | 93 | 108 | 108 |
| 680-55111-5 | BSA-MW-3D-0210 | 89 | 105 | 109 |
| 680-55111-7 | BSA-MW-2D-0210 | 91 | 110 | 107 |
| 680-55111-9 | BSA-MW-3D-0210-EB | 95 | 113 | 103 |
| 680-55111-10 | 1Q10 LTM Trip Blank #2 | 92 | 109 | 105 |
| 680-55143-1 | BSA-MW-1S-0210 | 101 | 103 | 100 |
| 680-55143-3 | CPA-MW-1D-0210 | 106 | 101 | 100 |
| 680-55143-5 | CPA-MW-2D-0210 | 106 | 98 | 102 |
| 680-55143-7 | CPA-MW-2D-0210-A D | 105 | 98 | 102 |
| 680-55143-8 | 1Q10-LTM Trip Blank #3 | 102 | 104 | 100 |
| 680-55185-1 | CPA-MW-3D-0210 | 109 | 98 | 109 |
| 680-55185-3 | 1Q10 LTM Trip Blank #4 | 101 | 109 | 107 |
| MB 680-161124/9 | | 92 | 111 | 102 |
| MB 680-161233/8 | | 94 | 111 | 104 |
| MB 680-161234/9 | | 94 | 108 | 104 |
| MB 680-161320/23 | | 104 | 101 | 103 |
| MB 680-161453/18 | | 105 | 112 | 104 |
| MB 680-161527/9 | | 97 | 112 | 104 |
| LCS 680-161124/6 | | 97 | 108 | 104 |
| LCS 680-161233/5 | | 93 | 99 | 99 |
| LCS 680-161234/6 | | 95 | 98 | 101 |
| LCS 680-161320/20 | | 106 | 100 | 100 |
| LCS 680-161453/15 | | 110 | 111 | 108 |

| Surrogate | Acceptance Limits |
|---|---|
| BFB = 4-Bromofluorobenzene | 75-120 |
| DBFM = Dibromofluoromethane | 75-121 |
| TOL = Toluene-d8 (Surr) | 75-120 |

MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## Surrogate Recovery Report

**8260B Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

| Lab Sample ID | Client Sample ID | BFB %Rec | DBFM %Rec | TOL %Rec |
|---|---|---|---|---|
| LCS 680-161527/7 | | 97 | 100 | 99 |
| LCSD 680-161124/7 | | 94 | 109 | 103 |
| LCSD 680-161233/6 | | 95 | 101 | 99 |
| LCSD 680-161234/7 | | 95 | 99 | 102 |
| LCSD 680-161320/21 | | 106 | 103 | 100 |
| LCSD 680-161453/16 | | 107 | 110 | 106 |
| 680-55111-1 MS | BSA-MW-4D-0210 MS | 91 | 101 | 100 |
| 680-55111-1 MSD | BSA-MW-4D-0210 MSD | 89 | 100 | 101 |

| Surrogate | Acceptance Limits |
|---|---|
| BFB = 4-Bromofluorobenzene | 75-120 |
| DBFM = Dibromofluoromethane | 75-121 |
| TOL = Toluene-d8 (Surr) | 75-120 |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## Surrogate Recovery Report

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

**Client Matrix: Water**

| Lab Sample ID | Client Sample ID | PHL %Rec | 2FP %Rec | TBP %Rec | NBZ %Rec | FBP %Rec | TPH %Rec |
|---|---|---|---|---|---|---|---|
| 680-55082-1 | CPA-MW-4D-0210 | 79 | 76 | 91 | 79 | 75 | 43 |
| 680-55082-3 | BSA-MW-5D-0210 | 62 | 40 | 84 | 71 | 67 | 41 |
| 680-55111-3 | CPA-MW-5D-0210 | 79 | 76 | 90 | 83 | 77 | 43 |
| 680-55143-1 | BSA-MW-1S-0210 | 65 | 58 | 85 | 75 | 64 | 56 |
| 680-55143-3 | CPA-MW-1D-0210 | 0D | 0D | 0D | 0D | 0D | 0D |
| 680-55143-5 | CPA-MW-2D-0210 | 87 | 78 | 86 | 72 | 65 | 50 |
| 680-55143-7 | CPA-MW-2D-0210-AD | 0D | 0D | 0D | 0D | 0D | 0D |
| 680-55185-1 | CPA-MW-3D-0210 | 62 | 67 | 84 | 78 | 72 | 95 |

| Surrogate | Acceptance Limits |
|---|---|
| PHL = Phenol-d5 | 38-116 |
| 2FP = 2-Fluorophenol | 36-110 |
| TBP = 2,4,6-Tribromophenol | 40-139 |
| NBZ = Nitrobenzene-d5 | 45-112 |
| FBP = 2-Fluorobiphenyl | 50-113 |
| TPH = Terphenyl-d14 | 10-121 |

MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## Surrogate Recovery Report

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

**Client Matrix: Water**

| Lab Sample ID | Client Sample ID | PHL %Rec | TBP %Rec | 2FP %Rec | FBP %Rec | NBZ %Rec | TPH %Rec |
|---|---|---|---|---|---|---|---|
| MB 680-161121/15-A | | 77 | 88 | 77 | 78 | 81 | 84 |
| MB 680-161199/12-A | | 82 | 103 | 82 | 86 | 87 | 88 |
| MB 680-161413/6-A | | 45 | 56 | 53 | 56 | 60 | 108 |
| LCS 680-161121/16-A | | 80 | 93 | 78 | 83 | 83 | 75 |
| LCS 680-161199/13-A | | 73 | 98 | 74 | 83 | 84 | 71 |
| LCS 680-161413/7-A | | 64 | 77 | 65 | 80 | 70 | 78 |
| 680-55185-1 MS | CPA-MW-3D-0210 MS | 61 | 66 | 61 | 74 | 73 | 75 |
| 680-55185-1 MSD | CPA-MW-3D-0210 MSD | 57 | 68 | 57 | 76 | 67 | 76 |

| Surrogate | Acceptance Limits |
|---|---|
| PHL = Phenol-d5 | 38-116 |
| TBP = 2,4,6-Tribromophenol | 40-139 |
| 2FP = 2-Fluorophenol | 36-110 |
| FBP = 2-Fluorobiphenyl | 50-113 |
| NBZ = Nitrobenzene-d5 | 45-112 |
| TPH = Terphenyl-d14 | 10-121 |

MAR 23 2010 EKR

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

## Surrogate Recovery Report

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

**Client Matrix: Water**

| Lab Sample ID | Client Sample ID | PHL %Rec | TBP %Rec | FBP %Rec | 2FP %Rec | NBZ %Rec | TPH %Rec |
|---|---|---|---|---|---|---|---|
| 680-55111-1 | BSA-MW-4D-0210 | 70 | 81 | 72 | 78 | 77 | 40 |
| 680-55111-5 | BSA-MW-3D-0210 | 74 | 87 | 72 | 72 | 78 | 37 |
| 680-55111-7 | BSA-MW-2D-0210 | 78 | 91 | 74 | 73 | 79 | 39 |
| 680-55111-9 | BSA-MW-3D-0210-EB | 72 | 79 | 80 | 75 | 82 | 83 |
| 680-55111-1 MS | BSA-MW-4D-0210 MS | 74 | 87 | 82 | 73 | 80 | 64 |
| 680-55111-1 MSD | BSA-MW-4D-0210 MSD | 74 | 91 | 81 | 75 | 81 | 64 |

| Surrogate | Acceptance Limits |
|---|---|
| PHL = Phenol-d5 | 38-116 |
| TBP = 2,4,6-Tribromophenol | 40-139 |
| FBP = 2-Fluorobiphenyl | 50-113 |
| 2FP = 2-Fluorophenol | 36-110 |
| NBZ = Nitrobenzene-d5 | 45-112 |
| TPH = Terphenyl-d14 | 10-121 |

MAR 23 2010 ERK

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161124**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161124/9 | Analysis Batch: | 680-161124 | Instrument ID: | MSO |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | oq201.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/18/2010 1155 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/18/2010 1155 | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Benzene | 1.0 | U | 1.0 |
| Chlorobenzene | 1.0 | U | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 92 | 75 - 120 |
| Dibromofluoromethane | 111 | 75 - 121 |
| Toluene-d8 (Surr) | 102 | 75 - 120 |

MAR 23 2010 ELK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Lab Control Sample/**
**Lab Control Sample Duplicate Recovery Report - Batch: 680-161124**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| LCS Lab Sample ID: | LCS 680-161124/6 | Analysis Batch: | 680-161124 | Instrument ID: | MSO |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | oq193.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/18/2010 0959 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/18/2010 0959 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| LCSD Lab Sample ID: | LCSD 680-161124/7 | Analysis Batch: | 680-161124 | Instrument ID: | MSO |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | oq195.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/18/2010 1028 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/18/2010 1028 | | | | |

| Analyte | % Rec. LCS | % Rec. LCSD | Limit | RPD | RPD Limit | LCS Qual | LCSD Qual |
|---|---|---|---|---|---|---|---|
| Benzene | 104 | 103 | 77 - 119 | 1 | 30 | | |
| Chlorobenzene | 101 | 99 | 85 - 116 | 2 | 30 | | |
| 1,2-Dichlorobenzene | 99 | 98 | 79 - 124 | 1 | 30 | | |
| 1,3-Dichlorobenzene | 97 | 97 | 78 - 125 | 1 | 30 | | |
| 1,4-Dichlorobenzene | 101 | 101 | 81 - 122 | 0 | 30 | | |

| Surrogate | LCS % Rec | LCSD % Rec | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 97 | 94 | 75 - 120 |
| Dibromofluoromethane | 108 | 109 | 75 - 121 |
| Toluene-d8 (Surr) | 104 | 103 | 75 - 120 |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161233**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161233/8 | Analysis Batch: | 680-161233 | Instrument ID: | MSO |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | oq215.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1143 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1143 | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Benzene | 1.0 | U | 1.0 |
| Chlorobenzene | 1.0 | U | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 94 | 75 - 120 |
| Dibromofluoromethane | 111 | 75 - 121 |
| Toluene-d8 (Surr) | 104 | 75 - 120 |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Lab Control Sample/**
**Lab Control Sample Duplicate Recovery Report - Batch: 680-161233**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| LCS Lab Sample ID: | LCS 680-161233/5 | Analysis Batch: | 680-161233 | Instrument ID: | MSO |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | oq207.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 0940 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 0940 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| LCSD Lab Sample ID: | LCSD 680-161233/6 | Analysis Batch: | 680-161233 | Instrument ID: | MSO |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | oq209.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1009 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1009 | | | | |

| Analyte | % Rec. LCS | % Rec. LCSD | Limit | RPD | RPD Limit | LCS Qual | LCSD Qual |
|---|---|---|---|---|---|---|---|
| Benzene | 100 | 102 | 77 - 119 | 2 | 30 | | |
| Chlorobenzene | 99 | 104 | 85 - 116 | 5 | 30 | | |
| 1,2-Dichlorobenzene | 98 | 103 | 79 - 124 | 5 | 30 | | |
| 1,3-Dichlorobenzene | 96 | 99 | 78 - 125 | 3 | 30 | | |
| 1,4-Dichlorobenzene | 98 | 105 | 81 - 122 | 7 | 30 | | |

| Surrogate | LCS % Rec | LCSD % Rec | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 93 | 95 | 75 - 120 |
| Dibromofluoromethane | 99 | 101 | 75 - 121 |
| Toluene-d8 (Surr) | 99 | 99 | 75 - 120 |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161234**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161234/9 | Analysis Batch: | 680-161234 | Instrument ID: | MSO2 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | oq216.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1158 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1158 | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Benzene | 1.0 | U | 1.0 |
| Chlorobenzene | 1.0 | U | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 94 | 75 - 120 |
| Dibromofluoromethane | 108 | 75 - 121 |
| Toluene-d8 (Surr) | 104 | 75 - 120 |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Lab Control Sample/**
**Lab Control Sample Duplicate Recovery Report - Batch: 680-161234**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| LCS Lab Sample ID: | LCS 680-161234/6 | Analysis Batch: | 680-161234 | Instrument ID: | MSO2 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | oq208.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 0954 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 0954 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| LCSD Lab Sample ID: | LCSD 680-161234/7 | Analysis Batch: | 680-161234 | Instrument ID: | MSO2 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | oq210.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1023 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1023 | | | | |

| Analyte | % Rec. LCS | % Rec. LCSD | Limit | RPD | RPD Limit | LCS Qual | LCSD Qual |
|---|---|---|---|---|---|---|---|
| Benzene | 100 | 103 | 77 - 119 | 3 | 30 | | |
| Chlorobenzene | 101 | 103 | 85 - 116 | 2 | 30 | | |
| 1,2-Dichlorobenzene | 104 | 107 | 79 - 124 | 2 | 30 | | |
| 1,3-Dichlorobenzene | 94 | 95 | 78 - 125 | 0 | 30 | | |
| 1,4-Dichlorobenzene | 103 | 106 | 81 - 122 | 3 | 30 | | |

| Surrogate | LCS % Rec | LCSD % Rec | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 95 | 95 | 75 - 120 |
| Dibromofluoromethane | 98 | 99 | 75 - 121 |
| Toluene-d8 (Surr) | 101 | 102 | 75 - 120 |

MAR 23 2010 EZR

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161320**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161320/23 | Analysis Batch: | 680-161320 | Instrument ID: | MSP |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | pq029.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1245 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1245 | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Benzene | 1.0 | U | 1.0 |
| Chlorobenzene | 1.0 | U | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 104 | 75 - 120 |
| Dibromofluoromethane | 101 | 75 - 121 |
| Toluene-d8 (Surr) | 103 | 75 - 120 |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Lab Control Sample/**
**Lab Control Sample Duplicate Recovery Report - Batch: 680-161320**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| LCS Lab Sample ID: | LCS 680-161320/20 | Analysis Batch: | 680-161320 | Instrument ID: | MSP |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | pq021.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1047 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1047 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| LCSD Lab Sample ID: | LCSD 680-161320/21 | Analysis Batch: | 680-161320 | Instrument ID: | MSP |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | pq023.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1116 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1116 | | | | |

| | % Rec. | | | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | LCS | LCSD | Limit | RPD | RPD Limit | LCS Qual | LCSD Qual |
| Benzene | 101 | 100 | 77 - 119 | 0 | 30 | | |
| Chlorobenzene | 106 | 104 | 85 - 116 | 1 | 30 | | |
| 1,2-Dichlorobenzene | 105 | 106 | 79 - 124 | 1 | 30 | | |
| 1,3-Dichlorobenzene | 104 | 104 | 78 - 125 | 0 | 30 | | |
| 1,4-Dichlorobenzene | 107 | 105 | 81 - 122 | 2 | 30 | | |

| Surrogate | LCS % Rec | LCSD % Rec | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 106 | 106 | 75 - 120 |
| Dibromofluoromethane | 100 | 103 | 75 - 121 |
| Toluene-d8 (Surr) | 100 | 100 | 75 - 120 |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161453**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161453/18 | Analysis Batch: | 680-161453 | Instrument ID: | MSP2 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | pq042.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/22/2010 1158 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/22/2010 1158 | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Benzene | 1.0 | U | 1.0 |
| Chlorobenzene | 1.0 | U | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 105 | 75 - 120 |
| Dibromofluoromethane | 112 | 75 - 121 |
| Toluene-d8 (Surr) | 104 | 75 - 120 |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Lab Control Sample/**
**Lab Control Sample Duplicate Recovery Report - Batch: 680-161453**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| LCS Lab Sample ID: | LCS 680-161453/15 | Analysis Batch: | 680-161453 | Instrument ID: | MSP2 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | pq036.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/22/2010 1029 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/22/2010 1029 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| LCSD Lab Sample ID: | LCSD 680-161453/16 | Analysis Batch: | 680-161453 | Instrument ID: | MSP2 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | pq038.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/22/2010 1059 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/22/2010 1059 | | | | |

| Analyte | % Rec. LCS | % Rec. LCSD | Limit | RPD | RPD Limit | LCS Qual | LCSD Qual |
|---|---|---|---|---|---|---|---|
| Benzene | 107 | 103 | 77 - 119 | 3 | 30 | | |
| Chlorobenzene | 114 | 109 | 85 - 116 | 5 | 30 | | |
| 1,2-Dichlorobenzene | 115 | 112 | 79 - 124 | 2 | 30 | | |
| 1,3-Dichlorobenzene | 112 | 109 | 78 - 125 | 3 | 30 | | |
| 1,4-Dichlorobenzene | 115 | 112 | 81 - 122 | 3 | 30 | | |

| Surrogate | LCS % Rec | LCSD % Rec | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 110 | 107 | 75 - 120 |
| Dibromofluoromethane | 111 | 110 | 75 - 121 |
| Toluene-d8 (Surr) | 108 | 106 | 75 - 120 |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161527**

**Method: 8260B**
**Preparation: 5030B**

Lab Sample ID: MB 680-161527/9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/22/2010 1630
Date Prepared: 02/22/2010 1630

Analysis Batch: 680-161527
Prep Batch: N/A
Units: ug/L

Instrument ID: MSO
Lab File ID: oq229.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Benzene | 1.0 | U | 1.0 |
| Chlorobenzene | 1.0 | U | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 1.0 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 97 | 75 - 120 |
| Dibromofluoromethane | 112 | 75 - 121 |
| Toluene-d8 (Surr) | 104 | 75 - 120 |

**Lab Control Sample - Batch: 680-161527**

**Method: 8260B**
**Preparation: 5030B**

Lab Sample ID: LCS 680-161527/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/22/2010 1503
Date Prepared: 02/22/2010 1503

Analysis Batch: 680-161527
Prep Batch: N/A
Units: ug/L

Instrument ID: MSO
Lab File ID: oq223.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Benzene | 50.0 | 50.8 | 102 | 77 - 119 | |
| Chlorobenzene | 50.0 | 51.2 | 102 | 85 - 116 | |
| 1,2-Dichlorobenzene | 50.0 | 51.2 | 102 | 79 - 124 | |
| 1,3-Dichlorobenzene | 50.0 | 48.0 | 96 | 78 - 125 | |
| 1,4-Dichlorobenzene | 50.0 | 51.9 | 104 | 81 - 122 | |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 97 | 75 - 120 |
| Dibromofluoromethane | 100 | 75 - 121 |
| Toluene-d8 (Surr) | 99 | 75 - 120 |

MAR 23 2010 EZR

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Matrix Spike/**
**Matrix Spike Duplicate Recovery Report - Batch: 680-161527**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| MS Lab Sample ID: | 680-55111-1 | Analysis Batch: | 680-161527 | Instrument ID: | MSO |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | o0361.d |
| Dilution: | 20 | | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/22/2010 2124 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/22/2010 2124 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| MSD Lab Sample ID: | 680-55111-1 | Analysis Batch: | 680-161527 | Instrument ID: | MSO |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | o0363.d |
| Dilution: | 20 | | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/22/2010 2153 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/22/2010 2153 | | | | |

| | % Rec. | | | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | MS | MSD | Limit | RPD | RPD Limit | MS Qual | MSD Qual |
| Benzene | 101 | 101 | 77 - 119 | 0 | 30 | | |
| Chlorobenzene | 93 | 102 | 85 - 116 | 3 | 30 | | |
| 1,2-Dichlorobenzene | 94 | 97 | 79 - 124 | 3 | 30 | | |
| 1,3-Dichlorobenzene | 90 | 94 | 78 - 125 | 4 | 30 | | |
| 1,4-Dichlorobenzene | 97 | 101 | 81 - 122 | 4 | 30 | | |

| Surrogate | MS % Rec | MSD % Rec | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 91 | 89 | 75 - 120 |
| Dibromofluoromethane | 101 | 100 | 75 - 121 |
| Toluene-d8 (Surr) | 100 | 101 | 75 - 120 |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161121**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161121/15-A | Analysis Batch: | 680-161551 | Instrument ID: | MSF |
| Client Matrix: | Water | Prep Batch: | 680-161121 | Lab File ID: | f4538.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 1000 mL |
| Date Analyzed: | 02/23/2010 1902 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/18/2010 1519 | | | Injection Volume: | 1 uL |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| 4-Chloroaniline | 20 | U | 20 |
| 1,2,4-Trichlorobenzene | 10 | U | 10 |
| 1,4-Dioxane | 10 | U | 10 |
| 2-Chlorophenol | 10 | U | 10 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| Phenol-d5 | 77 | 38 - 116 |
| 2,4,6-Tribromophenol | 88 | 40 - 139 |
| 2-Fluorophenol | 77 | 36 - 110 |
| 2-Fluorobiphenyl | 78 | 50 - 113 |
| Nitrobenzene-d5 | 81 | 45 - 112 |
| Terphenyl-d14 | 84 | 10 - 121 |

**Lab Control Sample - Batch: 680-161121**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161121/16-A | Analysis Batch: | 680-161551 | Instrument ID: | MSF |
| Client Matrix: | Water | Prep Batch: | 680-161121 | Lab File ID: | f4539.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 1000 mL |
| Date Analyzed: | 02/24/2010 0046 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/18/2010 1519 | | | Injection Volume: | 1 uL |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| 4-Chloroaniline | 100 | 56.8 | 57 | 10 - 110 | |
| 1,2,4-Trichlorobenzene | 100 | 73.3 | 73 | 41 - 110 | |
| 1,4-Dioxane | 100 | 49.3 | 49 | 11 - 110 | |
| 2-Chlorophenol | 100 | 79.1 | 79 | 47 - 110 | |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| Phenol-d5 | 80 | 38 - 116 |
| 2,4,6-Tribromophenol | 93 | 40 - 139 |
| 2-Fluorophenol | 78 | 36 - 110 |
| 2-Fluorobiphenyl | 83 | 50 - 113 |
| Nitrobenzene-d5 | 83 | 45 - 112 |
| Terphenyl-d14 | 75 | 10 - 121 |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Matrix Spike/**
**Matrix Spike Duplicate Recovery Report - Batch: 680-161121**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| MS Lab Sample ID: | 680-55111-1 | Analysis Batch: | 680-161641 | Instrument ID: | MSF |
| Client Matrix: | Water | Prep Batch: | 680-161121 | Lab File ID: | f4562.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 1060 mL |
| Date Analyzed: | 02/24/2010 1640 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/18/2010 1519 | | | Injection Volume: | 1 uL |

| | | | | | |
|---|---|---|---|---|---|
| MSD Lab Sample ID: | 680-55111-1 | Analysis Batch: | 680-161672 | Instrument ID: | MSF |
| Client Matrix: | Water | Prep Batch: | 680-161121 | Lab File ID: | f4590.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 1060 mL |
| Date Analyzed: | 02/25/2010 1236 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/18/2010 1519 | | | Injection Volume: | 1 uL |

| | % Rec. | | | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | MS | MSD | Limit | RPD | RPD Limit | MS Qual | MSD Qual |
| 4-Chloroaniline | 29 | 45 | 10 - 110 | 43 | 40 | | F |
| 1,2,4-Trichlorobenzene | 72 | 73 | 41 - 110 | 2 | 40 | | |
| 1,4-Dioxane | 43 | 51 | 11 - 110 | 10 | 40 | | |
| 2-Chlorophenol | 76 | 76 | 47 - 110 | 0 | 40 | | |

| Surrogate | MS % Rec | MSD % Rec | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 74 | 74 | 38 - 116 |
| 2,4,6-Tribromophenol | 87 | 91 | 40 - 139 |
| 2-Fluorobiphenyl | 82 | 81 | 50 - 113 |
| 2-Fluorophenol | 73 | 75 | 36 - 110 |
| Nitrobenzene-d5 | 80 | 81 | 45 - 112 |
| Terphenyl-d14 | 64 | 64 | 10 - 121 |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161199**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161199/12-A | Analysis Batch: | 680-161991 | Instrument ID: | MSG |
| Client Matrix: | Water | Prep Batch: | 680-161199 | Lab File ID: | g0163.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 1000 mL |
| Date Analyzed: | 03/01/2010 1703 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| 4-Chloroaniline | 20 | U | 20 |
| 1,2,4-Trichlorobenzene | 10 | U | 10 |
| 1,4-Dioxane | 10 | U | 10 |
| 2-Chlorophenol | 10 | U | 10 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| Phenol-d5 | 82 | 38 - 116 |
| 2,4,6-Tribromophenol | 103 | 40 - 139 |
| 2-Fluorophenol | 82 | 36 - 110 |
| 2-Fluorobiphenyl | 86 | 50 - 113 |
| Nitrobenzene-d5 | 87 | 45 - 112 |
| Terphenyl-d14 | 88 | 10 - 121 |

**Lab Control Sample - Batch: 680-161199**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161199/13-A | Analysis Batch: | 680-161991 | Instrument ID: | MSG |
| Client Matrix: | Water | Prep Batch: | 680-161199 | Lab File ID: | g0164.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 1000 mL |
| Date Analyzed: | 03/01/2010 1731 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| 4-Chloroaniline | 100 | 20.4 | 20 | 10 - 110 | |
| 1,2,4-Trichlorobenzene | 100 | 74.5 | 75 | 41 - 110 | |
| 1,4-Dioxane | 100 | 49.4 | 49 | 11 - 110 | |
| 2-Chlorophenol | 100 | 80.3 | 80 | 47 - 110 | |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| Phenol-d5 | 73 | 38 - 116 |
| 2,4,6-Tribromophenol | 98 | 40 - 139 |
| 2-Fluorophenol | 74 | 36 - 110 |
| 2-Fluorobiphenyl | 83 | 50 - 113 |
| Nitrobenzene-d5 | 84 | 45 - 112 |
| Terphenyl-d14 | 71 | 10 - 121 |

Calculations are performed before rounding to avoid round-off errors in calculated results.

MAR 23 2010 EZK

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161413**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161413/6-A | Analysis Batch: | 680-161650 | Instrument ID: | MSG |
| Client Matrix: | Water | Prep Batch: | 680-161413 | Lab File ID: | g0133.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 1000 mL |
| Date Analyzed: | 02/25/2010 1305 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/23/2010 1319 | | | Injection Volume: | 1 uL |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| 4-Chloroaniline | 20 | U | 20 |
| 1,2,4-Trichlorobenzene | 10 | U | 10 |
| 1,4-Dioxane | 10 | U | 10 |
| 2-Chlorophenol | 10 | U | 10 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| Phenol-d5 | 45 | 38 - 116 |
| 2,4,6-Tribromophenol | 56 | 40 - 139 |
| 2-Fluorophenol | 53 | 36 - 110 |
| 2-Fluorobiphenyl | 56 | 50 - 113 |
| Nitrobenzene-d5 | 60 | 45 - 112 |
| Terphenyl-d14 | 108 | 10 - 121 |

**Lab Control Sample - Batch: 680-161413**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161413/7-A | Analysis Batch: | 680-161650 | Instrument ID: | MSG |
| Client Matrix: | Water | Prep Batch: | 680-161413 | Lab File ID: | g0134.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 1000 mL |
| Date Analyzed: | 02/25/2010 1332 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/23/2010 1319 | | | Injection Volume: | 1 uL |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| 4-Chloroaniline | 100 | 31.3 | 31 | 10 - 110 | |
| 1,2,4-Trichlorobenzene | 100 | 62.5 | 63 | 41 - 110 | |
| 1,4-Dioxane | 100 | 33.0 | 33 | 11 - 110 | |
| 2-Chlorophenol | 100 | 67.1 | 67 | 47 - 110 | |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| Phenol-d5 | 64 | 38 - 116 |
| 2,4,6-Tribromophenol | 77 | 40 - 139 |
| 2-Fluorophenol | 65 | 36 - 110 |
| 2-Fluorobiphenyl | 80 | 50 - 113 |
| Nitrobenzene-d5 | 70 | 45 - 112 |
| Terphenyl-d14 | 78 | 10 - 121 |

Calculations are performed before rounding to avoid round-off errors in calculated results.

MAR 23 2010 ERL

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Matrix Spike/**
**Matrix Spike Duplicate Recovery Report - Batch: 680-161413**

**Method: 8270C**
**Preparation: 3520C**

| | | | |
|---|---|---|---|
| MS Lab Sample ID: | 680-55185-1 | Analysis Batch: 680-161650 | Instrument ID: MSG |
| Client Matrix: | Water | Prep Batch: 680-161413 | Lab File ID: g0143.d |
| Dilution: | 1.0 | | Initial Weight/Volume: 500 mL |
| Date Analyzed: | 02/25/2010 1802 | | Final Weight/Volume: 0.5 mL |
| Date Prepared: | 02/23/2010 1319 | | Injection Volume: 1 uL |

| | | | |
|---|---|---|---|
| MSD Lab Sample ID: | 680-55185-1 | Analysis Batch: 680-161650 | Instrument ID: MSG |
| Client Matrix: | Water | Prep Batch: 680-161413 | Lab File ID: g0144.d |
| Dilution: | 1.0 | | Initial Weight/Volume: 500 mL |
| Date Analyzed: | 02/25/2010 1829 | | Final Weight/Volume: 0.5 mL |
| Date Prepared: | 02/23/2010 1319 | | Injection Volume: 1 uL |

| Analyte | % Rec. MS | % Rec. MSD | Limit | RPD | RPD Limit | MS Qual | MSD Qual |
|---|---|---|---|---|---|---|---|
| 4-Chloroaniline | 36 | 26 | 10 - 110 | 16 | 40 | | |
| 1,2,4-Trichlorobenzene | 60 | 50 | 41 - 110 | 19 | 40 | | |
| 1,4-Dioxane | 45 | 45 | 11 - 110 | 2 | 40 | | |
| 2-Chlorophenol | 65 | 58 | 47 - 110 | 9 | 40 | | |

| Surrogate | MS % Rec | MSD % Rec | Acceptance Limits |
|---|---|---|---|
| Phenol-d5 | 61 | 57 | 38 - 116 |
| 2,4,6-Tribromophenol | 66 | 68 | 40 - 139 |
| 2-Fluorophenol | 61 | 57 | 36 - 110 |
| 2-Fluorobiphenyl | 74 | 76 | 50 - 113 |
| Nitrobenzene-d5 | 73 | 67 | 45 - 112 |
| Terphenyl-d14 | 75 | 76 | 10 - 121 |

MAR 23 2010 ELK

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161547**

**Method: RSK-175**
**Preparation: N/A**

Lab Sample ID: MB 680-161547/17
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1012
Date Prepared: N/A

Analysis Batch: 680-161547
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUFID2
Lab File ID: UQ249.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Ethane | 0.35 | U | 0.35 |
| Ethylene | 0.33 | U | 0.33 |
| Methane | 0.19 | U | 0.19 |

**Lab Control Sample/**
**Lab Control Sample Duplicate Recovery Report - Batch: 680-161547**

**Method: RSK-175**
**Preparation: N/A**

LCS Lab Sample ID: LCS 680-161547/15
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 0909
Date Prepared: N/A

Analysis Batch: 680-161547
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUFID2
Lab File ID: UQ246.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 680-161547/16
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 0950
Date Prepared: N/A

Analysis Batch: 680-161547
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUFID2
Lab File ID: UQ247.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

| Analyte | % Rec. LCS | % Rec. LCSD | Limit | RPD | RPD Limit | LCS Qual | LCSD Qual |
|---|---|---|---|---|---|---|---|
| Ethane | 107 | 112 | 75 - 125 | 5 | 30 | | |
| Ethylene | 113 | 118 | 75 - 125 | 4 | 30 | | |
| Methane | 88 | 92 | 75 - 125 | 4 | 30 | | |

MAR 23 2010 ERR

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161548**

**Method: RSK-175**
**Preparation: N/A**

Lab Sample ID: MB 680-161548/11
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1012
Date Prepared: N/A

Analysis Batch: 680-161548
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUTCD1
Lab File ID: UQ249.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Methane | 0.19 | U | 0.19 |

**Lab Control Sample/**
**Lab Control Sample Duplicate Recovery Report - Batch: 680-161548**

**Method: RSK-175**
**Preparation: N/A**

LCS Lab Sample ID: LCS 680-161548/9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 0818
Date Prepared: N/A

Analysis Batch: 680-161548
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUTCD1
Lab File ID: UQ242.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 680-161548/10
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 0831
Date Prepared: N/A

Analysis Batch: 680-161548
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUTCD1
Lab File ID: UQ243.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

| | % Rec. | | | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | LCS | LCSD | Limit | RPD | RPD Limit | LCS Qual | LCSD Qual |
| Methane | 87 | 94 | 75 - 125 | 7 | 30 | | |

MAR 23 2010 ERL

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161109**

**Method: 6010B**
**Preparation: 3005A**
**Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161109/16-A | Analysis Batch: | 680-161225 | Instrument ID: | ICPD |
| Client Matrix: | Water | Prep Batch: | 680-161109 | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2001 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Iron | 0.050 | U | 0.050 |
| Iron, Dissolved | 0.050 | U | 0.050 |
| Manganese | 0.010 | U | 0.010 |
| Manganese, Dissolved | 0.010 | U | 0.010 |

**Lab Control Sample - Batch: 680-161109**

**Method: 6010B**
**Preparation: 3005A**
**Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161109/17-A | Analysis Batch: | 680-161225 | Instrument ID: | ICPD |
| Client Matrix: | Water | Prep Batch: | 680-161109 | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/18/2010 2006 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/18/2010 1225 | | | | |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Iron | 1.00 | 0.991 | 99 | 75 - 125 | |
| Iron, Dissolved | 1.00 | 0.991 | 99 | 75 - 125 | |
| Manganese | 0.500 | 0.497 | 99 | 75 - 125 | |
| Manganese, Dissolved | 0.500 | 0.497 | 99 | 75 - 125 | |

MAR 23 2010 EZR

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161475**

**Method: 6010B**
**Preparation: 3005A**
**Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161475/15-A | Analysis Batch: | 680-161776 | Instrument ID: | ICPD |
| Client Matrix: | Water | Prep Batch: | 680-161475 | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/24/2010 2030 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/23/2010 1652 | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Iron | 0.050 | U | 0.050 |
| Iron, Dissolved | 0.050 | U | 0.050 |
| Manganese | 0.010 | U | 0.010 |
| Manganese, Dissolved | 0.010 | U | 0.010 |

**Lab Control Sample - Batch: 680-161475**

**Method: 6010B**
**Preparation: 3005A**
**Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161475/16-A | Analysis Batch: | 680-161776 | Instrument ID: | ICPD |
| Client Matrix: | Water | Prep Batch: | 680-161475 | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 50 mL |
| Date Analyzed: | 02/24/2010 2035 | | | Final Weight/Volume: | 50 mL |
| Date Prepared: | 02/23/2010 1652 | | | | |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Iron | 1.00 | 1.01 | 101 | 75 - 125 | |
| Iron, Dissolved | 1.00 | 1.01 | 101 | 75 - 125 | |
| Manganese | 0.500 | 0.509 | 102 | 75 - 125 | |
| Manganese, Dissolved | 0.500 | 0.509 | 102 | 75 - 125 | |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Matrix Spike/**
**Matrix Spike Duplicate Recovery Report - Batch: 680-161475**

**Method: 6010B**
**Preparation: 3005A**
**Total Recoverable**

| | | | | | |
|---|---|---|---|---|---|
| MS Lab Sample ID: | 680-55143-1 | Analysis Batch: 680-161776 | Instrument ID: | ICPD | |
| Client Matrix: | Water | Prep Batch: 680-161475 | Lab File ID: | N/A | |
| Dilution: | 1.0 | | Initial Weight/Volume: | 50 | mL |
| Date Analyzed: | 02/24/2010 2056 | | Final Weight/Volume: | 50 | mL |
| Date Prepared: | 02/23/2010 1652 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| MSD Lab Sample ID: | 680-55143-1 | Analysis Batch: 680-161776 | Instrument ID: | ICPD | |
| Client Matrix: | Water | Prep Batch: 680-161475 | Lab File ID: | N/A | |
| Dilution: | 1.0 | | Initial Weight/Volume: | 50 | mL |
| Date Analyzed: | 02/24/2010 2101 | | Final Weight/Volume: | 50 | mL |
| Date Prepared: | 02/23/2010 1652 | | | | |

| | % Rec. | | | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | MS | MSD | Limit | RPD | RPD Limit | MS Qual | MSD Qual |
| Iron | 109 | 102 | 75 - 125 | 2 | 20 | | |
| Iron, Dissolved | 109 | 102 | 75 - 125 | 2 | 20 | | |
| Manganese | 106 | 103 | 75 - 125 | 2 | 20 | | |
| Manganese, Dissolved | 106 | 103 | 75 - 125 | 2 | 20 | | |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161368**

**Method: 310.1**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161368/5 | Analysis Batch: | 680-161368 | Instrument ID: | MANTECH |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 25 mL |
| Date Analyzed: | 02/22/2010 1233 | | | Final Weight/Volume: | 25 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Alkalinity | 5.0 | U | 5.0 |
| Carbon Dioxide, Free | 5.0 | U | 5.0 |

**Lab Control Sample - Batch: 680-161368**

**Method: 310.1**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161368/6 | Analysis Batch: | 680-161368 | Instrument ID: | MANTECH |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 25 mL |
| Date Analyzed: | 02/22/2010 1240 | | | Final Weight/Volume: | 25 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Alkalinity | 226 | 226 | 100 | 80 - 120 | |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161501**

**Method: 310.1**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161501/5 | Analysis Batch: | 680-161501 | Instrument ID: | MANTECH |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 25 mL |
| Date Analyzed: | 02/23/2010 1709 | | | Final Weight/Volume: | 25 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Alkalinity | 5.0 | U | 5.0 |
| Carbon Dioxide, Free | 5.0 | U | 5.0 |

**Lab Control Sample - Batch: 680-161501**

**Method: 310.1**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161501/9 | Analysis Batch: | 680-161501 | Instrument ID: | MANTECH |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 25 mL |
| Date Analyzed: | 02/23/2010 1736 | | | Final Weight/Volume: | 25 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Alkalinity | 226 | 223 | 99 | 80 - 120 | |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-162285**

**Method: 325.2**
**Preparation: N/A**

Lab Sample ID: MB 680-162285/19
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/04/2010 1316
Date Prepared: N/A

Analysis Batch: 680-162285
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Chloride | 1.0 | U | 1.0 |

**Lab Control Sample - Batch: 680-162285**

**Method: 325.2**
**Preparation: N/A**

Lab Sample ID: LCS 680-162285/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/04/2010 1139
Date Prepared: N/A

Analysis Batch: 680-162285
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Chloride | 50.0 | 51.2 | 102 | 85 - 115 | |

**Matrix Spike/**
**Matrix Spike Duplicate Recovery Report - Batch: 680-162285**

**Method: 325.2**
**Preparation: N/A**

MS Lab Sample ID: 680-55082-1
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 03/04/2010 1250
Date Prepared: N/A

Analysis Batch: 680-162285
Prep Batch: N/A

Instrument ID: KONELAB1
Lab File ID: N/A
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 680-55082-1
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 03/04/2010 1250
Date Prepared: N/A

Analysis Batch: 680-162285
Prep Batch: N/A

Instrument ID: KONELAB1
Lab File ID: N/A
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

| Analyte | % Rec. MS | % Rec. MSD | Limit | RPD | RPD Limit | MS Qual | MSD Qual |
|---|---|---|---|---|---|---|---|
| Chloride | 60 | 59 | 85 - 115 | 0 | 30 | 4 | 4 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EZK

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-162120**

**Method: 353.2**
**Preparation: N/A**

Lab Sample ID: MB 680-162120/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/02/2010 1656
Date Prepared: N/A

Analysis Batch: 680-162120
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB2
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Nitrate as N | 0.050 | U | 0.050 |
| Nitrate Nitrite as N | 0.050 | U | 0.050 |
| Nitrite as N | 0.050 | U | 0.050 |

**Lab Control Sample - Batch: 680-162120**

**Method: 353.2**
**Preparation: N/A**

Lab Sample ID: LCS 680-162120/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/02/2010 1656
Date Prepared: N/A

Analysis Batch: 680-162120
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB2
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Nitrate as N | 0.989 | 1.02 | 103 | 90 - 110 | |
| Nitrate Nitrite as N | 0.989 | 1.02 | 103 | 90 - 110 | |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Matrix Spike/**
**Matrix Spike Duplicate Recovery Report - Batch: 680-162120**

**Method: 353.2**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| MS Lab Sample ID: | 680-55082-1 | Analysis Batch: | 680-162120 | Instrument ID: | KONELAB2 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 10 mL |
| Date Analyzed: | 02/16/2010 1229 | | | Final Weight/Volume: | 10 mL |
| Date Prepared: | N/A | | | | |

| | | | | | |
|---|---|---|---|---|---|
| MSD Lab Sample ID: | 680-55082-1 | Analysis Batch: | 680-162120 | Instrument ID: | KONELAB2 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 10 mL |
| Date Analyzed: | 02/16/2010 1229 | | | Final Weight/Volume: | 10 mL |
| Date Prepared: | N/A | | | | |

| | % Rec. | | | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | MS | MSD | Limit | RPD | RPD Limit | MS Qual | MSD Qual |
| Nitrate as N | 100 | 102 | 90 - 110 | 3 | 10 | | |
| Nitrate Nitrite as N | 100 | 102 | 90 - 110 | 3 | 10 | | |

MAR 23 2010 ERK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161667**

**Method: 375.4**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161667/1 | Analysis Batch: | 680-161667 | Instrument ID: | KONELAB1 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 2 mL |
| Date Analyzed: | 02/25/2010 1017 | | | Final Weight/Volume: | 2 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Sulfate | 5.0 | U | 5.0 |

**Lab Control Sample - Batch: 680-161667**

**Method: 375.4**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161667/2 | Analysis Batch: | 680-161667 | Instrument ID: | KONELAB1 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 2 mL |
| Date Analyzed: | 02/25/2010 1017 | | | Final Weight/Volume: | 2 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Sulfate | 20.0 | 20.1 | 101 | 75 - 125 | |

MAR 23 2010 EJK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161728**

**Method: 415.1**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161728/2 | Analysis Batch: | 680-161728 | Instrument ID: | TOC3 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 25 mL |
| Date Analyzed: | 02/24/2010 1129 | | | Final Weight/Volume: | 25 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Total Organic Carbon | 1.0 | U | 1.0 |

**Lab Control Sample - Batch: 680-161728**

**Method: 415.1**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161728/4 | Analysis Batch: | 680-161728 | Instrument ID: | TOC3 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 25 mL |
| Date Analyzed: | 02/24/2010 1159 | | | Final Weight/Volume: | 25 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Total Organic Carbon | 20.0 | 20.0 | 100 | 80 - 120 | |

MAR 23 2010 EJC

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-161777**

**Method: 415.1**
**Preparation: N/A**

Lab Sample ID: MB 680-161777/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/16/2010 1529
Date Prepared: N/A

Analysis Batch: 680-161777
Prep Batch: N/A
Units: mg/L

Instrument ID: TOC3
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 25 mL

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 1.0 | U | 1.0 |

**Lab Control Sample - Batch: 680-161777**

**Method: 415.1**
**Preparation: N/A**

Lab Sample ID: LCS 680-161777/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/16/2010 1529
Date Prepared: N/A

Analysis Batch: 680-161777
Prep Batch: N/A
Units: mg/L

Instrument ID: TOC3
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 25 mL

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 20.0 | 19.3 | 96 | 80 - 120 | |

**Duplicate - Batch: 680-161777**

**Method: 415.1**
**Preparation: N/A**

Lab Sample ID: 680-55082-4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/16/2010 1529
Date Prepared: N/A

Analysis Batch: 680-161777
Prep Batch: N/A
Units: mg/L

Instrument ID: TOC3
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 25 mL

| Analyte | Sample Result/Qual | Result | RPD | Limit | Qual |
|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 5.6 | 5.47 | 2 | 30 | |

MAR 23 2010 EZR

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-162884**

**Method: 415.1**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-162884/2 | Analysis Batch: | 680-162884 | Instrument ID: | TOC3 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 25 mL |
| Date Analyzed: | 03/10/2010 1022 | | | Final Weight/Volume: | 25 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Total Organic Carbon | 1.0 | U | 1.0 |

**Lab Control Sample - Batch: 680-162884**

**Method: 415.1**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-162884/4 | Analysis Batch: | 680-162884 | Instrument ID: | TOC3 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | 25 mL |
| Date Analyzed: | 03/10/2010 1053 | | | Final Weight/Volume: | 25 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Total Organic Carbon | 20.0 | 19.4 | 97 | 80 - 120 | |

MAR 23 2010 EJL

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-162889**

**Method: 415.1**
**Preparation: N/A**

Lab Sample ID: MB 680-162889/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/10/2010 1642
Date Prepared: N/A

Analysis Batch: 680-162889
Prep Batch: N/A
Units: mg/L

Instrument ID: TOC3
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 25 mL

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 1.0 | U | 1.0 |

**Lab Control Sample - Batch: 680-162889**

**Method: 415.1**
**Preparation: N/A**

Lab Sample ID: LCS 680-162889/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/10/2010 1642
Date Prepared: N/A

Analysis Batch: 680-162889
Prep Batch: N/A
Units: mg/L

Instrument ID: TOC3
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 25 mL

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 20.0 | 19.1 | 95 | 80 - 120 | |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1
Sdg Number: KPS056

**Method Blank - Batch: 680-162953**

**Method: 415.1**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-162953/1 | Analysis Batch: | 680-162953 | Instrument ID: | TOC3 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | |
| Date Analyzed: | 03/11/2010 1026 | | | Final Weight/Volume: | 25 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Result | Qual | RL |
|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 1.0 | U | 1.0 |

**Lab Control Sample - Batch: 680-162953**

**Method: 415.1**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-162953/2 | Analysis Batch: | 680-162953 | Instrument ID: | TOC3 |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | N/A |
| Dilution: | 1.0 | Units: | mg/L | Initial Weight/Volume: | |
| Date Analyzed: | 03/11/2010 1026 | | | Final Weight/Volume: | 25 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Dissolved Organic Carbon-Dissolved | 20.0 | 18.9 | 95 | 80 - 120 | |

MAR 23 2010 EZK

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Savannah**
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

| Client Contact | Project Manager: Dave Palmer | Site Contact: Mike Corbett | Date: 2/15/10 | COC No: |
|---|---|---|---|---|
| URS Corporation | Tel/Fax: (314) 743-4154 | Lab Contact: Lidya Gulizia | Carrier: Fed Ex | 1 of 1 COCs |
| 1001 Highlands Plaza Drive West, Suite 300 | Analysis Turnaround Time | | | Job No. |
| St. Louis, MO 63110 | Calendar ( C ) or Work Days (W) | | | 21562401.00001 |
| (314) 429-0100 Phone | TAT if different from Below Standard | | | SDG No. |
| (314) 429-0462 FAX | ☐ 2 weeks | | | |
| Project Name: 1Q10 LTM GW Sampling | ☐ 1 week | | | |
| Site: Solutia WG Krummrich Facility | ☐ 2 days | | | |
| P O # | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample (Y/N) | VOCs by 8260 | SVOCs by 8270C* | Total Fe/Mn by 6010B | Alk/CO2 by 310.1 | Chloride by 325.2/Sulfate by 375.4 | Methane, Ethane, Ethene by RSK 175 | Nitrate by 353.2 | TOC by 415.1 | Dissolved Fe/Mn by 6010B | DOC by 415.1 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPA -MW-4D-0210 | 2/15/10 | 1150 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | *SVOCs per semi-annual list |
| CPA -MW-4D-F(0.2)-0210 | | 1150 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| BSA -MW-5D-0210 | | 1630 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| BSA -MW-5D-F(0.2)-0210 | | 1630 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 1Q10 LTM Trip Blank # 1 | | | | Water | 2 | | 2 | | | | | | | | | | 680-55082 |
| Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other | | | | | | | 2 | 1 | 4 | 1 | 1 | 1 | 3,1 | 2 | 4 | 2 | |

*Possible Hazard Identification*
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

**Special Instructions/QC Requirements & Comments:** Level 4 Data Package

Temp
5.2

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| [signature] | URS | 2/15/10 1800 | Ruth A Daughtry | TA SAV | 2/16/10 0919 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |

MAR 23 2010 EK

**Savannah**
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

| Client Contact | Project Manager: Dave Palmer | Site Contact: Mike Corbett | Date: 2/16/10 | COC No: |
|---|---|---|---|---|
| URS Corporation | Tel/Fax: (314) 743-4154 | Lab Contact: Lidya Gulizia | Carrier: FedEx | 1 of 1 COCs |
| 1001 Highlands Plaza Drive West, Suite 300 | Analysis Turnaround Time | | | Job No. |
| St. Louis, MO 63110 | Calendar ( C ) or Work Days (W) | | | 21562401.00001 |
| (314) 429-0100 Phone | TAT if different from Below Standard | | | SDG No. |
| (314) 429-0462 FAX | ☐ 2 weeks | | | |
| Project Name: 1Q10 LTM GW Sampling | ☐ 1 week | | | |
| Site: Solutia WG Krummrich Facility | ☐ 2 days | | | |
| P O # | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample (Y/N) | VOCs by 8260 | SVOCs by 8270C* | Total Fe/Mn by 6010B | Alk/CO2 by 310.1 | Chloride by 325.2/Sulfate by 375.4 | Methane, Ethane, Ethene by RSK 175 | Nitrate by 353.2 | TOC by 415.1 | Dissolved Fe/Mn by 6010B | DOC by 415.1 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BSA-MW-4D-0210 | 2/16/10 | 1010 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | *SVOCs per semi-annual list |
| BSA-MW-4D-F(0.2)-0210 | | 1010 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| CPA-MW-5D-0210 | | 1200 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| CPA-MW-5D-F(0.2)-0210 | | 1200 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| BSA-MW-3D-0210 | | 1400 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| BSA-MW-3D-F(0.2)-0210 | | 1400 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| BSA-MW-2D-0210 | | 1530 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| BSA-MW-2D-F(0.2)-0210 | | 1530 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| BSA-MW-4D-0210-MS | | 1010 | G | Water | 5 | | 3 | 2 | | | | | | | | | |
| BSA-MW-4D-0210-MSD | | 1010 | G | Water | 5 | | 3 | 2 | | | | | | | | | |
| BSA-MW-3D-0210-EB | | 1245 | G | Water | 5 | | 3 | 2 | | | | | | | | | |
| 1Q10 LTM Trip Blank # 2 | ↓ | — | — | Water | 2 | | 2 | | | | | | | | | | |
| Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other | | | | | | | 2 | 1 | 4 | 1 | 1 | 1 | 3,1 | 2 | 4 | 2 | |

*Possible Hazard Identification*
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: Level 4 Data Package

680-55111 0.8/1.4/2.0

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| [signature] | URS | 2/16/10 1700 | [signature] | TA | 2/16/10 1700 |
| [signature] | TA | 2/16/10 1715 | | | |
| | | | [signature] | TA SV | 2/17/10 0407 |

MAR 23 2010 EZK

**Savannah**
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

| Client Contact | Project Manager: Dave Palmer | Site Contact: Mike Corbett | Date: 2/17/10 | COC No: |
|---|---|---|---|---|
| URS Corporation | Tel/Fax: (314) 743-4154 | Lab Contact: Lidya Gulizia | Carrier: FedEx | 1 of 1 COCs |
| 1001 Highlands Plaza Drive West, Suite 300 | Analysis Turnaround Time | | | Job No. |
| St. Louis, MO 63110 | Calendar (C) or Work Days (W) | | | 21562401.00001 |
| (314) 429-0100 Phone | TAT if different from Below Standard | | | SDG No. |
| (314) 429-0462 FAX | ☐ 2 weeks | | | |
| Project Name: 1Q10 LTM GW Sampling | ☐ 1 week | | | |
| Site: Solutia WG Krummrich Facility | ☐ 2 days | | | |
| PO# | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample (Y/N) | VOCs by 8260 | SVOCs by 8270C* | Total Fe/Mn by 6010B | Alk/CO2 by 310.1 | Chloride by 325.2/Sulfate by 375.4 | Methane, Ethane, Ethene by RSK 175 | Nitrate by 353.2 | TOC by 415.1 | Dissolved Fe/Mn by 6010B | DOC by 415.1 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BSA -MW-1S-0210 | 2/17/10 | 1050 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | *SVOCs per semi-annual list |
| BSA -MW-1S-F(0.2)-0210 | | 1050 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| CPA -MW-1D-0210 | | 1305 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| CPA -MW-1D-F(0.2)-0210 | | 1305 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| CPA -MW-2D-0210 | | 1450 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | |
| CPA -MW-2D-F(0.2)-0210 | | 1450 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| CPA -MW-2D-0210-AD | 2/17/10 | 1450 | G | Water | 5 | | 3 | 2 | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 1Q10 LTM Trip Blank #3 | 2/17/10 | — | — | Water | 2 | | 2 | | | | | | | | | | |
| Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other | | | | | | | 2 | 1 | 4 | 1 | 1 | 1 | 3,1 | 2 | 4 | 2 | |

*Possible Hazard Identification*
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

**Special Instructions/QC Requirements & Comments:** Level 4 Data Package

Temp. - IUR. 2.4 2.2

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| [signature] | URS | 2/17/10 1700 | [signature] | TA | 2/18/10 09:59 |
| Relinquished by: | Company: | Date/Time: | Received by: 680-55143 | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |

MAR 23 2010 EZK

**Savannah**
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

| Client Contact | Project Manager: Dave Palmer | Site Contact: Mike Corbett | Date: 2/18/10 | COC No: |
|---|---|---|---|---|
| URS Corporation | Tel/Fax: (314) 743-4154 | Lab Contact: Lidya Gulizia | Carrier: Fed Ex | 1 of 1 COCs |
| 1001 Highlands Plaza Drive West, Suite 300 | Analysis Turnaround Time | | | Job No. 21562401.00001 |
| St. Louis, MO 63110 | Calendar ( C ) or Work Days (W) | | | |
| (314) 429-0100 Phone | TAT if different from Below Standard | | | |
| (314) 429-0462 FAX | ☐ 2 weeks | | | SDG No. |
| Project Name: 1Q10 LTM GW Sampling | ☐ 1 week | | | |
| Site: Solutia WG Krummrich Facility | ☐ 2 days | | | |
| P O # | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type | Matrix | # of Cont. | Filtered Sample | VOCs by 8260 | SVOCs by 8270C* | Total Fe/Mn by 6010B | Alk/CO2 by 310.1 | Chloride by 325.2/Sulfate by 375.4 | Methane, Ethane, Ethene by RSK 175 | Nitrate by 353.2 | TOC by 415.1 | Dissolved Fe/Mn by 6010B | DOC by 415.1 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPA -MW-3D-0210 | 2/18/10 | 0945 | G | Water | 14 | | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | | | *SVOCs per semi-annual list |
| CPA -MW-3D-F(0.2)-0210 | ↓ | 0945 | G | Water | 2 | X | | | | | | | | | 1 | 1 | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| -MW- -F(0.2)-0210 | | | G | Water | | X | | | | | | | | | | | |
| -MW- -0210 | | | *G | Water | | | | | | | | | | | | | |
| -MW- -0210 | | | G | Water | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 1Q10 LTM Trip Blank # 4 | 2/18/10 | — | — | Water | 2 | | 2 | | | | | | | | | | |
| Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other | | | | | | | 2 | 1 | 4 | 1 | 1 | 1 | 3,1 | 2 | 4 | 2 | 680-55185 |

*Possible Hazard Identification*
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

*Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: Level 4 Data Package

Temp 2.0/1.6/0.9

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| [signature] | URS | 2/18/10 1515 | Ruth Daughtry | TA Sav | 2.19.10 @ 0930 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |

MAR 23 2010 EZL

# Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55082-1
SDG Number: KPS056

**Login Number: 55082**
**Creator: Daughtry, Beth**
**List Number: 1**

**List Source: TestAmerica Savannah**

| Question | T / F/ NA | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | N/A | |
| Is the Field Sampler's name present on COC? | False | |
| Sample Preservation Verified | True | |

MAR 23 2010 EZR

# Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55082-1
SDG Number: KPS056

**Login Number: 55111**
**Creator: Conner, Keaton**
**List Number: 1**

**List Source: TestAmerica Savannah**

| Question | T / F/ NA | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | 3 coolers rec'd on ice |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.8, 1.4, 2.0 C |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | N/A | |
| Is the Field Sampler's name present on COC? | N/A | |
| Sample Preservation Verified | True | |

MAR 23 2010 EZK

# Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55082-1
SDG Number: KPS056

**Login Number: 55143**
**Creator: Kicklighter, Marilyn**
**List Number: 1**

**List Source: TestAmerica Savannah**

| Question | T / F/ NA | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | 2 coolers rec'd on ice |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.4 and 2.2 C |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | N/A | |
| Is the Field Sampler's name present on COC? | True | |
| Sample Preservation Verified | True | |

MAR 23 2010 EZK

# Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55082-1
SDG Number: KPS056

**Login Number: 55185**
**Creator: Daughtry, Beth**
**List Number: 1**

**List Source: TestAmerica Savannah**

| Question | T / F/ NA | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | 3 coolers rec'd on ice |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.0, 1.6, and 0.9 C |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | MS/MSD received in other receipt for SDG. |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | N/A | |
| Is the Field Sampler's name present on COC? | True | |
| Sample Preservation Verified | True | |

MAR 23 2010 ezk

# Appendix F

## Surface Water and Sediment Analytical Results (with Data Review Reports)

# SDG KRS009

Results of Surface Water Samples from Sampling Points:

R2007-1
R2007-2
R2007-3

# Solutia Krummrich Data Review
# WGK LTM 1Q10

**Laboratory SDG: KRS009**

**Reviewer: Elizabeth Kunkel**

**Date Reviewed: 3/23/2010**

**Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008**

**Applicable Work Plan: Revised Long-Term Monitoring Program (LTMP) Work Plan (Solutia 2009)**

| Sample Identification | Sample Identification |
|---|---|
| SW-R2007-3-0210 | SW-R2007-2-0210 |
| SW-R2007-1-0210 | SW-R2007-1-0210 AD |
| SED-R2007-1-0210 EB | Trip Blank 021710 |

## 1.0 Data Package Completeness

*Were all items delivered as specified in the QAPP and COC as appropriate?*

Yes

## 2.0 Laboratory Case Narrative \ Cooler Receipt Form

*Were problems noted in the laboratory case narrative or cooler receipt form?*

No problems were indicated in the laboratory case narrative.

The cooler receipt form indicated that three out of three coolers were received by the laboratory at temperatures below the 4ºC ± 2ºC criteria. Samples received were in good condition and not frozen; therefore, no qualification of data was required.

## 3.0 Holding Times

W*ere samples extracted/analyzed within applicable limits?*

Yes

## 4.0 Blank Contamination

*Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?*

No

## 5.0 Laboratory Control Sample

*Were LCS recoveries within evaluation criteria?*

Yes

## 6.0 Surrogate Recoveries

*Were surrogate recoveries within evaluation criteria?*

Yes

## 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

*Were MS/MSD samples collected as part of this SDG?*

Yes, sample SW-R2007-3-0210 was spiked and analyzed for VOCs and SVOCs.

*Were MS/MSD recoveries within evaluation criteria?*

Yes

## 8.0 Internal Standard (IS) Recoveries

*Were internal standard area recoveries within evaluation criteria?*

Yes

## 9.0 Laboratory Duplicate Results

*Were laboratory duplicate samples collected as part of this SDG?*

No

## 10.0 Field Duplicate Results

*Were field duplicate samples collected as part of this SDG?*

Yes

| Field ID | Field Duplicate ID |
|---|---|
| SW-R2007-1-0210 | SW-R2007-1-0210 AD |

*Were field duplicates within evaluation criteria?*

Yes

## 11.0 Sample Dilutions

*For samples that were diluted and nondetect, were undiluted results also reported?*

Not applicable; samples analyzed did not require dilution.

## 12.0 Additional Qualifications

*Were additional qualifications applied?*

No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

Job Number: 680-55137-1

SDG Number: KRS009

Job Description: WGK River Sampling SA - SW FEB 2010

For:
Solutia Inc.
575 Maryville Centre Dr.
Saint Louis, MO 63141

Attention: Mr. Jerry Rinaldi

Lidya Gulizia

Approved for release.
Lidya Gulizia
Project Manager I
3/22/2010 2:48 PM

Lidya Gulizia
Project Manager I
lidya.gulizia@testamericainc.com
03/22/2010

Reviewed on MAR 23 2010 EVR

cc: Mr. Bob Billman
Dave Palmer
Mr. Richard Williams

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**
TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404
Tel (912) 354-7858 Fax (912) 352-0165 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

**Job Narrative**
**680-55137-1 / SDG KRS009**

**Receipt**
All samples were received in good condition within temperature requirements.

**GC/MS VOA**
No analytical or quality issues were noted.

**GC/MS Semi VOA**
No analytical or quality issues were noted.

MAR 23 2010 EZR

# METHOD SUMMARY

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

| Description | Lab Location | Method | Preparation Method |
|---|---|---|---|
| **Matrix Water** | | | |
| Volatile Organic Compounds (GC/MS) | TAL SAV | SW846 8260B | |
| Purge and Trap | TAL SAV | | SW846 5030B |
| Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) | TAL SAV | SW846 8270C | |
| Liquid-Liquid Extraction (Continuous) | TAL SAV | | SW846 3520C |

**Lab References:**

TAL SAV = TestAmerica Savannah

**Method References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

# METHOD / ANALYST SUMMARY

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

| Method | Analyst | Analyst ID |
|---|---|---|
| SW846 8260B | Lanier, Carolyn | CL |
| SW846 8270C | Haynes, Carion | CRH |

## SAMPLE SUMMARY

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

| Lab Sample ID | Client Sample ID | Client Matrix | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|
| 680-55137-1 | SW-R2007-3-0210 | Water | 02/17/2010 0910 | 02/18/2010 0959 |
| 680-55137-1MS | SW-R2007-3-0210 | Water | 02/17/2010 0910 | 02/18/2010 0959 |
| 680-55137-1MSD | SW-R2007-3-0210 | Water | 02/17/2010 0910 | 02/18/2010 0959 |
| 680-55137-3 | SW-R2007-2-0210 | Water | 02/17/2010 1120 | 02/18/2010 0959 |
| 680-55137-5 | SW-R2007-1-0210 | Water | 02/17/2010 1250 | 02/18/2010 0959 |
| 680-55137-7FD | SW-R2007-1-0210 AD | Water | 02/17/2010 1250 | 02/18/2010 0959 |
| 680-55137-9EB | SED-R2007-1-0210 EB | Water | 02/17/2010 1540 | 02/18/2010 0959 |
| 680-55137-10TB | TRIP BLANK 021710 | Water | 02/17/2010 0910 | 02/18/2010 0959 |



MAR 23 2010 ERL

# SAMPLE RESULTS

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Client Sample ID:** **SW-R2007-3-0210**

Lab Sample ID: 680-55137-1
Client Matrix: Water

Date Sampled: 02/17/2010 0910
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161320 | Instrument ID: | MSP |
| Preparation: | 5030B | | Lab File ID: | p0013.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1609 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1609 | | | |

| Analyte | Result (ug/L) | Qualifier | MDL | RL |
|---|---|---|---|---|
| Benzene | 1.0 | U | 0.25 | 1.0 |
| Chlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.21 | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,4-Dichlorobenzene | 0.37 | J | 0.28 | 1.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 102 | | 75 - 120 |
| Dibromofluoromethane | 103 | | 75 - 121 |
| Toluene-d8 (Surr) | 100 | | 75 - 120 |



MAR 23 2010 EKR

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Client Sample ID:** **SW-R2007-2-0210**

Lab Sample ID: 680-55137-3
Client Matrix: Water

Date Sampled: 02/17/2010 1120
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161320 | Instrument ID: | MSP |
| Preparation: | 5030B | | Lab File ID: | p0017.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1711 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1711 | | | |

| Analyte | Result (ug/L) | Qualifier | MDL | RL |
|---|---|---|---|---|
| Benzene | 1.0 | U | 0.25 | 1.0 |
| Chlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.21 | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,4-Dichlorobenzene | 0.35 | J | 0.28 | 1.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 101 | | 75 - 120 |
| Dibromofluoromethane | 103 | | 75 - 121 |
| Toluene-d8 (Surr) | 103 | | 75 - 120 |



MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Client Sample ID:** **SW-R2007-1-0210**

Lab Sample ID: 680-55137-5
Client Matrix: Water

Date Sampled: 02/17/2010 1250
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161320 | Instrument ID: | MSP |
| Preparation: | 5030B | | Lab File ID: | p0019.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1741 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1741 | | | |

| Analyte | Result (ug/L) | Qualifier | MDL | RL |
|---|---|---|---|---|
| Benzene | 1.0 | U | 0.25 | 1.0 |
| Chlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.21 | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.28 | 1.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 102 | | 75 - 120 |
| Dibromofluoromethane | 102 | | 75 - 121 |
| Toluene-d8 (Surr) | 105 | | 75 - 120 |



MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Client Sample ID:** **SW-R2007-1-0210 AD**

Lab Sample ID: 680-55137-7FD
Client Matrix: Water

Date Sampled: 02/17/2010 1250
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161320 | Instrument ID: | MSP |
| Preparation: | 5030B | | Lab File ID: | p0021.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1810 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1810 | | | |

| Analyte | Result (ug/L) | Qualifier | MDL | RL |
|---|---|---|---|---|
| Benzene | 1.0 | U | 0.25 | 1.0 |
| Chlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.21 | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.28 | 1.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 103 | | 75 - 120 |
| Dibromofluoromethane | 105 | | 75 - 121 |
| Toluene-d8 (Surr) | 103 | | 75 - 120 |



MAR 23 2010 EJK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Client Sample ID:** **SED-R2007-1-0210 EB**

Lab Sample ID: 680-55137-9EB
Client Matrix: Water

Date Sampled: 02/17/2010 1540
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161320 | Instrument ID: | MSP |
| Preparation: | 5030B | | Lab File ID: | p0005.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1411 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1411 | | | |

| Analyte | Result (ug/L) | Qualifier | MDL | RL |
|---|---|---|---|---|
| Benzene | 1.0 | U | 0.25 | 1.0 |
| Chlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.21 | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.28 | 1.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 102 | | 75 - 120 |
| Dibromofluoromethane | 102 | | 75 - 121 |
| Toluene-d8 (Surr) | 102 | | 75 - 120 |



MAR 23 2010 ECK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Client Sample ID:** **TRIP BLANK 021710**

Lab Sample ID: 680-55137-10TB
Client Matrix: Water

Date Sampled: 02/17/2010 0910
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | |
|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161320 | Instrument ID: | MSP |
| Preparation: | 5030B | | Lab File ID: | p0003.d |
| Dilution: | 1.0 | | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1342 | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1342 | | | |

| Analyte | Result (ug/L) | Qualifier | MDL | RL |
|---|---|---|---|---|
| Benzene | 1.0 | U | 0.25 | 1.0 |
| Chlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.21 | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.28 | 1.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 102 | | 75 - 120 |
| Dibromofluoromethane | 102 | | 75 - 121 |
| Toluene-d8 (Surr) | 100 | | 75 - 120 |



MAR 23 2010 ERK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Client Sample ID:** **SW-R2007-3-0210**

Lab Sample ID: 680-55137-1
Client Matrix: Water

Date Sampled: 02/17/2010 0910
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161396 | | Instrument ID: | MSN |
| Preparation: | 3520C | Prep Batch: 680-161199 | | Lab File ID: | n6357.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 1060 mL |
| Date Analyzed: | 02/22/2010 1615 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | MDL | RL |
|---|---|---|---|---|
| 4-Chloroaniline | 19 | U | 2.1 | 19 |
| 2-Chlorophenol | 9.4 | U | 0.82 | 9.4 |
| 1,4-Dioxane | 9.4 | U | 3.2 | 9.4 |
| 1,2,4-Trichlorobenzene | 9.4 | U | 0.53 | 9.4 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 2-Fluorobiphenyl | 74 | | 50 - 113 |
| 2-Fluorophenol | 66 | | 36 - 110 |
| Nitrobenzene-d5 | 72 | | 45 - 112 |
| Phenol-d5 | 65 | | 38 - 116 |
| Terphenyl-d14 | 74 | | 10 - 121 |
| 2,4,6-Tribromophenol | 107 | | 40 - 139 |



MAR 23 2010 EKK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Client Sample ID:** **SW-R2007-2-0210**

Lab Sample ID: 680-55137-3
Client Matrix: Water

Date Sampled: 02/17/2010 1120
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161991 | | Instrument ID: | MSG |
| Preparation: | 3520C | Prep Batch: 680-161199 | | Lab File ID: | g0166.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 1060 mL |
| Date Analyzed: | 03/01/2010 1826 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | MDL | RL |
|---|---|---|---|---|
| 4-Chloroaniline | 19 | U | 2.1 | 19 |
| 2-Chlorophenol | 9.4 | U | 0.82 | 9.4 |
| 1,4-Dioxane | 9.4 | U | 3.2 | 9.4 |
| 1,2,4-Trichlorobenzene | 9.4 | U | 0.53 | 9.4 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 2-Fluorobiphenyl | 71 | | 50 - 113 |
| 2-Fluorophenol | 66 | | 36 - 110 |
| Nitrobenzene-d5 | 74 | | 45 - 112 |
| Phenol-d5 | 67 | | 38 - 116 |
| Terphenyl-d14 | 63 | | 10 - 121 |
| 2,4,6-Tribromophenol | 94 | | 40 - 139 |



MAR 23 2010 EJK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Client Sample ID:** **SW-R2007-1-0210**

Lab Sample ID: 680-55137-5
Client Matrix: Water

Date Sampled: 02/17/2010 1250
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-162040 | | Instrument ID: | MSN |
| Preparation: | 3520C | Prep Batch: 680-161199 | | Lab File ID: | n6518.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 1060 mL |
| Date Analyzed: | 03/02/2010 1500 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | MDL | RL |
|---|---|---|---|---|
| 4-Chloroaniline | 19 | U | 2.1 | 19 |
| 2-Chlorophenol | 9.4 | U | 0.82 | 9.4 |
| 1,4-Dioxane | 9.4 | U | 3.2 | 9.4 |
| 1,2,4-Trichlorobenzene | 9.4 | U | 0.53 | 9.4 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 2-Fluorobiphenyl | 71 | | 50 - 113 |
| 2-Fluorophenol | 63 | | 36 - 110 |
| Nitrobenzene-d5 | 65 | | 45 - 112 |
| Phenol-d5 | 59 | | 38 - 116 |
| Terphenyl-d14 | 69 | | 10 - 121 |
| 2,4,6-Tribromophenol | 105 | | 40 - 139 |



MAR 23 2010

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Client Sample ID:** **SW-R2007-1-0210 AD**

Lab Sample ID: 680-55137-7FD
Client Matrix: Water

Date Sampled: 02/17/2010 1250
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161991 | | Instrument ID: | MSG |
| Preparation: | 3520C | Prep Batch: 680-161199 | | Lab File ID: | g0168.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 1060 mL |
| Date Analyzed: | 03/01/2010 1920 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | MDL | RL |
|---|---|---|---|---|
| 4-Chloroaniline | 19 | U | 2.1 | 19 |
| 2-Chlorophenol | 9.4 | U | 0.82 | 9.4 |
| 1,4-Dioxane | 9.4 | U | 3.2 | 9.4 |
| 1,2,4-Trichlorobenzene | 9.4 | U | 0.53 | 9.4 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 2-Fluorobiphenyl | 73 | | 50 - 113 |
| 2-Fluorophenol | 70 | | 36 - 110 |
| Nitrobenzene-d5 | 77 | | 45 - 112 |
| Phenol-d5 | 70 | | 38 - 116 |
| Terphenyl-d14 | 57 | | 10 - 121 |
| 2,4,6-Tribromophenol | 101 | | 40 - 139 |



MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Client Sample ID:** **SED-R2007-1-0210 EB**

Lab Sample ID: 680-55137-9EB
Client Matrix: Water

Date Sampled: 02/17/2010 1540
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-162040 | | Instrument ID: | MSN |
| Preparation: | 3520C | Prep Batch: 680-161199 | | Lab File ID: | n6519.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 1060 mL |
| Date Analyzed: | 03/02/2010 1524 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Result (ug/L) | Qualifier | MDL | RL |
|---|---|---|---|---|
| 4-Chloroaniline | 19 | U | 2.1 | 19 |
| 2-Chlorophenol | 9.4 | U | 0.82 | 9.4 |
| 1,4-Dioxane | 9.4 | U | 3.2 | 9.4 |
| 1,2,4-Trichlorobenzene | 9.4 | U | 0.53 | 9.4 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 2-Fluorobiphenyl | 69 | | 50 - 113 |
| 2-Fluorophenol | 63 | | 36 - 110 |
| Nitrobenzene-d5 | 64 | | 45 - 112 |
| Phenol-d5 | 61 | | 38 - 116 |
| Terphenyl-d14 | 59 | | 10 - 121 |
| 2,4,6-Tribromophenol | 98 | | 40 - 139 |



MAR 23 2010 EZK

# DATA REPORTING QUALIFIERS

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

| Lab Section | Qualifier | Description |
|---|---|---|
| GC/MS VOA | | |
| | U | Indicates the analyte was analyzed for but not detected. |
| | J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| GC/MS Semi VOA | | |
| | U | Indicates the analyte was analyzed for but not detected. |

# QUALITY CONTROL RESULTS

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **GC/MS VOA** | | | | | |
| **Analysis Batch:680-161320** | | | | | |
| LCS 680-161320/20 | Lab Control Sample | T | Water | 8260B | |
| LCSD 680-161320/21 | Lab Control Sample Duplicate | T | Water | 8260B | |
| MB 680-161320/23 | Method Blank | T | Water | 8260B | |
| 680-55137-1 | SW-R2007-3-0210 | T | Water | 8260B | |
| 680-55137-1MS | Matrix Spike | T | Water | 8260B | |
| 680-55137-1MSD | Matrix Spike Duplicate | T | Water | 8260B | |
| 680-55137-3 | SW-R2007-2-0210 | T | Water | 8260B | |
| 680-55137-5 | SW-R2007-1-0210 | T | Water | 8260B | |
| 680-55137-7FD | SW-R2007-1-0210 AD | T | Water | 8260B | |
| 680-55137-9EB | SED-R2007-1-0210 EB | T | Water | 8260B | |
| 680-55137-10TB | TRIP BLANK 021710 | T | Water | 8260B | |

**Report Basis**
T = Total

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **GC/MS Semi VOA** | | | | | |
| **Prep Batch: 680-161199** | | | | | |
| LCS 680-161199/13-A | Lab Control Sample | T | Water | 3520C | |
| MB 680-161199/12-A | Method Blank | T | Water | 3520C | |
| 680-55137-1 | SW-R2007-3-0210 | T | Water | 3520C | |
| 680-55137-1MS | Matrix Spike | T | Water | 3520C | |
| 680-55137-1MSD | Matrix Spike Duplicate | T | Water | 3520C | |
| 680-55137-3 | SW-R2007-2-0210 | T | Water | 3520C | |
| 680-55137-5 | SW-R2007-1-0210 | T | Water | 3520C | |
| 680-55137-7FD | SW-R2007-1-0210 AD | T | Water | 3520C | |
| 680-55137-9EB | SED-R2007-1-0210 EB | T | Water | 3520C | |
| **Analysis Batch:680-161396** | | | | | |
| LCS 680-161199/13-A | Lab Control Sample | T | Water | 8270C | 680-161199 |
| MB 680-161199/12-A | Method Blank | T | Water | 8270C | 680-161199 |
| 680-55137-1 | SW-R2007-3-0210 | T | Water | 8270C | 680-161199 |
| 680-55137-1MS | Matrix Spike | T | Water | 8270C | 680-161199 |
| 680-55137-1MSD | Matrix Spike Duplicate | T | Water | 8270C | 680-161199 |
| **Analysis Batch:680-161991** | | | | | |
| LCS 680-161199/13-A | Lab Control Sample | T | Water | 8270C | 680-161199 |
| MB 680-161199/12-A | Method Blank | T | Water | 8270C | 680-161199 |
| 680-55137-3 | SW-R2007-2-0210 | T | Water | 8270C | 680-161199 |
| 680-55137-7FD | SW-R2007-1-0210 AD | T | Water | 8270C | 680-161199 |
| **Analysis Batch:680-162040** | | | | | |
| 680-55137-5 | SW-R2007-1-0210 | T | Water | 8270C | 680-161199 |
| 680-55137-9EB | SED-R2007-1-0210 EB | T | Water | 8270C | 680-161199 |

**Report Basis**
T = Total

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

## Surrogate Recovery Report

**8260B Volatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

| Lab Sample ID | Client Sample ID | BFB %Rec | DBFM %Rec | TOL %Rec |
|---|---|---|---|---|
| 680-55137-1 | SW-R2007-3-0210 | 102 | 103 | 100 |
| 680-55137-3 | SW-R2007-2-0210 | 101 | 103 | 103 |
| 680-55137-5 | SW-R2007-1-0210 | 102 | 102 | 105 |
| 680-55137-7 | SW-R2007-1-0210 AD | 103 | 105 | 103 |
| 680-55137-9 | SED-R2007-1-0210 EB | 102 | 102 | 102 |
| 680-55137-10 | TRIP BLANK 021710 | 102 | 102 | 100 |
| MB 680-161320/23 | | 104 | 101 | 103 |
| LCS 680-161320/20 | | 106 | 100 | 100 |
| LCSD 680-161320/21 | | 106 | 103 | 100 |
| 680-55137-1 MS | SW-R2007-3-0210 MS | 105 | 100 | 101 |
| 680-55137-1 MSD | SW-R2007-3-0210 MSD | 106 | 100 | 101 |

| Surrogate | Acceptance Limits |
|---|---|
| BFB = 4-Bromofluorobenzene | 75-120 |
| DBFM = Dibromofluoromethane | 75-121 |
| TOL = Toluene-d8 (Surr) | 75-120 |



MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

## Surrogate Recovery Report

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

**Client Matrix: Water**

| Lab Sample ID | Client Sample ID | FBP %Rec | 2FP %Rec | NBZ %Rec | PHL %Rec | TPH %Rec | TBP %Rec |
|---|---|---|---|---|---|---|---|
| 680-55137-1 | SW-R2007-3-0210 | 74 | 66 | 72 | 65 | 74 | 107 |
| 680-55137-3 | SW-R2007-2-0210 | 71 | 66 | 74 | 67 | 63 | 94 |
| 680-55137-5 | SW-R2007-1-0210 | 71 | 63 | 65 | 59 | 69 | 105 |
| 680-55137-7 | SW-R2007-1-0210 AD | 73 | 70 | 77 | 70 | 57 | 101 |
| 680-55137-9 | SED-R2007-1-0210 EB | 69 | 63 | 64 | 61 | 59 | 98 |
| MB 680-161199/12-A | | 86 | 82 | 87 | 82 | 88 | 103 |
| MB 680-161199/12-A | | 82 | 75 | 77 | 74 | 96 | 113 |
| LCS 680-161199/13-A | | 83 | 74 | 84 | 73 | 71 | 98 |
| LCS 680-161199/13-A | | 78 | 69 | 71 | 69 | 83 | 110 |
| 680-55137-1 MS | SW-R2007-3-0210 MS | 80 | 72 | 74 | 73 | 44 | 116 |
| 680-55137-1 MSD | SW-R2007-3-0210 MSD | 79 | 73 | 75 | 72 | 44 | 116 |

| Surrogate | Acceptance Limits |
|---|---|
| FBP = 2-Fluorobiphenyl | 50-113 |
| 2FP = 2-Fluorophenol | 36-110 |
| NBZ = Nitrobenzene-d5 | 45-112 |
| PHL = Phenol-d5 | 38-116 |
| TPH = Terphenyl-d14 | 10-121 |
| TBP = 2,4,6-Tribromophenol | 40-139 |



MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Method Blank - Batch: 680-161320**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161320/23 | Analysis Batch: | 680-161320 | Instrument ID: | MSP |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | pq029.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1245 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1245 | | | | |

| Analyte | Result | Qual | MDL | RL |
|---|---|---|---|---|
| Benzene | 1.0 | U | 0.25 | 1.0 |
| Chlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,2-Dichlorobenzene | 1.0 | U | 0.21 | 1.0 |
| 1,3-Dichlorobenzene | 1.0 | U | 0.25 | 1.0 |
| 1,4-Dichlorobenzene | 1.0 | U | 0.28 | 1.0 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 104 | 75 - 120 |
| Dibromofluoromethane | 101 | 75 - 121 |
| Toluene-d8 (Surr) | 103 | 75 - 120 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Lab Control Sample/**
**Lab Control Sample Duplicate Recovery Report - Batch: 680-161320**

**Method: 8260B**
**Preparation: 5030B**

| | | | | | |
|---|---|---|---|---|---|
| LCS Lab Sample ID: | LCS 680-161320/20 | Analysis Batch: | 680-161320 | Instrument ID: | MSP |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | pq021.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1047 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1047 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| LCSD Lab Sample ID: | LCSD 680-161320/21 | Analysis Batch: | 680-161320 | Instrument ID: | MSP |
| Client Matrix: | Water | Prep Batch: | N/A | Lab File ID: | pq023.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 5 mL |
| Date Analyzed: | 02/19/2010 1116 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | 02/19/2010 1116 | | | | |

| Analyte | % Rec. LCS | % Rec. LCSD | Limit | RPD | RPD Limit | LCS Qual | LCSD Qual |
|---|---|---|---|---|---|---|---|
| Benzene | 101 | 100 | 77 - 119 | 0 | 30 | | |
| Chlorobenzene | 106 | 104 | 85 - 116 | 1 | 30 | | |
| 1,2-Dichlorobenzene | 105 | 106 | 79 - 124 | 1 | 30 | | |
| 1,3-Dichlorobenzene | 104 | 104 | 78 - 125 | 0 | 30 | | |
| 1,4-Dichlorobenzene | 107 | 105 | 81 - 122 | 2 | 30 | | |

| Surrogate | LCS % Rec | LCSD % Rec | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 106 | 106 | 75 - 120 |
| Dibromofluoromethane | 100 | 103 | 75 - 121 |
| Toluene-d8 (Surr) | 100 | 100 | 75 - 120 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EJL

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Matrix Spike/**
**Matrix Spike Duplicate Recovery Report - Batch: 680-161320**

**Method: 8260B**
**Preparation: 5030B**

| | | | |
|---|---|---|---|
| MS Lab Sample ID: | 680-55137-1 | Analysis Batch: 680-161320 | Instrument ID: MSP |
| Client Matrix: | Water | Prep Batch: N/A | Lab File ID: p0031.d |
| Dilution: | 1.0 | | Initial Weight/Volume: 5 mL |
| Date Analyzed: | 02/19/2010 2038 | | Final Weight/Volume: 5 mL |
| Date Prepared: | 02/19/2010 2038 | | |

| | | | |
|---|---|---|---|
| MSD Lab Sample ID: | 680-55137-1 | Analysis Batch: 680-161320 | Instrument ID: MSP |
| Client Matrix: | Water | Prep Batch: N/A | Lab File ID: p0033.d |
| Dilution: | 1.0 | | Initial Weight/Volume: 5 mL |
| Date Analyzed: | 02/19/2010 2107 | | Final Weight/Volume: 5 mL |
| Date Prepared: | 02/19/2010 2107 | | |

| | % Rec. | | | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | MS | MSD | Limit | RPD | RPD Limit | MS Qual | MSD Qual |
| Benzene | 101 | 102 | 77 - 119 | 1 | 30 | | |
| Chlorobenzene | 104 | 104 | 85 - 116 | 0 | 30 | | |
| 1,2-Dichlorobenzene | 105 | 106 | 79 - 124 | 2 | 30 | | |
| 1,3-Dichlorobenzene | 103 | 103 | 78 - 125 | 0 | 30 | | |
| 1,4-Dichlorobenzene | 105 | 106 | 81 - 122 | 1 | 30 | | |

| Surrogate | MS % Rec | MSD % Rec | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 105 | 106 | 75 - 120 |
| Dibromofluoromethane | 100 | 100 | 75 - 121 |
| Toluene-d8 (Surr) | 101 | 101 | 75 - 120 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Method Blank - Batch: 680-161199**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161199/12-A | Analysis Batch: | 680-161396 | Instrument ID: | MSN |
| Client Matrix: | Water | Prep Batch: | 680-161199 | Lab File ID: | n6354.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 1000 mL |
| Date Analyzed: | 02/22/2010 1501 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Result | Qual | MDL | RL |
|---|---|---|---|---|
| 4-Chloroaniline | 20 | U | 2.2 | 20 |
| 2-Chlorophenol | 10 | U | 0.87 | 10 |
| 1,4-Dioxane | 10 | U | 3.4 | 10 |
| 1,2,4-Trichlorobenzene | 10 | U | 0.56 | 10 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 2-Fluorobiphenyl | 82 | 50 - 113 |
| 2-Fluorophenol | 75 | 36 - 110 |
| Nitrobenzene-d5 | 77 | 45 - 112 |
| Phenol-d5 | 74 | 38 - 116 |
| Terphenyl-d14 | 96 | 10 - 121 |
| 2,4,6-Tribromophenol | 113 | 40 - 139 |

**Method Blank - Batch: 680-161199**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161199/12-A | Analysis Batch: | 680-161991 | Instrument ID: | MSG |
| Client Matrix: | Water | Prep Batch: | 680-161199 | Lab File ID: | g0163.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 1000 mL |
| Date Analyzed: | 03/01/2010 1703 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Result | Qual | MDL | RL |
|---|---|---|---|---|
| 4-Chloroaniline | 20 | U | 2.2 | 20 |
| 2-Chlorophenol | 10 | U | 0.87 | 10 |
| 1,4-Dioxane | 10 | U | 3.4 | 10 |
| 1,2,4-Trichlorobenzene | 10 | U | 0.56 | 10 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 2-Fluorobiphenyl | 86 | 50 - 113 |
| 2-Fluorophenol | 82 | 36 - 110 |
| Nitrobenzene-d5 | 87 | 45 - 112 |
| Phenol-d5 | 82 | 38 - 116 |
| Terphenyl-d14 | 88 | 10 - 121 |
| 2,4,6-Tribromophenol | 103 | 40 - 139 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EJK

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Lab Control Sample - Batch: 680-161199**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161199/13-A | Analysis Batch: | 680-161396 | Instrument ID: | MSN |
| Client Matrix: | Water | Prep Batch: | 680-161199 | Lab File ID: | n6355.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 1000 mL |
| Date Analyzed: | 02/22/2010 1525 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| 4-Chloroaniline | 100 | 47.8 | 48 | 10 - 110 | |
| 2-Chlorophenol | 100 | 77.4 | 77 | 47 - 110 | |
| 1,4-Dioxane | 100 | 45.7 | 46 | 11 - 110 | |
| 1,2,4-Trichlorobenzene | 100 | 75.8 | 76 | 41 - 110 | |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 2-Fluorobiphenyl | 78 | 50 - 113 |
| 2-Fluorophenol | 69 | 36 - 110 |
| Nitrobenzene-d5 | 71 | 45 - 112 |
| Phenol-d5 | 69 | 38 - 116 |
| Terphenyl-d14 | 83 | 10 - 121 |
| 2,4,6-Tribromophenol | 110 | 40 - 139 |

**Lab Control Sample - Batch: 680-161199**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161199/13-A | Analysis Batch: | 680-161991 | Instrument ID: | MSG |
| Client Matrix: | Water | Prep Batch: | 680-161199 | Lab File ID: | g0164.d |
| Dilution: | 1.0 | Units: | ug/L | Initial Weight/Volume: | 1000 mL |
| Date Analyzed: | 03/01/2010 1731 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| 4-Chloroaniline | 100 | 20.4 | 20 | 10 - 110 | |
| 2-Chlorophenol | 100 | 80.3 | 80 | 47 - 110 | |
| 1,4-Dioxane | 100 | 49.4 | 49 | 11 - 110 | |
| 1,2,4-Trichlorobenzene | 100 | 74.5 | 75 | 41 - 110 | |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 2-Fluorobiphenyl | 83 | 50 - 113 |
| 2-Fluorophenol | 74 | 36 - 110 |
| Nitrobenzene-d5 | 84 | 45 - 112 |
| Phenol-d5 | 73 | 38 - 116 |
| Terphenyl-d14 | 71 | 10 - 121 |
| 2,4,6-Tribromophenol | 98 | 40 - 139 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010
EZR

Client: Solutia Inc.

Job Number: 680-55137-1
Sdg Number: KRS009

**Matrix Spike/**
**Matrix Spike Duplicate Recovery Report - Batch: 680-161199**

**Method: 8270C**
**Preparation: 3520C**

| | | | | | |
|---|---|---|---|---|---|
| MS Lab Sample ID: | 680-55137-1 | Analysis Batch: | 680-161396 | Instrument ID: | MSN |
| Client Matrix: | Water | Prep Batch: | 680-161199 | Lab File ID: | n6358.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 1060 mL |
| Date Analyzed: | 02/22/2010 1640 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| | | | | | |
|---|---|---|---|---|---|
| MSD Lab Sample ID: | 680-55137-1 | Analysis Batch: | 680-161396 | Instrument ID: | MSN |
| Client Matrix: | Water | Prep Batch: | 680-161199 | Lab File ID: | n6359.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 1060 mL |
| Date Analyzed: | 02/22/2010 1705 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1513 | | | Injection Volume: | 1 uL |

| | % Rec. | | | | | | |
|---|---|---|---|---|---|---|---|
| Analyte | MS | MSD | Limit | RPD | RPD Limit | MS Qual | MSD Qual |
| 4-Chloroaniline | 72 | 56 | 10 - 110 | 26 | 40 | | |
| 2-Chlorophenol | 82 | 79 | 47 - 110 | 4 | 40 | | |
| 1,4-Dioxane | 48 | 51 | 11 - 110 | 6 | 40 | | |
| 1,2,4-Trichlorobenzene | 82 | 81 | 41 - 110 | 1 | 40 | | |

| Surrogate | MS % Rec | MSD % Rec | Acceptance Limits |
|---|---|---|---|
| 2-Fluorobiphenyl | 80 | 79 | 50 - 113 |
| 2-Fluorophenol | 72 | 73 | 36 - 110 |
| Nitrobenzene-d5 | 74 | 75 | 45 - 112 |
| Phenol-d5 | 73 | 72 | 38 - 116 |
| Terphenyl-d14 | 44 | 44 | 10 - 121 |
| 2,4,6-Tribromophenol | 116 | 116 | 40 - 139 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EJC

Serial Number 026327

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

| PROJECT REFERENCE | PROJECT NO. | PROJECT LOCATION (STATE) |
|---|---|---|
| WGK 1st QTR 2010 River | 21562401.00005 | IL |

| TAL (LAB) PROJECT MANAGER | P.O. NUMBER | CONTRACT NO. |
|---|---|---|
| LIDYA Gu 121A | | |

| CLIENT (SITE) PM | CLIENT PHONE | CLIENT FAX |
|---|---|---|
| Dave Palmer | 314 429 0100 | 314 429 0462 |

| CLIENT NAME | CLIENT E-MAIL |
|---|---|
| URS Corp. | dave_palmer@urscorp.com |

CLIENT ADDRESS: 1001 Highlands Plaza Drive West Louis MO 63110

COMPANY CONTRACTING THIS WORK (if applicable)

PAGE 1 OF 2

STANDARD REPORT DELIVERY ☒
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 3

REQUIRED ANALYSIS

| SAMPLE DATE | SAMPLE TIME | SAMPLE IDENTIFICATION | COMPOSITE (C) OR GRAB (G) INDICATE | AQUEOUS (WATER) | SOLID OR SEMISOLID | AIR | NONAQUEOUS LIQUID (OIL, SOLVENT, ...) | VOC 8260B | SVOC 8270C | VOC 8260B | SVOC 8270C | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Sod Thio HCl | Sod Thio | Sod Bis Meth | | | | | | | | | |
| | | | | | | | | NUMBER OF CONTAINERS SUBMITTED | | | | | | | | | | | |
| 2/17/10 | 0910 | SW-R2007-3-0210 | G | X | | | | 3 | 2 | | | | | | | | | | |
| | 1035 | SED-R2007-3-0210 | G | | X | | | | | 3 | 1 | | | | | | | | |
| | 0910 | SW-R2007-3-0210 MS | G | X | | | | 3 | 2 | | | | | | | | | | |
| | 1035 | SED-R2007-3-0210 MS | G | | X | | | | | 3 | 1 | | | | | | | | |
| | 0910 | SW-R2007-3-0210 MSD | G | X | | | | 3 | 2 | | | | | | | | | | |
| | 1035 | SED-R2007-3-0210 MSD | G | | X | | | | | 3 | 1 | | | | | | | | |
| | 1120 | SW-R2007-2-0210 | G | X | | | | 3 | 2 | | | | | | | | | | |
| | 1200 | SED-R2007-2-0210 | G | | X | | | | | 3 | 1 | | | | | | | | |
| | 1250 | SW-R2007-1-0210 | G | X | | | | 3 | 2 | | | | | | | | | | |
| | 1450 | SED-R2007-1-0210 | G | | X | | | | | 3 | 1 | | | | | | | | |
| | 1250 | SW-R2007-1-0210 AD | G | X | | | | 3 | 2 | | | | | | | | | | |
| | 1450 | SED-R2007-1-0210 AD | G | | X | | | | | 3 | 1 | | | | | | | | |

PRESERVATIVE

REMARKS

VOC= Benzene Chlorobenzene 1,2 Dichlorobenzene (DC 1,3 DCB + 1,4 DCB

SVOC= 4-chloroaniline 2-chlorophenol 1,4-Dioxane 1,2,4-Trichlorobenzene

Page 30 of 32

| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME |
|---|---|---|---|---|---|---|---|---|
| [signature] | 2/17/10 | 1900 | | | | | | |

| RECEIVED BY: (SIGNATURE) | DATE | TIME | RECEIVED BY: (SIGNATURE) | DATE | TIME | RECEIVED BY: (SIGNATURE) | DATE | TIME |
|---|---|---|---|---|---|---|---|---|
| FedeX | | | | | | | | |

LABORATORY USE ONLY

| RECEIVED FOR LABORATORY BY: (SIGNATURE) | DATE | TIME | CUSTODY INTACT | CUSTODY SEAL NO. | SAVANNAH LOG NO. | LABORATORY REMARKS |
|---|---|---|---|---|---|---|
| [signature] | 2/18/10 | 0959 | YES ○ NO ○ | | 680-55137 | 1.0/1.6/1.4 |

TAL8240-680 (1207)

MAR 23 2010 EZK

Serial Number 026878

# 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: WGK 1st QTR 2010 River | PROJECT NO.: 21562401.00005 | PROJECT LOCATION (STATE): IL |
| TAL (LAB) PROJECT MANAGER: LIDYA Galizia | P.O. NUMBER: | CONTRACT NO.: |
| CLIENT (SITE) PM: Dave Palmer | CLIENT PHONE: 314 429 0100 | CLIENT FAX: |
| CLIENT NAME: URS Corp | CLIENT E-MAIL: dave_palmer@urscorp.com | |
| CLIENT ADDRESS: 1001 Highlands Plaza DR W St. Louis MO 63110 | | |
| COMPANY CONTRACTING THIS WORK (if applicable) | | |

PAGE 2 OF 2

STANDARD REPORT DELIVERY ◯

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ◯

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 3

| SAMPLE DATE | SAMPLE TIME | SAMPLE IDENTIFICATION | COMPOSITE (C) OR GRAB (G) INDICATE | AQUEOUS (WATER) | SOLID OR SEMISOLID | AIR | NONAQUEOUS LIQUID (OIL, SOLVENT, ...) | VOC (8260B) | SVOC (8270C) | VOC (8260B) | SVOC (8270C) | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Sod Thio HCl | Sod Thio | Sod Bis meth | PRESERVATIVE | | | | | | | | |
| | | | | | | | | NUMBER OF CONTAINERS SUBMITTED | | | | | | | | | | | |
| 2/17/10 | 1540 | SED-R2007-1-0210EB | G | X | | | | 3 | 2 | | | | | | | | | | For VOC + SVOC |
| ↓ | 0910 | TRIPBLANK 021710 | G | X | | | | 2 | | | | | | | | | | | lists see Page 1 |

2/17/10

| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME |
|---|---|---|---|---|---|---|---|---|
| | 2/17/10 | 1900 | | | | | | |
| RECEIVED BY: (SIGNATURE) Fed Ex | 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 |
|---|---|---|---|---|---|---|
| | | | YES ◯ NO ◯ | | 630-5517 | |

TAL8240-680 (1207)

MAR 23 2010 EZK

# Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55137-1
SDG Number: KRS009

**Login Number: 55137**
**Creator: Conner, Keaton**
**List Number: 1**

**List Source: TestAmerica Savannah**

| Question | T / F/ NA | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | 3 coolers rec'd on ice |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.0, 1.6, 1.4 C |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | N/A | |
| Is the Field Sampler's name present on COC? | N/A | |
| Sample Preservation Verified | True | |



MAR 23 2010 EZK

# SDG KRS010

Results of Sediment Samples from Sampling Points:

R2007-1
R2007-2
R2007-3

# Solutia Krummrich Data Review
# WGK LTM 1Q10

**Laboratory SDG: KRS010**

**Reviewer: Elizabeth Kunkel**

**Date Reviewed: 3/23/2010**

**Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008**

**Applicable Work Plan: Revised Long-Term Monitoring Program (LTMP) Work Plan (Solutia 2009)**

| Sample Identification | Sample Identification |
|---|---|
| SED-R2007-3-0210 | SED-R2007-2-0210 |
| SED-R2007-1-0210 | SED-R2007-1-0210 AD |

## 1.0 Data Package Completeness

*Were all items delivered as specified in the QAPP and COC as appropriate?*

Yes

## 2.0 Laboratory Case Narrative \ Cooler Receipt Form

*Were problems noted in the laboratory case narrative or cooler receipt form?*

Yes, although not indicated in the laboratory case narrative, sample SED-R2007-1-0210 AD was extracted outside holding time criteria. This issue is addressed further in the following section below.

The cooler receipt form did not indicate any problems.

## 3.0 Holding Times

W*ere samples extracted/analyzed within applicable limits?*

No, sample SED-R2007-1-0210 AD was extracted approximately 6 days outside holding time criteria (7 days). Qualifications due to holding time criteria are included in the table below.

| Sample ID | Parameter | Analyte | Qualification |
|---|---|---|---|
| SED-R2007-1-0210 AD | SVOCs | 4-Chloroaniline | **UJ** |
| SED-R2007-1-0210 AD | SVOCs | 2-Chlorophenol | **UJ** |
| SED-R2007-1-0210 AD | SVOCs | 1,2,4-Trichlorobenzene | **UJ** |
| SED-R2007-1-0210 AD | SVOCs | 1,4-Dioxane | **UJ** |

## 4.0 Blank Contamination

*Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?*

No

## 5.0 Laboratory Control Sample

*Were LCS recoveries within evaluation criteria?*

Yes

## 6.0 Surrogate Recoveries

*Were surrogate recoveries within evaluation criteria?*

Yes

## 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

*Were MS/MSD samples collected as part of this SDG?*

Yes, sample SED-R2007-3-0210 was spiked and analyzed for VOCs and SVOCs.

*Were MS/MSD recoveries within evaluation criteria?*

Yes

## 8.0 Internal Standard (IS) Recoveries

*Were internal standard area recoveries within evaluation criteria?*

Yes

## 9.0 Laboratory Duplicate Results

*Were laboratory duplicate samples collected as part of this SDG?*

No

## 10.0 Field Duplicate Results

*Were field duplicate samples collected as part of this SDG?*

Yes

| Field ID | Field Duplicate ID |
|---|---|
| SED-R2007-1-0210 | SED-R2007-1-0210 AD |

*Were field duplicates within evaluation criteria?*

Yes

## 11.0 Sample Dilutions

*For samples that were diluted and nondetect, were undiluted results also reported?*

Not applicable; samples analyzed did not require a dilution.

## 12.0 Additional Qualifications

*Were additional qualifications applied?*

No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

Job Number: 680-55137-2

SDG Number: KRS010

Job Description: WGK River Sampling SA - SED FEB 2010

For:
Solutia Inc.
575 Maryville Centre Dr.
Saint Louis, MO 63141

Attention: Mr. Jerry Rinaldi

Lidya Gulizia

Approved for release.
Lidya Gulizia
Project Manager I
3/22/2010 2:53 PM

Lidya Gulizia
Project Manager I
lidya.gulizia@testamericainc.com
03/22/2010

Reviewed on MAR 23 2010 EZK

cc: Mr. Bob Billman
Dave Palmer
Mr. Richard Williams

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

**TestAmerica Laboratories, Inc.**
TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404
Tel (912) 354-7858 Fax (912) 352-0165 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

**Job Narrative**
**680-55137-2 / SDG KRS010**

**Receipt**
All samples were received in good condition within temperature requirements.

**GC/MS VOA**
No analytical or quality issues were noted.

**GC/MS Semi VOA**
Method(s) 8270C: Manual integration was performed on the following sample(s): SED-R2007-3-0210 (680-55137-2 MSD).

No other analytical or quality issues were noted.

**General Chemistry**
No analytical or quality issues were noted.

**Comments**
No additional comments.

MAR 23 2010

# METHOD SUMMARY

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

| Description | Lab Location | Method | Preparation Method |
|---|---|---|---|
| **Matrix Solid** | | | |
| Volatile Organic Compounds (GC/MS) | TAL SAV | SW846 8260B | |
| Closed System Purge and Trap | TAL SAV | | SW846 5035 |
| Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) | TAL SAV | SW846 8270C | |
| Ultrasonic Extraction | TAL SAV | | SW846 3550B |
| Percent Moisture | TAL SAV | EPA Moisture | |

**Lab References:**

TAL SAV = TestAmerica Savannah

**Method References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

# METHOD / ANALYST SUMMARY

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

| Method | Analyst | Analyst ID |
|---|---|---|
| SW846 8260B | Sokolin, Eleina | ES |
| SW846 8270C | Davis, Nancy | ND |
| EPA Moisture | Morgan, Harriet | HM |

## SAMPLE SUMMARY

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

| Lab Sample ID | Client Sample ID | Client Matrix | Date/Time Sampled | Date/Time Received |
|---|---|---|---|---|
| 680-55137-2 | SED-R2007-3-0210 | Solid | 02/17/2010 1035 | 02/18/2010 0959 |
| 680-55137-2MS | SED-R2007-3-0210 | Solid | 02/17/2010 1035 | 02/18/2010 0959 |
| 680-55137-2MSD | SED-R2007-3-0210 | Solid | 02/17/2010 1035 | 02/18/2010 0959 |
| 680-55137-4 | SED-R2007-2-0210 | Solid | 02/17/2010 1200 | 02/18/2010 0959 |
| 680-55137-6 | SED-R2007-1-0210 | Solid | 02/17/2010 1450 | 02/18/2010 0959 |
| 680-55137-8FD | SED-R2007-1-0210 AD | Solid | 02/17/2010 1450 | 02/18/2010 0959 |



MAR 23 2010 EJK

# SAMPLE RESULTS

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Client Sample ID:** **SED-R2007-3-0210**

Lab Sample ID: 680-55137-2
Client Matrix: Solid
% Moisture: 14.8

Date Sampled: 02/17/2010 1035
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161900 | | Instrument ID: | MSL |
| Preparation: | 5035 | Prep Batch: 680-161094 | | Lab File ID: | I0002.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 5.9 g |
| Date Analyzed: | 02/28/2010 1322 | | | Final Weight/Volume: | 5 g |
| Date Prepared: | 02/18/2010 1100 | | | | |

| Analyte | DryWt Corrected: Y | Result (ug/Kg) | Qualifier | MDL | RL |
|---|---|---|---|---|---|
| Benzene | | 5.0 | U | 0.73 | 5.0 |
| Chlorobenzene | | 5.0 | U | 0.96 | 5.0 |
| 1,2-Dichlorobenzene | | 5.0 | U | 1.3 | 5.0 |
| 1,3-Dichlorobenzene | | 5.0 | U | 1.6 | 5.0 |
| 1,4-Dichlorobenzene | | 5.0 | U | 0.74 | 5.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 94 | | 65 - 124 |
| Dibromofluoromethane | 93 | | 65 - 124 |
| Toluene-d8 (Surr) | 98 | | 65 - 132 |



MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Client Sample ID:** **SED-R2007-2-0210**

Lab Sample ID: 680-55137-4
Client Matrix: Solid
% Moisture: 15.5

Date Sampled: 02/17/2010 1200
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161843 | | Instrument ID: | MSL |
| Preparation: | 5035 | Prep Batch: 680-161094 | | Lab File ID: | I0146.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 5.9 g |
| Date Analyzed: | 02/27/2010 1152 | | | Final Weight/Volume: | 5 g |
| Date Prepared: | 02/18/2010 1100 | | | | |

| Analyte | DryWt Corrected: Y | Result (ug/Kg) | Qualifier | MDL | RL |
|---|---|---|---|---|---|
| Benzene | | 5.0 | U | 0.73 | 5.0 |
| Chlorobenzene | | 5.0 | U | 0.96 | 5.0 |
| 1,2-Dichlorobenzene | | 5.0 | U | 1.3 | 5.0 |
| 1,3-Dichlorobenzene | | 5.0 | U | 1.6 | 5.0 |
| 1,4-Dichlorobenzene | | 5.0 | U | 0.74 | 5.0 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 104 | | 65 - 124 |
| Dibromofluoromethane | 99 | | 65 - 124 |
| Toluene-d8 (Surr) | 102 | | 65 - 132 |



MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Client Sample ID:** **SED-R2007-1-0210**

Lab Sample ID: 680-55137-6
Client Matrix: Solid
% Moisture: 18.9

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161843 | | Instrument ID: | MSL |
| Preparation: | 5035 | Prep Batch: 680-161094 | | Lab File ID: | I0147.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 6.6 g |
| Date Analyzed: | 02/27/2010 1214 | | | Final Weight/Volume: | 5 g |
| Date Prepared: | 02/18/2010 1100 | | | | |

| Analyte | DryWt Corrected: Y | Result (ug/Kg) | Qualifier | MDL | RL |
|---|---|---|---|---|---|
| Benzene | | 4.7 | U | 0.68 | 4.7 |
| Chlorobenzene | | 4.7 | U | 0.90 | 4.7 |
| 1,2-Dichlorobenzene | | 4.7 | U | 1.2 | 4.7 |
| 1,3-Dichlorobenzene | | 4.7 | U | 1.5 | 4.7 |
| 1,4-Dichlorobenzene | | 4.7 | U | 0.69 | 4.7 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 94 | | 65 - 124 |
| Dibromofluoromethane | 100 | | 65 - 124 |
| Toluene-d8 (Surr) | 100 | | 65 - 132 |



MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Client Sample ID:** **SED-R2007-1-0210 AD**

Lab Sample ID: 680-55137-8FD
Client Matrix: Solid
% Moisture: 27.7

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**8260B Volatile Organic Compounds (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8260B | Analysis Batch: 680-161843 | | Instrument ID: | MSL |
| Preparation: | 5035 | Prep Batch: 680-161094 | | Lab File ID: | I0148.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 6.6 g |
| Date Analyzed: | 02/27/2010 1235 | | | Final Weight/Volume: | 5 g |
| Date Prepared: | 02/18/2010 1100 | | | | |

| Analyte | DryWt Corrected: Y | Result (ug/Kg) | Qualifier | MDL | RL |
|---|---|---|---|---|---|
| Benzene | | 5.2 | U | 0.76 | 5.2 |
| Chlorobenzene | | 5.2 | U | 1.0 | 5.2 |
| 1,2-Dichlorobenzene | | 5.2 | U | 1.4 | 5.2 |
| 1,3-Dichlorobenzene | | 5.2 | U | 1.7 | 5.2 |
| 1,4-Dichlorobenzene | | 5.2 | U | 0.77 | 5.2 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 93 | | 65 - 124 |
| Dibromofluoromethane | 106 | | 65 - 124 |
| Toluene-d8 (Surr) | 95 | | 65 - 132 |



MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Client Sample ID:** **SED-R2007-3-0210**

Lab Sample ID: 680-55137-2
Client Matrix: Solid
% Moisture: 14.8

Date Sampled: 02/17/2010 1035
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161672 | | Instrument ID: | MSF |
| Preparation: | 3550B | Prep Batch: 680-161178 | | Lab File ID: | f4588.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 30.06 g |
| Date Analyzed: | 02/25/2010 1148 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1345 | | | Injection Volume: | 1 uL |

| Analyte | DryWt Corrected: Y | Result (ug/Kg) | Qualifier | MDL | RL |
|---|---|---|---|---|---|
| 4-Chloroaniline | | 770 | U | 61 | 770 |
| 2-Chlorophenol | | 390 | U | 47 | 390 |
| 1,2,4-Trichlorobenzene | | 390 | U | 36 | 390 |
| 1,4-Dioxane | | 390 | U | 140 | 390 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 2-Fluorobiphenyl | 57 | | 34 - 130 |
| 2-Fluorophenol | 57 | | 30 - 130 |
| Nitrobenzene-d5 | 55 | | 27 - 130 |
| Phenol-d5 | 55 | | 30 - 130 |
| Terphenyl-d14 | 62 | | 39 - 130 |
| 2,4,6-Tribromophenol | 43 | | 34 - 130 |



MAR 23 2010

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Client Sample ID:** **SED-R2007-2-0210**

Lab Sample ID: 680-55137-4
Client Matrix: Solid
% Moisture: 15.5

Date Sampled: 02/17/2010 1200
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161672 | | Instrument ID: | MSF |
| Preparation: | 3550B | Prep Batch: 680-161178 | | Lab File ID: | f4600.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 30.06 g |
| Date Analyzed: | 02/25/2010 1750 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1345 | | | Injection Volume: | 1 uL |

| Analyte | DryWt Corrected: Y | Result (ug/Kg) | Qualifier | MDL | RL |
|---|---|---|---|---|---|
| 4-Chloroaniline | | 780 | U | 61 | 780 |
| 2-Chlorophenol | | 390 | U | 47 | 390 |
| 1,2,4-Trichlorobenzene | | 390 | U | 37 | 390 |
| 1,4-Dioxane | | 390 | U | 140 | 390 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 2-Fluorobiphenyl | 49 | | 34 - 130 |
| 2-Fluorophenol | 48 | | 30 - 130 |
| Nitrobenzene-d5 | 46 | | 27 - 130 |
| Phenol-d5 | 47 | | 30 - 130 |
| Terphenyl-d14 | 59 | | 39 - 130 |
| 2,4,6-Tribromophenol | 46 | | 34 - 130 |



MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Client Sample ID:** **SED-R2007-1-0210**

Lab Sample ID: 680-55137-6
Client Matrix: Solid
% Moisture: 18.9

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-161786 | | Instrument ID: | MSF |
| Preparation: | 3550B | Prep Batch: 680-161178 | | Lab File ID: | f4607.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 30.10 g |
| Date Analyzed: | 02/26/2010 1145 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1345 | | | Injection Volume: | 1 uL |

| Analyte | DryWt Corrected: Y | Result (ug/Kg) | Qualifier | MDL | RL |
|---|---|---|---|---|---|
| 4-Chloroaniline | | 810 | U | 64 | 810 |
| 2-Chlorophenol | | 410 | U | 49 | 410 |
| 1,2,4-Trichlorobenzene | | 410 | U | 38 | 410 |
| 1,4-Dioxane | | 410 | U | 150 | 410 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 2-Fluorobiphenyl | 37 | | 34 - 130 |
| 2-Fluorophenol | 33 | | 30 - 130 |
| Nitrobenzene-d5 | 34 | | 27 - 130 |
| Phenol-d5 | 32 | | 30 - 130 |
| Terphenyl-d14 | 55 | | 39 - 130 |
| 2,4,6-Tribromophenol | 45 | | 34 - 130 |



MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Client Sample ID:** **SED-R2007-1-0210 AD**

Lab Sample ID: 680-55137-8FD
Client Matrix: Solid
% Moisture: 27.7

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

| | | | | | |
|---|---|---|---|---|---|
| Method: | 8270C | Analysis Batch: 680-162186 | | Instrument ID: | MSF |
| Preparation: | 3550B | Prep Batch: 680-161995 | | Lab File ID: | f4739.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 30.27 g |
| Date Analyzed: | 03/03/2010 1655 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 03/02/2010 1425 | | | Injection Volume: | 1 uL |

| Analyte | DryWt Corrected: Y | Result (ug/Kg) | Qualifier | MDL | RL |
|---|---|---|---|---|---|
| 4-Chloroaniline | | 900 | "UJ" | 71 | 900 |
| 2-Chlorophenol | | 450 | "UJ" | 55 | 450 |
| 1,2,4-Trichlorobenzene | | 450 | "UJ" | 42 | 450 |
| 1,4-Dioxane | | 450 | "UJ" | 160 | 450 |

| Surrogate | %Rec | Qualifier | Acceptance Limits |
|---|---|---|---|
| 2-Fluorobiphenyl | 61 | | 34 - 130 |
| 2-Fluorophenol | 61 | | 30 - 130 |
| Nitrobenzene-d5 | 57 | | 27 - 130 |
| Phenol-d5 | 61 | | 30 - 130 |
| Terphenyl-d14 | 78 | | 39 - 130 |
| 2,4,6-Tribromophenol | 72 | | 34 - 130 |



MAR 23 2010 ERR

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**General Chemistry**

**Client Sample ID:** **SED-R2007-3-0210**

Lab Sample ID: 680-55137-2
Client Matrix: Solid

Date Sampled: 02/17/2010 1035
Date Received: 02/18/2010 0959

| Analyte | Result | Qual | Units | RL | RL | Dil | Method |
|---|---|---|---|---|---|---|---|
| Percent Moisture | 15 | | % | 0.010 | 0.010 | 1.0 | Moisture |

Analysis Batch: 680-161335 Date Analyzed: 02/22/2010 1412 DryWt Corrected: N



MAR 23 2010

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**General Chemistry**

**Client Sample ID:** **SED-R2007-2-0210**

Lab Sample ID: 680-55137-4
Client Matrix: Solid

Date Sampled: 02/17/2010 1200
Date Received: 02/18/2010 0959

| Analyte | Result | Qual | Units | RL | RL | Dil | Method |
|---|---|---|---|---|---|---|---|
| Percent Moisture | 16 | | % | 0.010 | 0.010 | 1.0 | Moisture |

Analysis Batch: 680-161335 Date Analyzed: 02/22/2010 1412 DryWt Corrected: N



MAR 23 2010 EZR

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**General Chemistry**

**Client Sample ID:** **SED-R2007-1-0210**

Lab Sample ID: 680-55137-6
Client Matrix: Solid

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

| Analyte | Result | Qual | Units | RL | RL | Dil | Method |
|---|---|---|---|---|---|---|---|
| Percent Moisture | 19 | | % | 0.010 | 0.010 | 1.0 | Moisture |

Analysis Batch: 680-161335 Date Analyzed: 02/22/2010 1412 DryWt Corrected: N



MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**General Chemistry**

**Client Sample ID:** **SED-R2007-1-0210 AD**

Lab Sample ID: 680-55137-8FD
Client Matrix: Solid

Date Sampled: 02/17/2010 1450
Date Received: 02/18/2010 0959

| Analyte | Result | Qual | Units | RL | RL | Dil | Method |
|---|---|---|---|---|---|---|---|
| Percent Moisture | 28 | | % | 0.010 | 0.010 | 1.0 | Moisture |

Analysis Batch: 680-161335 Date Analyzed: 02/22/2010 1412 DryWt Corrected: N



MAR 23 2010 EZK

# DATA REPORTING QUALIFIERS

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

| Lab Section | Qualifier | Description |
|---|---|---|
| GC/MS VOA | | |
| | U | Indicates the analyte was analyzed for but not detected. |
| GC/MS Semi VOA | | |
| | U | Indicates the analyte was analyzed for but not detected. |

# QUALITY CONTROL RESULTS

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **GC/MS VOA** | | | | | |
| **Prep Batch: 680-161094** | | | | | |
| 680-55137-2 | SED-R2007-3-0210 | T | Solid | 5035 | |
| 680-55137-2MS | Matrix Spike | T | Solid | 5035 | |
| 680-55137-2MSD | Matrix Spike Duplicate | T | Solid | 5035 | |
| 680-55137-4 | SED-R2007-2-0210 | T | Solid | 5035 | |
| 680-55137-6 | SED-R2007-1-0210 | T | Solid | 5035 | |
| 680-55137-8FD | SED-R2007-1-0210 AD | T | Solid | 5035 | |
| **Analysis Batch:680-161843** | | | | | |
| LCS 680-161843/6 | Lab Control Sample | T | Solid | 8260B | |
| MB 680-161843/7 | Method Blank | T | Solid | 8260B | |
| 680-55137-4 | SED-R2007-2-0210 | T | Solid | 8260B | 680-161094 |
| 680-55137-6 | SED-R2007-1-0210 | T | Solid | 8260B | 680-161094 |
| 680-55137-8FD | SED-R2007-1-0210 AD | T | Solid | 8260B | 680-161094 |
| **Analysis Batch:680-161900** | | | | | |
| LCS 680-161900/5 | Lab Control Sample | T | Solid | 8260B | |
| MB 680-161900/6 | Method Blank | T | Solid | 8260B | |
| 680-55137-2 | SED-R2007-3-0210 | T | Solid | 8260B | 680-161094 |
| **Analysis Batch:680-162060** | | | | | |
| LCS 680-162060/5 | Lab Control Sample | T | Solid | 8260B | |
| MB 680-162060/6 | Method Blank | T | Solid | 8260B | |
| 680-55137-2MS | Matrix Spike | T | Solid | 8260B | 680-161094 |
| 680-55137-2MSD | Matrix Spike Duplicate | T | Solid | 8260B | 680-161094 |

**Report Basis**
T = Total

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **GC/MS Semi VOA** | | | | | |
| **Prep Batch: 680-161178** | | | | | |
| LCS 680-161178/10-A | Lab Control Sample | T | Solid | 3550B | |
| MB 680-161178/9-A | Method Blank | T | Solid | 3550B | |
| 680-55137-2 | SED-R2007-3-0210 | T | Solid | 3550B | |
| 680-55137-2MS | Matrix Spike | T | Solid | 3550B | |
| 680-55137-2MSD | Matrix Spike Duplicate | T | Solid | 3550B | |
| 680-55137-4 | SED-R2007-2-0210 | T | Solid | 3550B | |
| 680-55137-6 | SED-R2007-1-0210 | T | Solid | 3550B | |
| **Analysis Batch:680-161641** | | | | | |
| LCS 680-161178/10-A | Lab Control Sample | T | Solid | 8270C | 680-161178 |
| MB 680-161178/9-A | Method Blank | T | Solid | 8270C | 680-161178 |
| 680-55137-2MS | Matrix Spike | T | Solid | 8270C | 680-161178 |
| 680-55137-2MSD | Matrix Spike Duplicate | T | Solid | 8270C | 680-161178 |
| **Analysis Batch:680-161672** | | | | | |
| 680-55137-2 | SED-R2007-3-0210 | T | Solid | 8270C | 680-161178 |
| 680-55137-4 | SED-R2007-2-0210 | T | Solid | 8270C | 680-161178 |
| **Analysis Batch:680-161786** | | | | | |
| 680-55137-6 | SED-R2007-1-0210 | T | Solid | 8270C | 680-161178 |
| **Prep Batch: 680-161995** | | | | | |
| LCS 680-161995/17-A | Lab Control Sample | T | Solid | 3550B | |
| MB 680-161995/16-A | Method Blank | T | Solid | 3550B | |
| 680-55137-8FD | SED-R2007-1-0210 AD | T | Solid | 3550B | |
| **Analysis Batch:680-162186** | | | | | |
| LCS 680-161995/17-A | Lab Control Sample | T | Solid | 8270C | 680-161995 |
| MB 680-161995/16-A | Method Blank | T | Solid | 8270C | 680-161995 |
| 680-55137-8FD | SED-R2007-1-0210 AD | T | Solid | 8270C | 680-161995 |

**Report Basis**
T = Total

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

## QC Association Summary

| Lab Sample ID | Client Sample ID | Report Basis | Client Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| **General Chemistry** | | | | | |
| **Analysis Batch:680-161335** | | | | | |
| 680-55137-2 | SED-R2007-3-0210 | T | Solid | Moisture | |
| 680-55137-2MS | Matrix Spike | T | Solid | Moisture | |
| 680-55137-2MSD | Matrix Spike Duplicate | T | Solid | Moisture | |
| 680-55137-4 | SED-R2007-2-0210 | T | Solid | Moisture | |
| 680-55137-6 | SED-R2007-1-0210 | T | Solid | Moisture | |
| 680-55137-8FD | SED-R2007-1-0210 AD | T | Solid | Moisture | |

**Report Basis**
T = Total

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

## Surrogate Recovery Report

**8260B Volatile Organic Compounds (GC/MS)**

**Client Matrix: Solid**

| Lab Sample ID | Client Sample ID | BFB %Rec | DBFM %Rec | TOL %Rec |
|---|---|---|---|---|
| 680-55137-2 | SED-R2007-3-0210 | 94 | 93 | 98 |
| 680-55137-4 | SED-R2007-2-0210 | 104 | 99 | 102 |
| 680-55137-6 | SED-R2007-1-0210 | 94 | 100 | 100 |
| 680-55137-8 | SED-R2007-1-0210 AD | 93 | 106 | 95 |
| MB 680-161843/7 | | 95 | 111 | 98 |
| MB 680-161900/6 | | 94 | 108 | 98 |
| MB 680-162060/6 | | 97 | 107 | 99 |
| LCS 680-161843/6 | | 92 | 87 | 86 |
| LCS 680-161900/5 | | 101 | 101 | 100 |
| LCS 680-162060/5 | | 92 | 84 | 88 |
| 680-55137-2 MS | SED-R2007-3-0210 MS | 105 | 97 | 110 |
| 680-55137-2 MSD | SED-R2007-3-0210 MSD | 90 | 75 | 86 |

| Surrogate | Acceptance Limits |
|---|---|
| BFB = 4-Bromofluorobenzene | 65-124 |
| DBFM = Dibromofluoromethane | 65-124 |
| TOL = Toluene-d8 (Surr) | 65-132 |

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

## Surrogate Recovery Report

**8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)**

**Client Matrix: Solid**

| Lab Sample ID | Client Sample ID | FBP %Rec | 2FP %Rec | NBZ %Rec | PHL %Rec | TPH %Rec | TBP %Rec |
|---|---|---|---|---|---|---|---|
| 680-55137-2 | SED-R2007-3-0210 | 57 | 57 | 55 | 55 | 62 | 43 |
| 680-55137-4 | SED-R2007-2-0210 | 49 | 48 | 46 | 47 | 59 | 46 |
| 680-55137-6 | SED-R2007-1-0210 | 37 | 33 | 34 | 32 | 55 | 45 |
| 680-55137-8 | SED-R2007-1-0210 AD | 61 | 61 | 57 | 61 | 78 | 72 |
| MB 680-161178/9-A | | 63 | 59 | 56 | 58 | 79 | 68 |
| MB 680-161995/16-A | | 66 | 58 | 59 | 60 | 84 | 73 |
| LCS 680-161178/10-A | | 69 | 63 | 63 | 65 | 75 | 72 |
| LCS 680-161995/17-A | | 70 | 60 | 63 | 63 | 86 | 88 |
| 680-55137-2 MS | SED-R2007-3-0210 MS | 64 | 57 | 58 | 59 | 70 | 68 |
| 680-55137-2 MSD | SED-R2007-3-0210 MSD | 59 | 54 | 53 | 58 | 72 | 65 |

| Surrogate | Acceptance Limits |
|---|---|
| FBP = 2-Fluorobiphenyl | 34-130 |
| 2FP = 2-Fluorophenol | 30-130 |
| NBZ = Nitrobenzene-d5 | 27-130 |
| PHL = Phenol-d5 | 30-130 |
| TPH = Terphenyl-d14 | 39-130 |
| TBP = 2,4,6-Tribromophenol | 34-130 |

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Matrix Spike/**
**Matrix Spike Duplicate Recovery Report - Batch: 680-161094**

**Method: 8260B**
**Preparation: 5035**

| | | | | | |
|---|---|---|---|---|---|
| MS Lab Sample ID: | 680-55137-2 | Analysis Batch: | 680-162060 | Instrument ID: | MSL |
| Client Matrix: | Solid | Prep Batch: | 680-161094 | Lab File ID: | I0054.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 6.6 g |
| Date Analyzed: | 03/02/2010 1307 | | | Final Weight/Volume: | 5 g |
| Date Prepared: | 02/18/2010 1100 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| MSD Lab Sample ID: | 680-55137-2 | Analysis Batch: | 680-162060 | Instrument ID: | MSL |
| Client Matrix: | Solid | Prep Batch: | 680-161094 | Lab File ID: | I0055.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 6.1 g |
| Date Analyzed: | 03/02/2010 1328 | | | Final Weight/Volume: | 5 g |
| Date Prepared: | 02/18/2010 1100 | | | | |

| Analyte | % Rec. MS | % Rec. MSD | Limit | RPD | RPD Limit | MS Qual | MSD Qual |
|---|---|---|---|---|---|---|---|
| Benzene | 120 | 92 | 63 - 130 | 18 | 50 | | |
| Chlorobenzene | 101 | 89 | 77 - 120 | 4 | 50 | | |
| 1,2-Dichlorobenzene | 113 | 101 | 75 - 123 | 3 | 50 | | |
| 1,3-Dichlorobenzene | 106 | 93 | 74 - 123 | 5 | 50 | | |
| 1,4-Dichlorobenzene | 109 | 94 | 75 - 122 | 7 | 50 | | |

| Surrogate | MS % Rec | MSD % Rec | Acceptance Limits |
|---|---|---|---|
| 4-Bromofluorobenzene | 105 | 90 | 65 - 124 |
| Dibromofluoromethane | 97 | 75 | 65 - 124 |
| Toluene-d8 (Surr) | 110 | 86 | 65 - 132 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 ERR

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Method Blank - Batch: 680-161843**

**Method: 8260B**
**Preparation: N/A**

Lab Sample ID: MB 680-161843/7
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 02/27/2010 1108
Date Prepared: N/A

Analysis Batch: 680-161843
Prep Batch: N/A
Units: ug/Kg

Instrument ID: MSL
Lab File ID: lq079.d
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

| Analyte | Result | Qual | MDL | RL |
|---|---|---|---|---|
| Benzene | 5.0 | U | 0.73 | 5.0 |
| Chlorobenzene | 5.0 | U | 0.96 | 5.0 |
| 1,2-Dichlorobenzene | 5.0 | U | 1.3 | 5.0 |
| 1,3-Dichlorobenzene | 5.0 | U | 1.6 | 5.0 |
| 1,4-Dichlorobenzene | 5.0 | U | 0.74 | 5.0 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 95 | 65 - 124 |
| Dibromofluoromethane | 111 | 65 - 124 |
| Toluene-d8 (Surr) | 98 | 65 - 132 |

**Lab Control Sample - Batch: 680-161843**

**Method: 8260B**
**Preparation: N/A**

Lab Sample ID: LCS 680-161843/6
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 02/27/2010 0942
Date Prepared: N/A

Analysis Batch: 680-161843
Prep Batch: N/A
Units: ug/Kg

Instrument ID: MSL
Lab File ID: lq076.d
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Benzene | 50.0 | 44.6 | 89 | 63 - 130 | |
| Chlorobenzene | 50.0 | 38.8 | 78 | 77 - 120 | |
| 1,2-Dichlorobenzene | 50.0 | 38.7 | 77 | 75 - 123 | |
| 1,3-Dichlorobenzene | 50.0 | 40.3 | 81 | 74 - 123 | |
| 1,4-Dichlorobenzene | 50.0 | 39.6 | 79 | 75 - 122 | |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 92 | 65 - 124 |
| Dibromofluoromethane | 87 | 65 - 124 |
| Toluene-d8 (Surr) | 86 | 65 - 132 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EJK

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Method Blank - Batch: 680-161900**

**Method: 8260B**
**Preparation: N/A**

Lab Sample ID: MB 680-161900/6
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 02/28/2010 1206
Date Prepared: N/A

Analysis Batch: 680-161900
Prep Batch: N/A
Units: ug/Kg

Instrument ID: MSL
Lab File ID: lq022.d
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

| Analyte | Result | Qual | MDL | RL |
|---|---|---|---|---|
| Benzene | 5.0 | U | 0.73 | 5.0 |
| Chlorobenzene | 5.0 | U | 0.96 | 5.0 |
| 1,2-Dichlorobenzene | 5.0 | U | 1.3 | 5.0 |
| 1,3-Dichlorobenzene | 5.0 | U | 1.6 | 5.0 |
| 1,4-Dichlorobenzene | 5.0 | U | 0.74 | 5.0 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 94 | 65 - 124 |
| Dibromofluoromethane | 108 | 65 - 124 |
| Toluene-d8 (Surr) | 98 | 65 - 132 |

**Lab Control Sample - Batch: 680-161900**

**Method: 8260B**
**Preparation: N/A**

Lab Sample ID: LCS 680-161900/5
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 02/28/2010 1040
Date Prepared: N/A

Analysis Batch: 680-161900
Prep Batch: N/A
Units: ug/Kg

Instrument ID: MSL
Lab File ID: lq019.d
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Benzene | 50.0 | 50.6 | 101 | 63 - 130 | |
| Chlorobenzene | 50.0 | 48.3 | 97 | 77 - 120 | |
| 1,2-Dichlorobenzene | 50.0 | 50.2 | 100 | 75 - 123 | |
| 1,3-Dichlorobenzene | 50.0 | 51.1 | 102 | 74 - 123 | |
| 1,4-Dichlorobenzene | 50.0 | 51.6 | 103 | 75 - 122 | |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 101 | 65 - 124 |
| Dibromofluoromethane | 101 | 65 - 124 |
| Toluene-d8 (Surr) | 100 | 65 - 132 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EZR

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Method Blank - Batch: 680-162060**

**Method: 8260B**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-162060/6 | Analysis Batch: | 680-162060 | Instrument ID: | MSL |
| Client Matrix: | Solid | Prep Batch: | N/A | Lab File ID: | lq039.d |
| Dilution: | 1.0 | Units: | ug/Kg | Initial Weight/Volume: | 5 g |
| Date Analyzed: | 03/02/2010 1156 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Result | Qual | MDL | RL |
|---|---|---|---|---|
| Benzene | 5.0 | U | 0.73 | 5.0 |
| Chlorobenzene | 5.0 | U | 0.96 | 5.0 |
| 1,2-Dichlorobenzene | 5.0 | U | 1.3 | 5.0 |
| 1,3-Dichlorobenzene | 5.0 | U | 1.6 | 5.0 |
| 1,4-Dichlorobenzene | 5.0 | U | 0.74 | 5.0 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 97 | 65 - 124 |
| Dibromofluoromethane | 107 | 65 - 124 |
| Toluene-d8 (Surr) | 99 | 65 - 132 |

**Lab Control Sample - Batch: 680-162060**

**Method: 8260B**
**Preparation: N/A**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-162060/5 | Analysis Batch: | 680-162060 | Instrument ID: | MSL |
| Client Matrix: | Solid | Prep Batch: | N/A | Lab File ID: | lq036.d |
| Dilution: | 1.0 | Units: | ug/Kg | Initial Weight/Volume: | 5 g |
| Date Analyzed: | 03/02/2010 1030 | | | Final Weight/Volume: | 5 mL |
| Date Prepared: | N/A | | | | |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| Benzene | 50.0 | 47.2 | 94 | 63 - 130 | |
| Chlorobenzene | 50.0 | 45.7 | 91 | 77 - 120 | |
| 1,2-Dichlorobenzene | 50.0 | 48.8 | 98 | 75 - 123 | |
| 1,3-Dichlorobenzene | 50.0 | 45.6 | 91 | 74 - 123 | |
| 1,4-Dichlorobenzene | 50.0 | 46.5 | 93 | 75 - 122 | |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 4-Bromofluorobenzene | 92 | 65 - 124 |
| Dibromofluoromethane | 84 | 65 - 124 |
| Toluene-d8 (Surr) | 88 | 65 - 132 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EZK

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Method Blank - Batch: 680-161178**

**Method: 8270C**
**Preparation: 3550B**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161178/9-A | Analysis Batch: | 680-161641 | Instrument ID: | MSF |
| Client Matrix: | Solid | Prep Batch: | 680-161178 | Lab File ID: | f4565.d |
| Dilution: | 1.0 | Units: | ug/Kg | Initial Weight/Volume: | 30.28 g |
| Date Analyzed: | 02/24/2010 1812 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1345 | | | Injection Volume: | 1 uL |

| Analyte | Result | Qual | MDL | RL |
|---|---|---|---|---|
| 4-Chloroaniline | 650 | U | 52 | 650 |
| 2-Chlorophenol | 330 | U | 40 | 330 |
| 1,2,4-Trichlorobenzene | 330 | U | 31 | 330 |
| 1,4-Dioxane | 330 | U | 120 | 330 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 2-Fluorobiphenyl | 63 | 34 - 130 |
| 2-Fluorophenol | 59 | 30 - 130 |
| Nitrobenzene-d5 | 56 | 27 - 130 |
| Phenol-d5 | 58 | 30 - 130 |
| Terphenyl-d14 | 79 | 39 - 130 |
| 2,4,6-Tribromophenol | 68 | 34 - 130 |

**Lab Control Sample - Batch: 680-161178**

**Method: 8270C**
**Preparation: 3550B**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161178/10-A | Analysis Batch: | 680-161641 | Instrument ID: | MSF |
| Client Matrix: | Solid | Prep Batch: | 680-161178 | Lab File ID: | f4575.d |
| Dilution: | 1.0 | Units: | ug/Kg | Initial Weight/Volume: | 30.15 g |
| Date Analyzed: | 02/24/2010 2201 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1345 | | | Injection Volume: | 1 uL |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| 4-Chloroaniline | 3320 | 1710 | 51 | 23 - 130 | |
| 2-Chlorophenol | 3320 | 2130 | 64 | 32 - 130 | |
| 1,2,4-Trichlorobenzene | 3320 | 2090 | 63 | 30 - 130 | |
| 1,4-Dioxane | 3320 | 786 | 24 | 10 - 130 | |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 2-Fluorobiphenyl | 69 | 34 - 130 |
| 2-Fluorophenol | 63 | 30 - 130 |
| Nitrobenzene-d5 | 63 | 27 - 130 |
| Phenol-d5 | 65 | 30 - 130 |
| Terphenyl-d14 | 75 | 39 - 130 |
| 2,4,6-Tribromophenol | 72 | 34 - 130 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EZK

## Quality Control Results

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Matrix Spike/**
**Matrix Spike Duplicate Recovery Report - Batch: 680-161178**

**Method: 8270C**
**Preparation: 3550B**

| | | | | | |
|---|---|---|---|---|---|
| MS Lab Sample ID: | 680-55137-2 | Analysis Batch: | 680-161641 | Instrument ID: | MSF |
| Client Matrix: | Solid | Prep Batch: | 680-161178 | Lab File ID: | f4583.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 30.27 g |
| Date Analyzed: | 02/25/2010 0105 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1345 | | | Injection Volume: | 1 uL |

| | | | | | |
|---|---|---|---|---|---|
| MSD Lab Sample ID: | 680-55137-2 | Analysis Batch: | 680-161641 | Instrument ID: | MSF |
| Client Matrix: | Solid | Prep Batch: | 680-161178 | Lab File ID: | f4584.d |
| Dilution: | 1.0 | | | Initial Weight/Volume: | 30.11 g |
| Date Analyzed: | 02/25/2010 0128 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 02/19/2010 1345 | | | Injection Volume: | 1 uL |

| Analyte | % Rec. MS | % Rec. MSD | Limit | RPD | RPD Limit | MS Qual | MSD Qual |
|---|---|---|---|---|---|---|---|
| 4-Chloroaniline | 67 | 60 | 23 - 130 | 10 | 50 | | |
| 2-Chlorophenol | 60 | 57 | 32 - 130 | 5 | 50 | | |
| 1,2,4-Trichlorobenzene | 62 | 55 | 30 - 130 | 11 | 50 | | |
| 1,4-Dioxane | 22 | 20 | 10 - 130 | 8 | 50 | | |

| Surrogate | MS % Rec | MSD % Rec | Acceptance Limits |
|---|---|---|---|
| 2-Fluorobiphenyl | 64 | 59 | 34 - 130 |
| 2-Fluorophenol | 57 | 54 | 30 - 130 |
| Nitrobenzene-d5 | 58 | 53 | 27 - 130 |
| Phenol-d5 | 59 | 58 | 30 - 130 |
| Terphenyl-d14 | 70 | 72 | 39 - 130 |
| 2,4,6-Tribromophenol | 68 | 65 | 34 - 130 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EYK

Client: Solutia Inc.

Job Number: 680-55137-2
Sdg Number: KRS010

**Method Blank - Batch: 680-161995**

**Method: 8270C**
**Preparation: 3550B**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | MB 680-161995/16-A | Analysis Batch: | 680-162186 | Instrument ID: | MSF |
| Client Matrix: | Solid | Prep Batch: | 680-161995 | Lab File ID: | f4733.d |
| Dilution: | 1.0 | Units: | ug/Kg | Initial Weight/Volume: | 30.12 g |
| Date Analyzed: | 03/03/2010 1458 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 03/02/2010 1425 | | | Injection Volume: | 1 uL |

| Analyte | Result | Qual | MDL | RL |
|---|---|---|---|---|
| 4-Chloroaniline | 660 | U | 52 | 660 |
| 2-Chlorophenol | 330 | U | 40 | 330 |
| 1,2,4-Trichlorobenzene | 330 | U | 31 | 330 |
| 1,4-Dioxane | 330 | U | 120 | 330 |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 2-Fluorobiphenyl | 66 | 34 - 130 |
| 2-Fluorophenol | 58 | 30 - 130 |
| Nitrobenzene-d5 | 59 | 27 - 130 |
| Phenol-d5 | 60 | 30 - 130 |
| Terphenyl-d14 | 84 | 39 - 130 |
| 2,4,6-Tribromophenol | 73 | 34 - 130 |

**Lab Control Sample - Batch: 680-161995**

**Method: 8270C**
**Preparation: 3550B**

| | | | | | |
|---|---|---|---|---|---|
| Lab Sample ID: | LCS 680-161995/17-A | Analysis Batch: | 680-162186 | Instrument ID: | MSF |
| Client Matrix: | Solid | Prep Batch: | 680-161995 | Lab File ID: | f4734.d |
| Dilution: | 1.0 | Units: | ug/Kg | Initial Weight/Volume: | 30.38 g |
| Date Analyzed: | 03/03/2010 1825 | | | Final Weight/Volume: | 1 mL |
| Date Prepared: | 03/02/2010 1425 | | | Injection Volume: | 1 uL |

| Analyte | Spike Amount | Result | % Rec. | Limit | Qual |
|---|---|---|---|---|---|
| 4-Chloroaniline | 3290 | 1830 | 56 | 23 - 130 | |
| 2-Chlorophenol | 3290 | 2010 | 61 | 32 - 130 | |
| 1,2,4-Trichlorobenzene | 3290 | 2110 | 64 | 30 - 130 | |
| 1,4-Dioxane | 3290 | 693 | 21 | 10 - 130 | |

| Surrogate | % Rec | Acceptance Limits |
|---|---|---|
| 2-Fluorobiphenyl | 70 | 34 - 130 |
| 2-Fluorophenol | 60 | 30 - 130 |
| Nitrobenzene-d5 | 63 | 27 - 130 |
| Phenol-d5 | 63 | 30 - 130 |
| Terphenyl-d14 | 86 | 39 - 130 |
| 2,4,6-Tribromophenol | 88 | 34 - 130 |

Calculations are performed before rounding to avoid round-off errors in calculated results.



MAR 23 2010 EZK

Serial Number 026327

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

| PROJECT REFERENCE | PROJECT NO. | PROJECT LOCATION (STATE) |
|---|---|---|
| WGK 1st QTR 2010 River | 21562401.00005 | IL |

| TAL (LAB) PROJECT MANAGER | P.O. NUMBER | CONTRACT NO. |
|---|---|---|
| LIDYA Gu 1121A | | |

| CLIENT (SITE) PM | CLIENT PHONE | CLIENT FAX |
|---|---|---|
| Dave Palmer | 314 429 0100 | 314 429 0462 |

| CLIENT NAME | CLIENT E-MAIL |
|---|---|
| URS Corp. | dave_palmer@urscorp.com |

CLIENT ADDRESS: 1001 H. Hands Plaza Drive West Louis MO 63110

COMPANY CONTRACTING THIS WORK (if applicable)

PAGE 1 OF 2

STANDARD REPORT DELIVERY ☒
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 3

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) | AQUEOUS (WATER) | SOLID OR SEMISOLID | AIR | NONAQUEOUS LIQUID (OIL, SOLVENT, ...) | VOC 8260B Sod Thio HCl | SVOC 8270C Sod Thio | VOC 8260B Sod Thio Meth | SVOC 8270C | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/17/10 | 0910 | SW-R2007-3-0210 | G | X | | | | 3 | 2 | | | VOC= Benzene Chlorobenzene 1,2 Dichlorobenzene 1,3 DCB + 1,4 DCB |
| | 1035 | SED-R2007-3-0210 | G | | X | | | | | 3 | 1 | |
| | 0910 | SW-R2007-3-0210 MS | G | X | | | | 3 | 2 | | | SVOC= 4-chloroaniline 2-chlorophenol 1,4-Dioxane 1,2,4-Trichlorobenzene |
| | 1035 | SED-R2007-3-0210 MS | G | | X | | | | | 3 | 1 | |
| | 0910 | SW-R2007-3-0210 MSD | G | X | | | | 3 | 2 | | | |
| | 1035 | SED-R2007-3-0210 MSD | G | | X | | | | | 3 | 1 | |
| | 1120 | SW-R2007-2-0210 | G | X | | | | 3 | 2 | | | |
| | 1200 | SED-R2007-2-0210 | G | | X | | | | | 3 | 1 | |
| | 1250 | SW-R2007-1-0210 | G | X | | | | 3 | 2 | | | |
| | 1450 | SED-R2007-1-0210 | G | | X | | | | | 3 | 1 | |
| | 1250 | SW-R2007-1-0210 AD | G | X | | | | 3 | 2 | | | |
| | 1450 | SED-R2007-1-0210 AD | G | | X | | | | | 3 | 1 | |

Page 33 of 35

| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME |
|---|---|---|---|---|---|---|---|---|
| [signature] | 2/17/10 | 1900 | | | | | | |

| RECEIVED BY: (SIGNATURE) | DATE | TIME | RECEIVED BY: (SIGNATURE) | DATE | TIME | RECEIVED BY: (SIGNATURE) | DATE | TIME |
|---|---|---|---|---|---|---|---|---|
| Fedex | | | | | | | | |

LABORATORY USE ONLY

| RECEIVED FOR LABORATORY BY: (SIGNATURE) | DATE | TIME | CUSTODY INTACT | CUSTODY SEAL NO. | SAVANNAH LOG NO. | LABORATORY REMARKS |
|---|---|---|---|---|---|---|
| George Klomm | 2/18/10 | 0459 | YES ○ NO ○ | | 680-55137 | 1.0/1.6/1.4 |

TAL6240-680 (1207)

MAR 23 2010 [signature]

Serial Number 026878

# 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: WGK 1st QTR 2010 River | PROJECT NO.: 21562401.00005 | PROJECT LOCATION (STATE): IL | PAGE 2 OF 2 |
| TAL (LAB) PROJECT MANAGER: LIDYA Galizia | P.O. NUMBER | CONTRACT NO. | STANDARD REPORT DELIVERY ○ |
| CLIENT (SITE) PM: Dave Palmer | CLIENT PHONE: 314 429 0100 | CLIENT FAX | DATE DUE _____ |
| CLIENT NAME: URS Corp | CLIENT E-MAIL: dave_palmer@urscorp.com | | EXPEDITED REPORT DELIVERY (SURCHARGE) ○ |
| CLIENT ADDRESS: 1001 Highlands Plaza DR W St. Louis MO 63110 | | | DATE DUE _____ |
| COMPANY CONTRACTING THIS WORK (if applicable) | | | NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 3 |

| SAMPLE DATE | SAMPLE TIME | SAMPLE IDENTIFICATION | COMPOSITE (C) OR GRAB (G) INDICATE | AQUEOUS (WATER) | SOLID OR SEMISOLID | AIR | NONAQUEOUS LIQUID (OIL, SOLVENT, ...) | VOC (8260B) Sod Thio HCl | SVOC (8270C) Sod Thio | VOC (8260B) Sod Bis meth | SVOC (8270C) | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/17/10 | 1540 | SED-R2007-1-0210EB | G | X | | | | 3 | 2 | | | | | | | | | | For VOC + SVOC |
| ↓ | 0910 | TRIPBLANK 021710 | G | X | | | | 2 | | | | | | | | | | | lists see Page 1 |

PRESERVATIVE

Page 34 of 35

| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME |
|---|---|---|---|---|---|---|---|---|
| | 2/17/10 | 1900 | | | | | | |
| RECEIVED BY: (SIGNATURE) Fed Ex | 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 |
|---|---|---|---|---|---|---|
| George K Conner | | | YES ○ NO ○ | | 680-55157 | |

TAL8240-680 (1207)

MAR 23 2010 EZR

# Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55137-2
SDG Number: KRS010

**Login Number: 55137**
**Creator: Conner, Keaton**
**List Number: 1**

**List Source: TestAmerica Savannah**

| Question | T / F/ NA | Comment |
|---|---|---|
| Radioactivity either was not measured or, if measured, is at or below background | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | 3 coolers rec'd on ice |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.0, 1.6, 1.4 C |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | True | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | N/A | |
| Is the Field Sampler's name present on COC? | N/A | |
| Sample Preservation Verified | True | |



MAR 23 2010 ERL

# Appendix G

# Microbial Insights Data Package

2340 Stock Creek Blvd.
Rockford TN 37853-3044
Phone: (865) 573-8188
Fax: (865) 573-8133
Email: info@microbe.com

**Client:** Dave Palmer
URS Corp
1001 Highlands Plaza Dr. West
Suite 300
St. Louis, MO 63110

**Phone:** (314) 743-4154

**Fax:** (314) 429-0462

**Identifier:** 028HB **Date Rec:** 02/16/2010 **Report Date:** 03/29/2010

**Client Project #:** 21562401.00001 **Client Project Name:** Solutia WG Krummrich Long Term Monit

**Purchase Order #:**

**Analysis Requested:** PLFA, PLFA+SIP

**Reviewed By:**

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

**MICROBIAL INSIGHTS, INC.**

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

# PLFA

**Client:** **URS Corp**
Project: Solutia WG Krummrich Long Term Monitoring

**MI Project Number:** **028HB**
Date Received: 02/16/2010

## Sample Information

| **Sample Name:** | **BSAMW01S-0210** | **BSAMW02D-0210** | **BSAMW02D-0210-13C Benzene** | **BSAMW03D-0210** | **BSAMW04D-0210** |
|---|---|---|---|---|---|
| Sample Date: | 02/15/2010 | 02/15/2010 | 02/15/2010 | 02/15/2010 | 02/15/2010 |
| Sample Matrix: | beads | beads | beads | beads | beads |
| Analyst: | MG | MG | MG | MG | MG |

## Biomass Concentrations

| | | | | | |
|---|---|---|---|---|---|
| Total Biomass (cells/bead) | **3.31E+05** | **1.94E+04** | **3.31E+04** | **1.78E+04** | **6.38E+04** |

## Community Structure (% total PLFA)

| | | | | | |
|---|---|---|---|---|---|
| Firmicutes (TerBrSats) | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |
| Proteobacteria (Monos) | **76.48** | **80.53** | **69.61** | **71.94** | **75.40** |
| Anaerobic metal reducers (BrMonos) | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |
| SRB/Actinomycetes (MidBrSats) | **0.00** | **0.00** | **2.87** | **0.00** | **0.00** |
| General (Nsats) | **19.03** | **19.48** | **27.52** | **28.06** | **14.19** |
| Eukaryotes (polyenoics) | **4.49** | **0.00** | **0.00** | **0.00** | **10.41** |

## Physiological Status (Proteobacteria only)

| | | | | | |
|---|---|---|---|---|---|
| Slowed Growth | **0.00** | **0.00** | **0.60** | **0.00** | **0.00** |
| Decreased Permeability | **0.78** | **0.00** | **0.00** | **0.00** | **0.00** |

**Legend:**
NA = Not Analyzed NS = Not Sampled

**MICROBIAL INSIGHTS, INC.**

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

# PLFA

**Client:** **URS Corp**
Project: Solutia WG Krummrich Long Term Monitoring

**MI Project Number:** **028HB**
Date Received: 02/16/2010

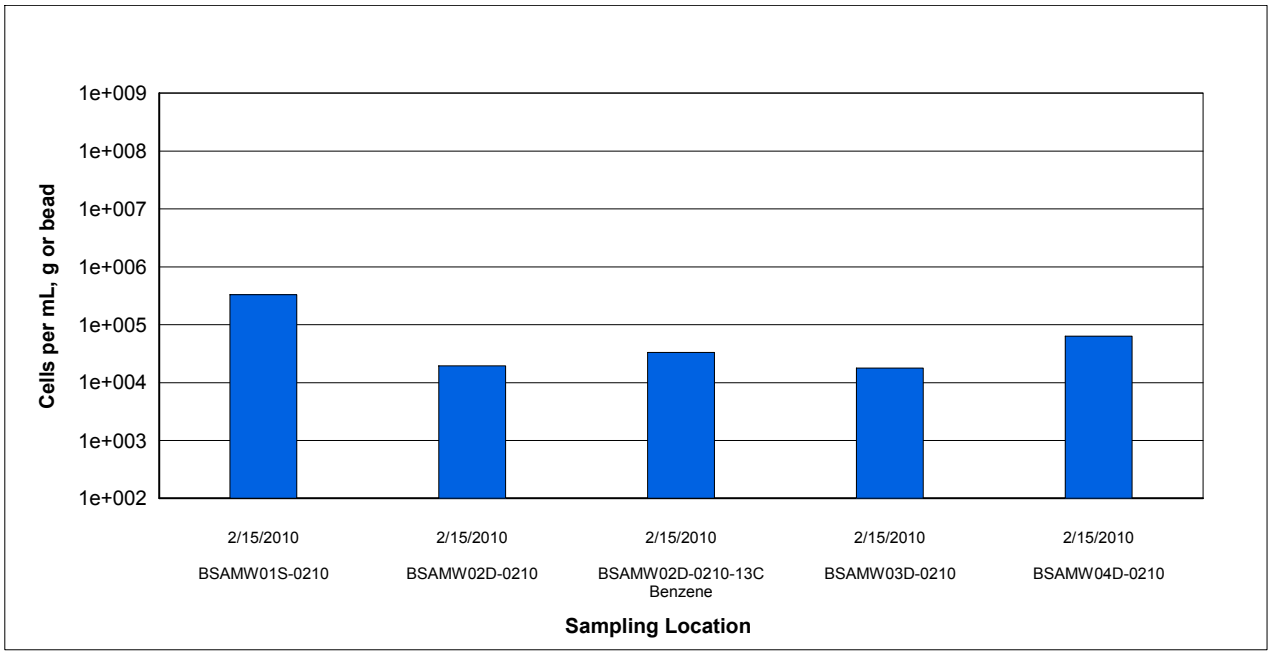



**Figure 1.** Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

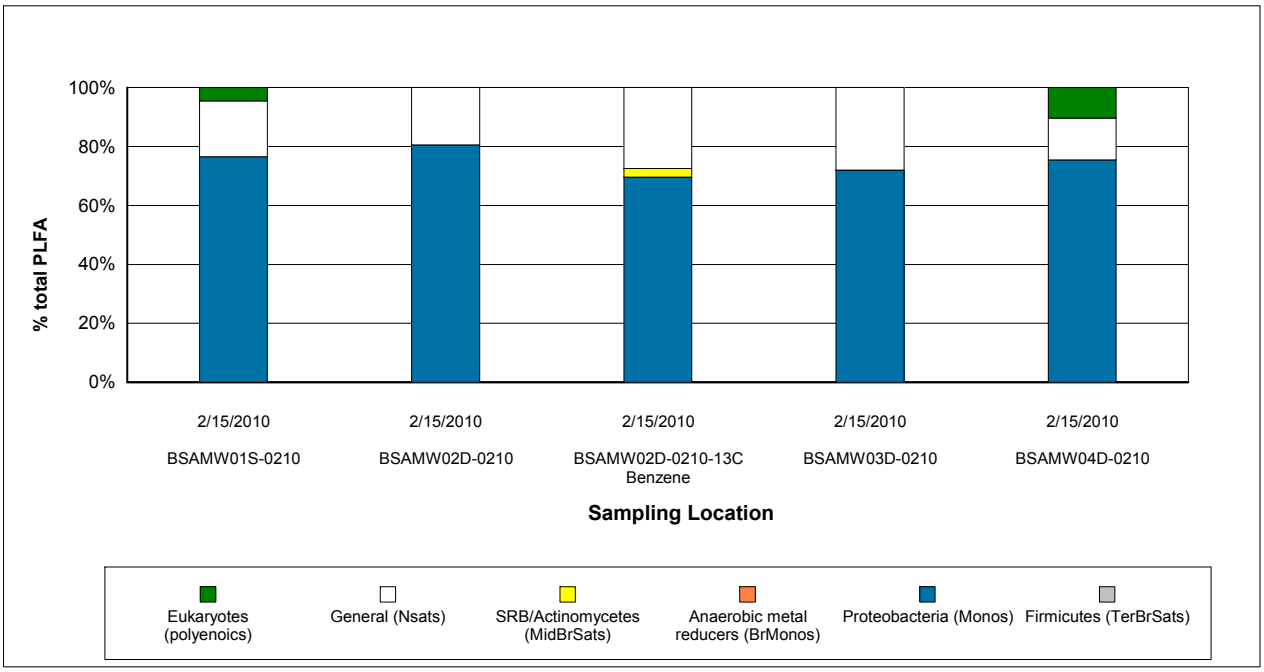



**Figure 2.** Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

**MICROBIAL INSIGHTS, INC.**

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

# PLFA

**Client:** **URS Corp**
Project: Solutia WG Krummrich Long Term Monitoring

**MI Project Number:** **028HB**
Date Received: 02/16/2010

## Sample Information

| **Sample Name:** | **BSAMW05D-0210** | **CPAMW01D-0210** | **CPAMW02D-0210** | **CPAMW03D-0210** | **CPAMW03D-0210** |
|---|---|---|---|---|---|
| Sample Date: | 02/15/2010 | 02/15/2010 | 02/15/2010 | 02/15/2010 | 02/15/2010 |
| Sample Matrix: | beads | beads | beads | beads | beads |
| Analyst: | MG | MG | MG | MG | MG |

## Biomass Concentrations

| | | | | | |
|---|---|---|---|---|---|
| Total Biomass (cells/bead) | **3.72E+04** | **4.43E+04** | **2.34E+04** | **1.17E+05** | **6.31E+04** |

## Community Structure (% total PLFA)

| | | | | | |
|---|---|---|---|---|---|
| Firmicutes (TerBrSats) | **0.00** | **0.00** | **0.00** | **0.00** | **8.53** |
| Proteobacteria (Monos) | **62.89** | **66.83** | **72.14** | **75.14** | **59.48** |
| Anaerobic metal reducers (BrMonos) | **0.00** | **0.00** | **0.00** | **0.00** | **2.66** |
| SRB/Actinomycetes (MidBrSats) | **0.00** | **0.00** | **0.00** | **0.00** | **1.37** |
| General (Nsats) | **22.03** | **33.17** | **27.87** | **13.58** | **24.41** |
| Eukaryotes (polyenoics) | **15.09** | **0.00** | **0.00** | **11.28** | **3.56** |

## Physiological Status (Proteobacteria only)

| | | | | | |
|---|---|---|---|---|---|
| Slowed Growth | **0.00** | **0.00** | **0.00** | **0.00** | **0.19** |
| Decreased Permeability | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

**Legend:**
NA = Not Analyzed NS = Not Sampled

**MICROBIAL INSIGHTS, INC.**

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

# PLFA

**Client:** **URS Corp**
Project: Solutia WG Krummrich Long Term Monitoring

**MI Project Number:** **028HB**
Date Received: 02/16/2010

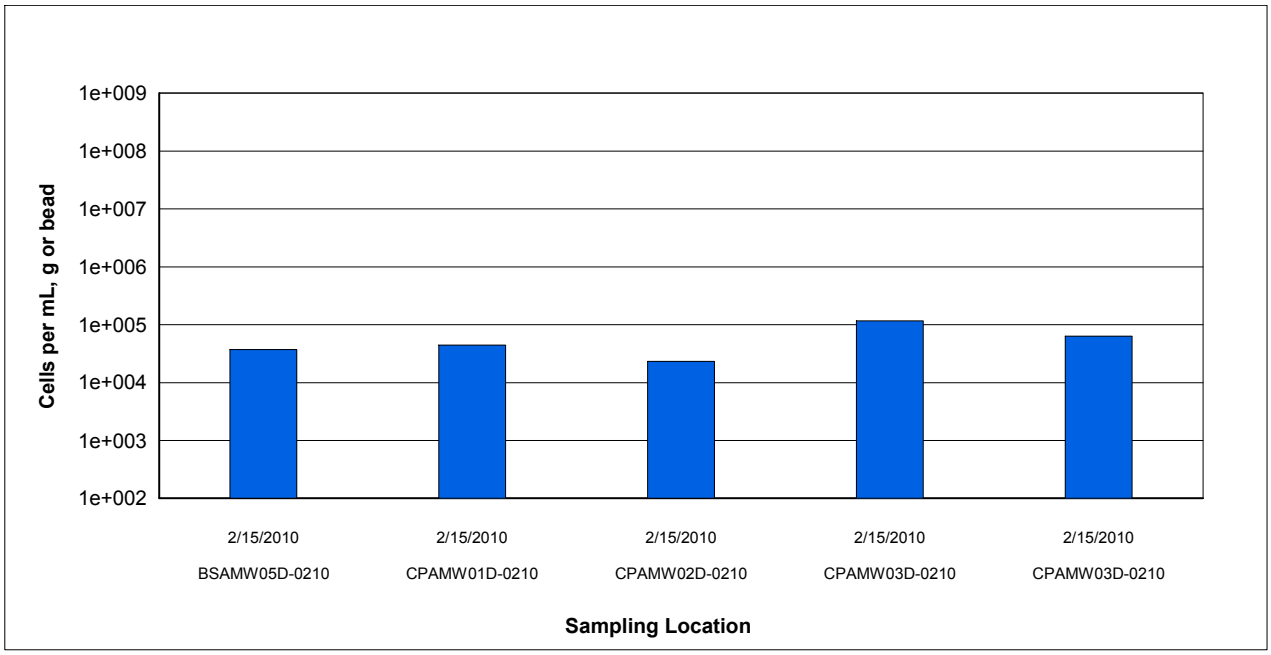



**Figure 1.** Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

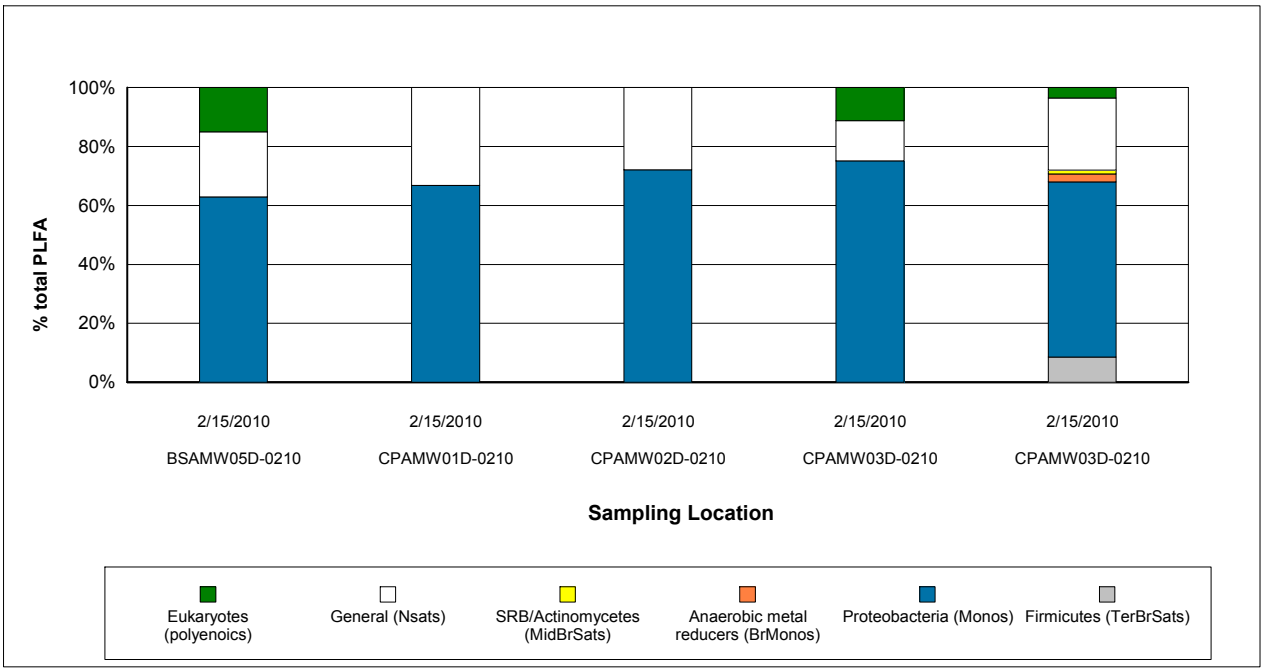



**Figure 2.** Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

**MICROBIAL INSIGHTS, INC.**

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

# PLFA

**Client:** **URS Corp**
Project: Solutia WG Krummrich Long Term Monitoring

**MI Project Number:** **028HB**
Date Received: 02/16/2010

## Sample Information

| **Sample Name:** | **CPAMW04D-0210** | **CPAMW05D-0210** |
|---|---|---|
| Sample Date: | 02/15/2010 | 02/15/2010 |
| Sample Matrix: | beads | beads |
| Analyst: | MG | MG |

## Biomass Concentrations

| | | |
|---|---|---|
| Total Biomass (cells/bead) | **4.43E+04** | **2.36E+04** |

## Community Structure (% total PLFA)

| | | |
|---|---|---|
| Firmicutes (TerBrSats) | **0.00** | **0.00** |
| Proteobacteria (Monos) | **73.75** | **57.42** |
| Anaerobic metal reducers (BrMonos) | **0.00** | **0.00** |
| SRB/Actinomycetes (MidBrSats) | **0.00** | **0.00** |
| General (Nsats) | **12.79** | **27.47** |
| Eukaryotes (polyenoics) | **13.45** | **15.11** |

## Physiological Status (Proteobacteria only)

| | | |
|---|---|---|
| Slowed Growth | **0.00** | **0.00** |
| Decreased Permeability | **0.00** | **0.00** |

**Legend:**
NA = Not Analyzed NS = Not Sampled

**MICROBIAL INSIGHTS, INC.**

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

# PLFA

**Client:** **URS Corp**
Project: Solutia WG Krummrich Long Term Monitoring

**MI Project Number:** **028HB**
Date Received: 02/16/2010

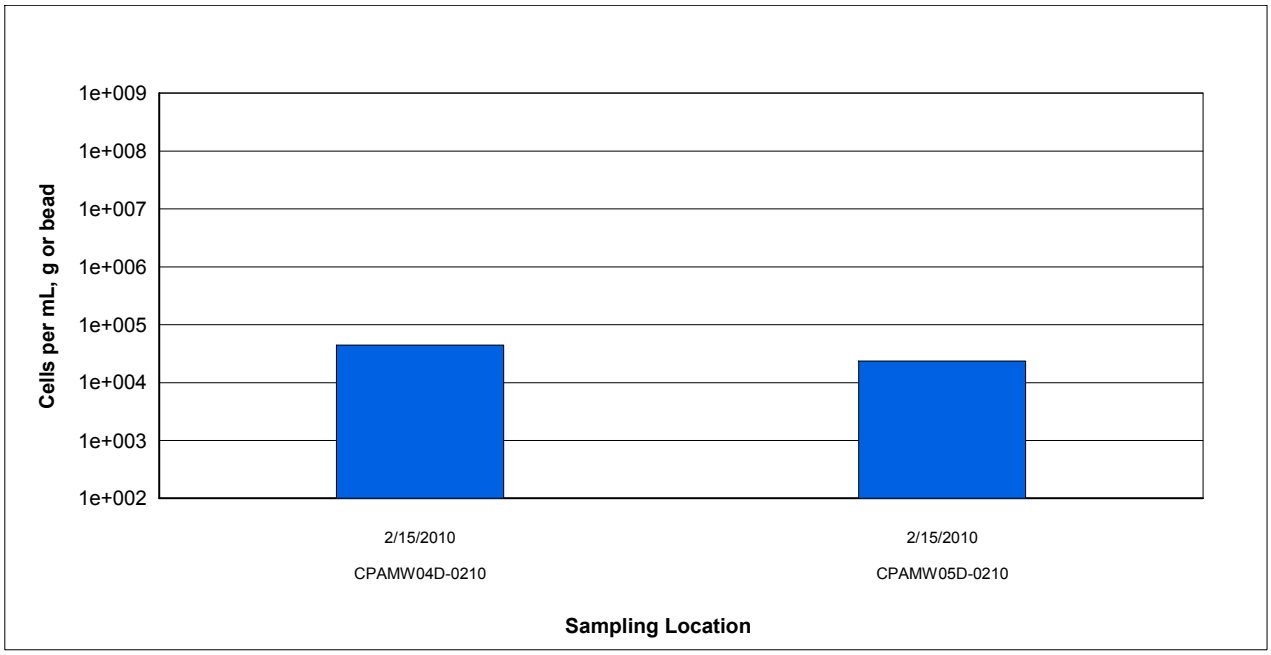



**Figure 1.** Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

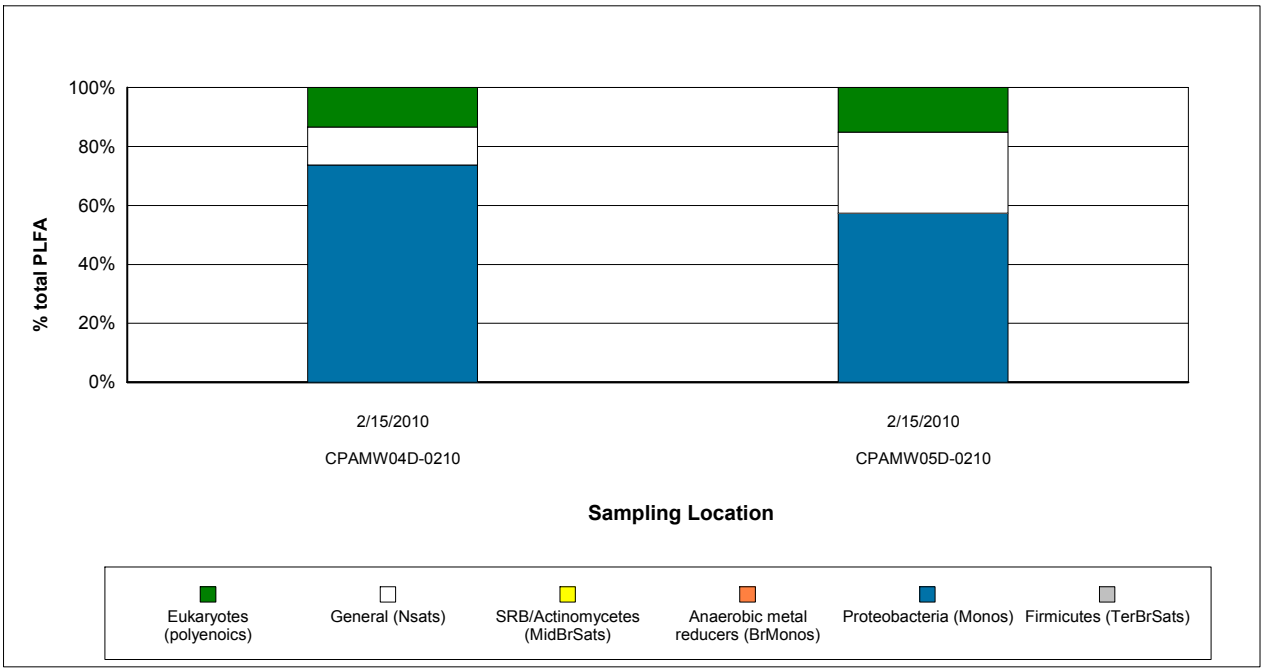



**Figure 2.** Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

2340 Stock Creek Blvd.
Rockford TN 37853-3044
Phone: (865) 573-8188
Fax: (865) 573-8133
Email: info@microbe.com

**Identifier:** 028HB **Date Rec:** 02/16/2010 **Report Date:** 03/29/2010

**Client Project #:** 21562401.00001 **Client Project Name:** Solutia WG Krummrich Long Term Monit

**Purchase Order #:**

**Comments:** Samples BSAMW02D-0210, BSAMW02D-0210-13C Benzene, BSAMW03D-0210, CPAMW02D-0210 and CPAMW-05D-0210 had total biomass levels below our PQL but above our LQL. Therefore, interpretation of these samples should be done with caution.

2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

# SITE LOGIC Report

*Stable Isotope Probing (SIP) Study*

**Contact:** Dave Palmer
**Address:** URS Corporation
1001 Highlands Plaza Drive West
Suite 300
St. Louis, MO 63110

**Phone:** 314.743.4154

**Email:** dave_palmer@urs.corp

**MI Identifier:** 028HB

**Report Date:** March 29, 2010

**Project:** Solutia WGK Long Term Monitoring 21562401.00001

**Comments:**

**NOTICE:** This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

# Executive Summary

Bio-Trap® samplers baited with $^{13}C$ labeled benzene or chlorobenzene were deployed for 31 days and then recovered for analysis. A complete summary of the results is provided in Table 1.

- A low level of biomass (~$10^4$ cells/bead) was detected in both the $^{13}C$ benzene and $^{13}C$ chlorobenzene sampler. The low level in the benzene sampler was below our practical quantitation limits; therefore, caution should be exercised when interpreting the PLFA data.
- Quantification of $^{13}C$ enriched biomass demonstrated a high level of utilization of the $^{13}C$ benzene in well BSAMW02D-0210. Additionally, a low level of biomass was present in this well causing the percent incorporation to appear higher. There was a low level of incorporation of $^{13}C$ chlorobenzene into the biomass in well CPAMW03D-0210.
- Quantification of the $^{13}C$ dissolved inorganic carbon (DIC) showed a high level of mineralization occurring in the $^{13}C$ benzene sampler. There was a low level of mineralization occurring in the $^{13}C$ chlorobenzene sampler.
- Comparison of pre- and post-deployment concentrations of $^{13}C$ labeled benzene demonstrated no loss and the $^{13}C$ labeled chlorobenzene showed a 34% loss.



2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
www.microbe.com

# Overview of Approach

## Stable Isotope Probing (SIP)

Stable isotope probing (SIP) is an innovative method to track the environmental fate of a "labeled" contaminant of concern to unambiguously demonstrate biodegradation. Two stable carbon isotopes exist in nature – carbon 12 ($^{12}C$) which accounts for 99% of carbon and carbon 13 ($^{13}C$) which is considerably less abundant (~1%). With the SIP method, the Bio-Trap® sampler is baited with a specially synthesized form of the contaminant containing $^{13}C$ labeled carbon. Since $^{13}C$ is rare, the labeled compound can be readily differentiated from the contaminants present at the site. Following deployment, the Bio-Trap® is recovered and three approaches are used to conclusively demonstrate biodegradation of the contaminant of concern.

- The loss of the labeled compound provides an estimate of the degradation rate (% loss of $^{13}C$).
- Quantification of $^{13}C$ enriched phospholipid fatty acids (PLFA) indicates incorporation into microbial biomass.
- Quantification of $^{13}C$ enriched dissolved inorganic carbon (DIC) indicates contaminant mineralization.

**Phospholipid Fatty Acids (PLFA):** PLFA are a primary component of the membrane of all living cells including bacteria. PLFA decomposes rapidly upon cell death (1, 2), so the total amount of PLFA present in a sample is indicative of the viable biomass. When combined with stable isotope probing (SIP), incorporation of $^{13}C$ into PLFA is a conclusive indicator of biodegradation.

Some organisms produce "signature" types of PLFA allowing quantification of important microbial functional groups (e.g. iron reducers, sulfate reducers, or fermenters). The relative proportions of the groups of PLFA provide a "fingerprint" of the microbial community. In addition, *Proteobacteria* modify specific PLFA during periods of slow growth or in response to environmental stress providing an index of their health and metabolic activity.



2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
www.microbe.com

## Results

**Table 1.** Summary of the results obtained from the Bio-Trap® Units. Interpretation guidelines and definitions are found later in the document.

| Sample Name | BSAMW02D-0210-$^{13}$C Benzene | CPAMW03D-0210-$^{13}$C Chlorobenzene |
|---|---|---|
| **$^{13}$C Contaminant Loss** | | |
| Benzene Pre-deployment (mg/bd) | 1.13 | ---- |
| Benzene Post-deployment (mg/bd) | 1.55 | ---- |
| Chlorobenzene Pre-deployment (mg/bd) | ---- | 0.94 |
| Chlorobenzene Post-deployment (mg/bd) | ---- | 0.62 |
| % Loss | ---- | 34% |
| First Order Rate Constant (1/days) | Not calculated | 0.013 |
| **Biomass & $^{13}$C Incorporation** | | |
| Total Biomass (Cells/bd) | 3.31E+04 (J) | 6.31E+04 |
| $^{13}$C Enriched Biomass (Cells/bd) | 1.08E+03 | 2.92E+02 |
| % $^{13}$C Incorporation | 3.26% | 0.46% |
| Average PLFA Del (‰) | 2622 | 13 |
| Maximum PLFA Del (‰) | 6686 | 16 |
| **$^{13}$C Mineralization** | | |
| DIC Del ( ‰) | 8698 | 36 |
| % 13C | 9.78 | 1.15 |
| **Community Structure (% total PLFA)** | | |
| Firmicutes (TerBrSats) | 0.0 | 8.5 |
| Proteobacteria (Monos) | 69.6 | 59.5 |
| Anaerobic metal reducers (BrMonos) | 0.0 | 2.7 |
| Actinomycetes (MidBrSats) | 2.9 | 1.4 |
| General (Nsats) | 27.5 | 24.4 |
| Eukaryotes (Polyenoics) | 0.0 | 3.6 |
| **Physiological Status (Proteobacteria only)** | | |
| Slowed Growth | 0.60 | 0.19 |
| Decreased Permeability | 0.00 | 0.00 |

(J) Total biomass was below our PQL



2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
www.microbe.com

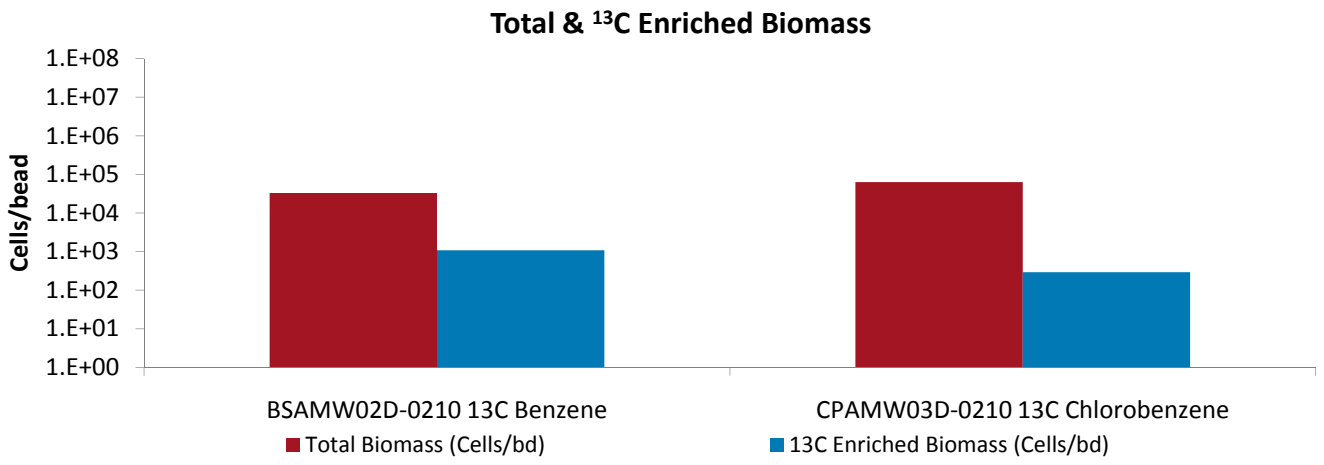



**Figure 1.** Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass (associated with higher organisms).

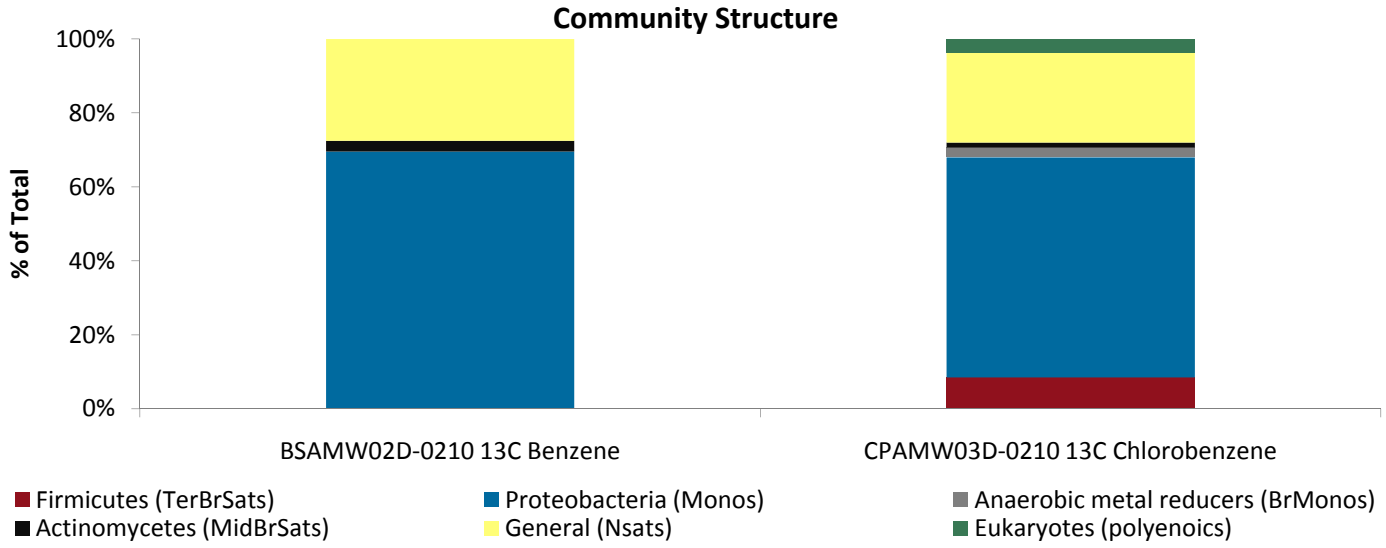



**Figure 2.** Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis. See the table in the interpretation section for detailed descriptions of the structural groups.



2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
www.microbe.com

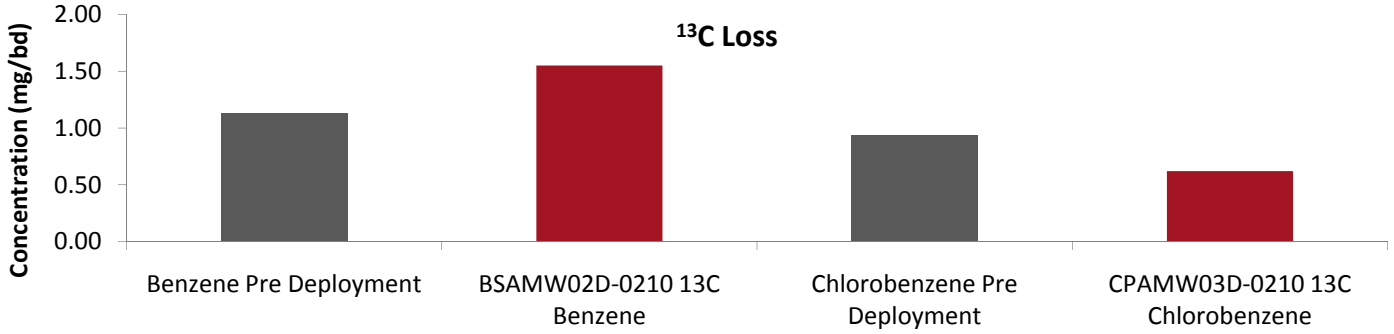



**Figure 3.** Comparison of Pre-deployment concentrations loaded on Bio-Sep beads to the concentrations detected after incubation.

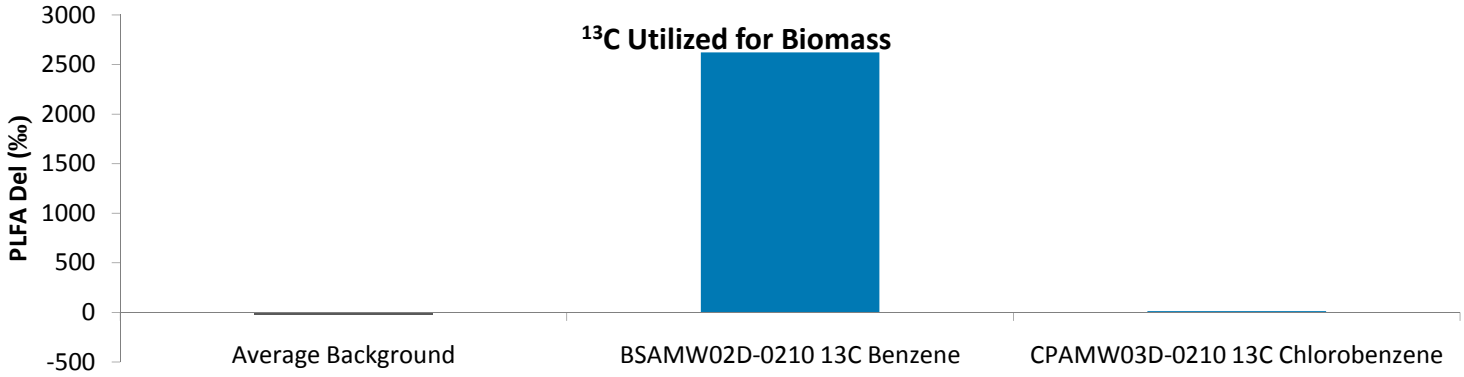



**Figure 4.** Comparison of the average Del value obtained from PLFA biomarkers from each Bio-Trap® unit to the average background Del observed in samples not exposed to $^{13}C$ enriched compounds.

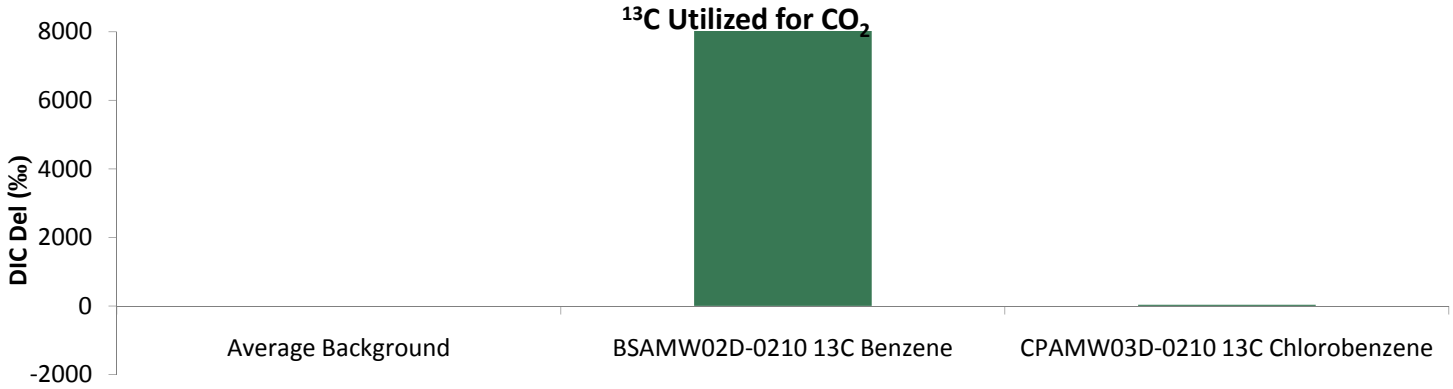



**Figure 5.** Comparison of the Del value obtained from DIC from each Bio-Trap® unit to the average background Del observed in samples not exposed to $^{13}C$ enriched compounds.



2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
www.microbe.com

# Interpretation

Interpretation of the results of the SIP Bio-Trap® study must be performed with due consideration of site conditions, site activities, and the desired treatment mechanism. The following discussion describes interpretation of results in general terms and is meant to serve as a guide.

**Contaminant Concentration:** Bio-Traps® are baited with a $^{13}C$ labeled contaminant of concern and a pre-deployment concentration is determined prior to shipping. Following deployment, Bio-Traps® are recovered for analysis including measurement of the concentration of the $^{13}C$ labeled contaminant remaining. Pre- and post-deployment concentrations are used to calculate percent loss, to estimate the first order degradation rate constant (k), and to estimate the contaminant half life (Results Summary Table). For a description of how the first order rate constant is calculated, please see the glossary at the end of the report. The first order rate constant can be used to compare different wells or treatments depending on the design of the study. A higher value is indicative of a greater biodegradation rate.

Alternatively, the contaminant half life can be used to make the same types of comparisons between wells and treatments. By definition, half life is the amount of time required for the contaminant concentration to equal half of the initial concentration (see glossary for calculation).

**Biomass Concentrations:** PLFA analysis is one of the most reliable and accurate methods available for the determination of viable (live) biomass. Phospholipids break down rapidly upon cell death, so biomass calculations based on PLFA content do not include "fossil" lipids from dead cells. Total biomass (cells/bead) is calculated from total PLFA using a conversion factor of 20,000 cells/pmole of PLFA. When making comparisons between wells, treatments, or over time, differences of one order of magnitude or more are considered significant.

| Total Biomass | | |
|---|---|---|
| **Low** | **Moderate** | **High** |
| $10^3$ to $10^4$ cells | $10^5$ to $10^6$ cells | $10^7$ to $10^8$ cells |

For SIP studies, the $^{13}C$ enriched PLFA is also determined to conclusively demonstrate contaminant biodegradation and quantify incorporation into biomass as a result of the $^{13}C$ being used for cellular growth. The % $^{13}C$ incorporation ($^{13}C$ enriched biomass/total biomass) is also provided in the data summary table, but the value must be interpreted carefully especially when comparing wells or treatments. Typically, biodegradation of a contaminant of concern is performed by a small subset of the total microbial community. For Bio-Traps® with large total biomass, the % $^{13}C$ incorporation value could be low despite significant $^{13}C$ labeled biomass and loss of the compound. The % $^{13}C$ incorporation should be viewed in light of total biomass, percent loss, and dissolved inorganic carbon (DIC) results.

$^{13}C$ enrichment data is often reported as a del value. The del value is the difference between the isotopic ratio ($^{13}C/^{12}C$) of the sample ($R_x$) and a standard ($R_{std}$) normalized to the isotopic ratio of the standard ($R_{std}$) and multiplied by 1,000 (units are parts per thousand, denoted ‰).



2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
www.microbe.com

$R_{std}$ is the naturally occurring isotopic ratio and is approximately 0.011180 (roughly 1% of naturally occurring carbon is $^{13}C$). The isotopic ratio, $R_x$, of PLFA is typically less than the $R_{std}$ under natural conditions, resulting in a del value between -20 and -30‰. For a SIP Bio-Trap® study, biodegradation and incorporation of the $^{13}C$ labeled compound into PLFA results in a larger $^{13}C/^{12}C$ ratio ($R_x$) and thus del values greater than under natural conditions. Typical PLFA del values are provided below.

| PLFA Del (‰) | | |
|---|---|---|
| **Low** | **Moderate** | **High** |
| 0 to 100 | 100 to 1,000 | >1,000 |

**Dissolved Inorganic Carbon (DIC):** Often, bacteria can utilize the $^{13}C$ labeled compound as both a carbon and energy source. The $^{13}C$ portion used as a carbon source for growth can be incorporated into PLFA as discussed above, while the $^{13}C$ used for energy is oxidized to $^{13}CO_2$ (mineralized).

$^{13}C$ enriched $CO_2$ data is often reported as a del value as described above for PLFA. Under natural conditions, the $R_x$ of $CO_2$ is approximately the same as $R_{std}$ (0.01118 or about 1.1% $^{13}C$). For an SIP Bio-Trap® study, mineralization of the $^{13}C$ labeled contaminant of concern would lead to a greater value of $R_x$ (increased $^{13}CO_2$ production) and thus a positive del value. As with PLFA, del values between 0 and 100‰ are considered low, values between 100 and 1,000‰ are considered moderate, and values greater than 1,000‰ are considered high. Thus DIC %$^{13}C$ are considered low if the value is less than 1.23%, moderate if between 1.23 and 2.24%, and high if greater than 2.24%.

| Dissolved Inorganic Carbon (DIC) Del and % $^{13}C$ | | |
|---|---|---|
| **Low** | **Moderate** | **High** |
| 0 to 100 | 100 to 1,000 | >1,000 |
| 1.11 to 1.23% | 1.23 to 2.24 % | >2.24 % |

**Community Structure (% total PLFA):** Community structure data is presented as a percentage of PLFA structural groups normalized to the total PLFA biomass. The relative proportions of the PLFA structural groups provide a "fingerprint" of the types of microbial groups (e.g. anaerobes, sulfate reducers, etc.) present and therefore offer insight into the dominant metabolic processes occurring at the sample location. Thorough interpretation of the PLFA structural groups depends in part on an understanding of site conditions and the desired microbial biodegradation pathways. For example, an increase in mid chain branched saturated PLFA (MidBrSats), indicative of sulfate reducing bacteria (SRB) and *Actinomycetes*, may be desirable at a site where anaerobic BTEX biodegradation is the treatment mechanism, but would not be desirable for a corrective action promoting aerobic BTEX or MTBE biodegradation. The following table provides a brief summary of each PLFA structural group and its potential relevance to bioremediation.



2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
www.microbe.com

**Table 2.** Description of PLFA structural groups.

| PLFA Structural Group | General classification | Potential Relevance to Bioremediation Studies |
|---|---|---|
| Monoenoic (Monos) | Abundant in Proteobacteria (Gram negative bacteria), typically fast growing, utilize many carbon sources, and adapt quickly to a variety of environments. | Proteobacteria is one of the largest groups of bacteria and represents a wide variety of both aerobes and anaerobes. The majority of Hydrocarbon utilizing bacteria fall within the Proteobacteria |
| Terminally Branched Saturated (TerBrSats) | Characteristic of Firmicutes (Low G+C Gram-positive bacteria), and also found in Bacteriodes, and some Gram-negative bacteria (especially anaerobes). | Firmicutes are indicative of presence of anaerobic fermenting bacteria (mainly *Clostridia/Bacteriodes*-like), which produce the $H_2$ necessary for reductive dechlorination |
| Branched Monoenoic (BrMonos) | Found in the cell membranes of micro-aerophiles and anaerobes, such as sulfate- or iron-reducing bacteria | In contaminated environments high proportions are often associated with anaerobic sulfate and iron reducing bacteria |
| Mid-Chain Branched Saturated (MidBrSats) | Common in sulfate reducing bacteria and also Actinobacteria (High G+C Gram-positive bacteria). | In contaminated environments high proportions are often associated with anaerobic sulfate and iron reducing bacteria |
| Normal Saturated (Nsats) | Found in all organisms. | High proportions often indicate less diverse populations. |
| Polyenoic | Found in eukaryotes such as fungi, protozoa, algae, higher plants, and animals. | Eukaryotic scavengers will often rise up and prey on contaminant utilizing bacteria |

**Physiological Status (*Proteobacteria*):** Some *Proteobacteria* modify specific PLFA as a strategy to adapt to stressful environmental conditions (3, 4). For example, *cis* monounsaturated fatty acids may be modified to cyclopropyl fatty acids during periods of slowed growth or modified to *trans* monounsaturated fatty acids to decrease membrane permeability in response to environmental stress. The ratio of product to substrate fatty acid thus provides an index of their health and metabolic activity. In general, status ratios greater than 0.25 indicate a response to unfavorable environmental conditions.



2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
www.microbe.com

# Glossary

**Del:** A Del value is the difference between the isotopic ratio ($^{13}C/^{12}C$) of the sample ($R_x$) and a standard ($R_{std}$) normalized to the isotopic ratio of the standard ($R_{std}$) and multiplied by 1,000 (units are parts per thousand denoted ‰).

$$Del = (R_x - R_{std})/R_{std} \times 1000$$

**First Order Rate Constant:** The first order rate is expression is $C=C_o e^{-kt}$ where C is the post-deployment concentration (mg/bead), $C_o$ is the pre-deployment concentration (mg/bead), k is the first order rate constant (1/days), and t is the deployment time (days). Upon rearrangement and using pre-and post-deployment concentrations, $k=-\ln(C/C_o)/t$.

**Half Life:** Half life is the amount of time required for the contaminant concentration to equal half of the initial concentration and is expressed as $C=C_o/2$. Substituting into the rate expression and solving for half life ($t_{1/2}$), $t_{1/2} = \ln(0.5)/-k$. As opposed to the rate constant, a higher half life ($t_{1/2}$) indicates a lower degradation rate.

# References


1. White, D.C., W.M. Davis, J.S. Nickels, J.D. King, and R.J. Bobbie. 1979. Determination of the sedimentary microbial biomass by extractable lipid phosphate. Oecologia 40:51-62.
2. White, D.C. and D.B. Ringelberg. 1995. Utility of signature lipid biomarker analysis in determining in situ viable biomass. In P.S. Amy and D.L. Halderman (eds.) The microbiology of the terrestrial surface. CRC Press, Boca Raton.
3. Guckert, J.B., M.A. Hood, and D.C. White. 1986. Phospholipid ester-linked fatty acid profile changes during nutrient deprivation of *Vibrio chloerae*: increases in the trans/cis ratio and proportions of cyclopropyl fatty acids. Applied and Environmental Microbiology. 52:794-801.
4. Tsitko, I.V., G. M. Zaitsev, A. G. Lobanok, and M.S. Salkinoja-Salonen. 1999. Effect of aromatic compounds on cellular fatty acid composition of *Rhodococcus opacus*. Applied and Environmental Microbiology. 65:853-855.




2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
www.microbe.com

**REPORT TO:**
Reports will be provided to the contact(s) listed below. Parties other than the contact(s) listed below will require prior approval.

Name: Dave Palmer
Company: URS Corporation
Address: 1001 Highlands Plaza Dr. W, Ste. 300
St. Louis, MO 63110

email: dave_palmer@urscorp.com
Phone: (314) 429-0100
Fax: (314) 429-0462

Project Manager: Dave Palmer
Project Name: Solutia WG Krummrich - Long Term Monitoring
Project No.: 21562401.00001

**INVOICE TO:**
For Invoices **paid by a third party** it is imperative that contact information & corresponding reference No. be provided.

Name:
Company: (← SAME)
Address:

email:
Phone: ( )
Fax: ( )

Purchase Order No.
Subcontract No.


microbialinsights
2340 Stock Creek Blvd.
Rockford, TN 37853-3044
phone (865) 573-8188
fax: (865) 573-8133
email: info@microbe.com
www.microbe.com


**Please Check One:**
☐ More samples to follow
☒ No Additional Samples

Saturday Delivery
Please see sampling protocol for instructions

Report Type: ☒ Standard (default) ☐ Comprehensive (15% surcharge) ☐ Historical (30% surcharge)

Please contact us prior to submitting samples regarding questions about the analyses you are requesting at (865) 573-8188 (8:00 am to 4:00 pm M-F). After these hours please call (865) 300-8053.

**Sample Information** / **CENSUS:** Please select the target organism/gene

| MI ID (Laboratory Use Only) | Sample Name | Date Sampled | Time Sampled | Matrix | PLFA | VFA | ME/E | DGGE+3ID | DGGE+5ID | qDHC (Dehalococcoides) | DHC Functional genes | qDHB (Dehalobacter) | qDSM (Desulfuromonas) | qDSB (Desulfitobacterium) | qEBAC (Total) | qDSR (SRBs only) | qSRB/RB | qMGN (methanogens) | qMOB (methanotrophs) | qDNF (Dentrifying) | qAOB (ammonia oxidizing) | qPM1 (MTBE aerobic) | qTOD (Intial PAHs aerobic) | qCAT (Intermediate PAHs aerobic) | qBSS (Toluen/Xylene Anaerobic) | qNAH (Napthalene aerobic) | add. qPCR: | add. qPCR: | add. qPCR: | RNA (Expression Option)* | Other: Benzene SIP | Other: Chlorobenzene SIP | Other: | Other: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0284B 1 | BSAMW01S-0210 | 2/15/10 | 1500 | water | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2,3 | BSAMW02D-0210 | ↓ | 1415 | ↓ | X | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | |
| 4 | BSAMW03D-0210 | | 1510 | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | BSAMW04D-0210 | | 1000 | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | BSAMW05D-0210 | | 1545 | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | CPAMW01D-0210 | | 1440 | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | CPAMW02D-0210 | | 1450 | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9,10 | CPAMW03D-0210 | | 1400 | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | |
| 11 | CPAMW04D-0210 | | 1100 | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | CPAMW05D-0210 | ↓ | 1730 | ↓ | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Relinquished by: [signature] Date: 2/15/10 Received by: [signature] Date 2/16/10

In order for analysis to be completed correctly, it is vital that chain of custody is filled out correctly & that all relative information is provided. Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable. *** additional cost and sample preservation are associated with RNA samples.**