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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,

A handwritten signature in blue ink, appearing to read "Gerald M. Rinaldi".

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

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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



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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)
Manganese (Total and Dissolved)
Nitrate
Sulfate
- Biodegradation Byproducts: Carbon Dioxide
Chloride
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°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:

<u>KRS009</u>	<u>KRS010</u>
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.

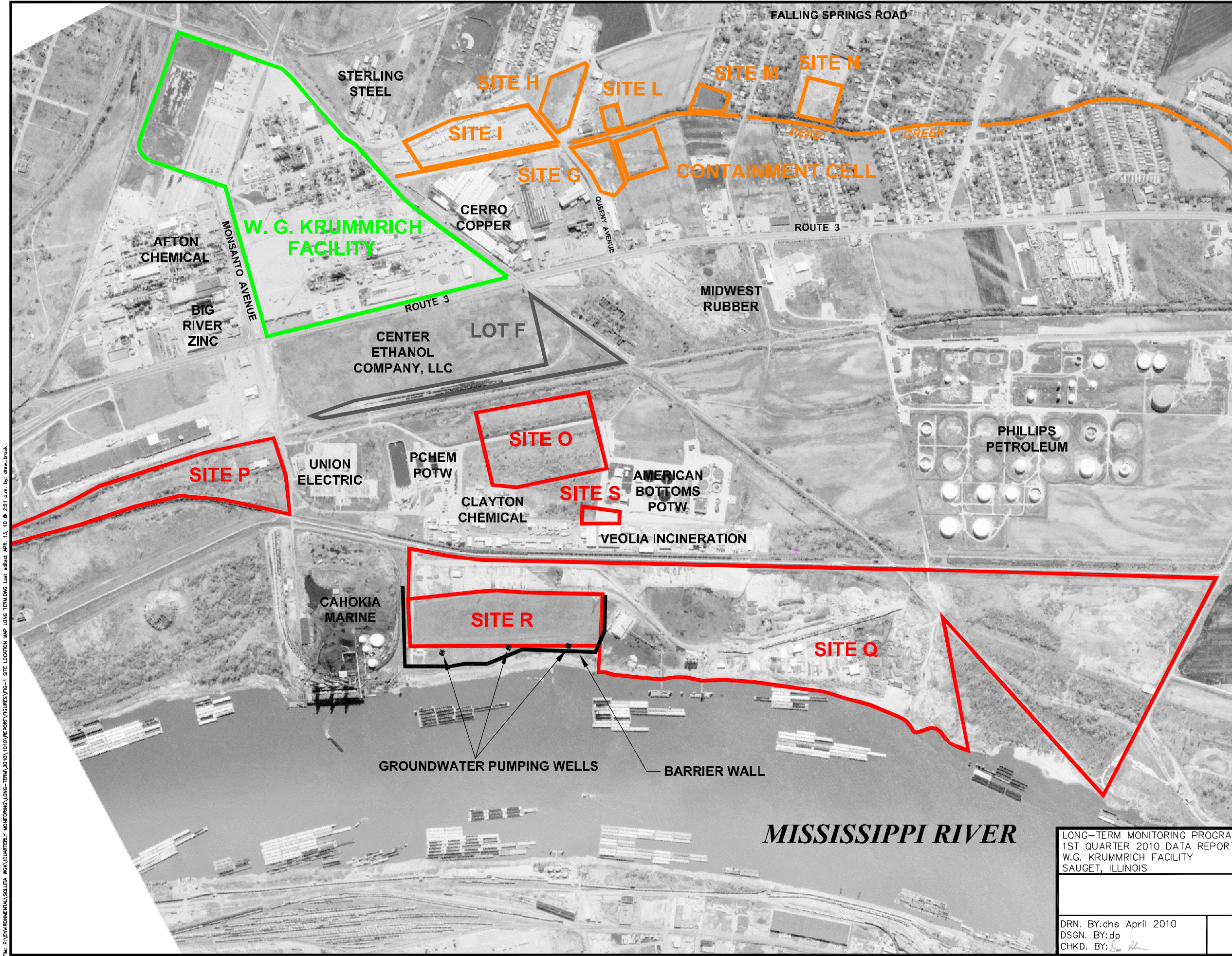
6.0 REFERENCES

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.

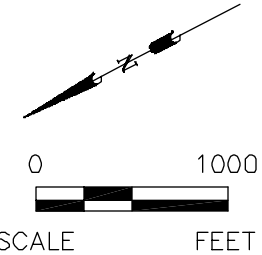
USEPA, 2008. Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review

Figures



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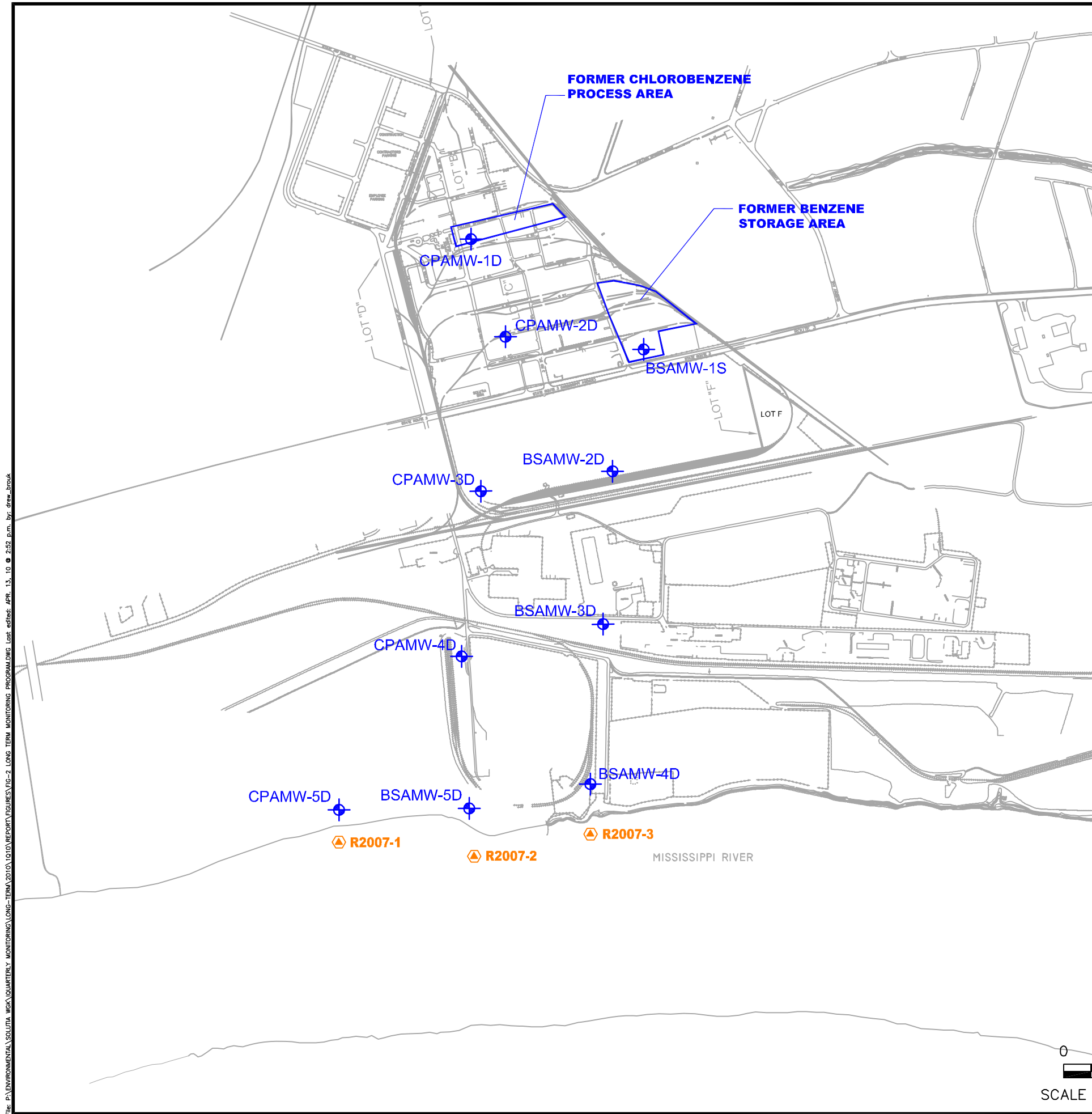
- W.G. KRUMMRICH FACILITY
- SAUGET AREA #1
- SAUGET AREA #2



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

F:\ENVIRONMENTAL\SOLUTIONS\WORK\QUARTERLY MONITORING\LONG-TERM\TERMINAL\2010\REPORT\FIGURES\FIG-1 SITE LOCATION MAP LONG TERM.DWG Last edited: APR. 13, 10 2:51 p.m. by drew.brook

File: P:\ENVIRONMENTAL\SOLUTIONS\WORK\QUARTERLY MONITORING\LONG-TERM\2010\1010\REPORT FIGURES\FIG-2 LONG TERM MONITORING PROGRAM\DWG Last edited: APR. 13, 10 @ 2:52 p.m. by: drew_brook

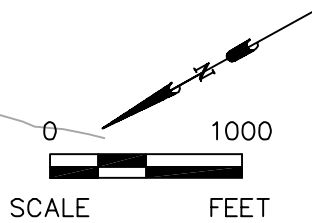


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- LONG-TERM MONITORING WELL LOCATION
- LONG-TERM MONITORING PROGRAM SURFACE WATER / SEDIMENT SAMPLING LOCATION

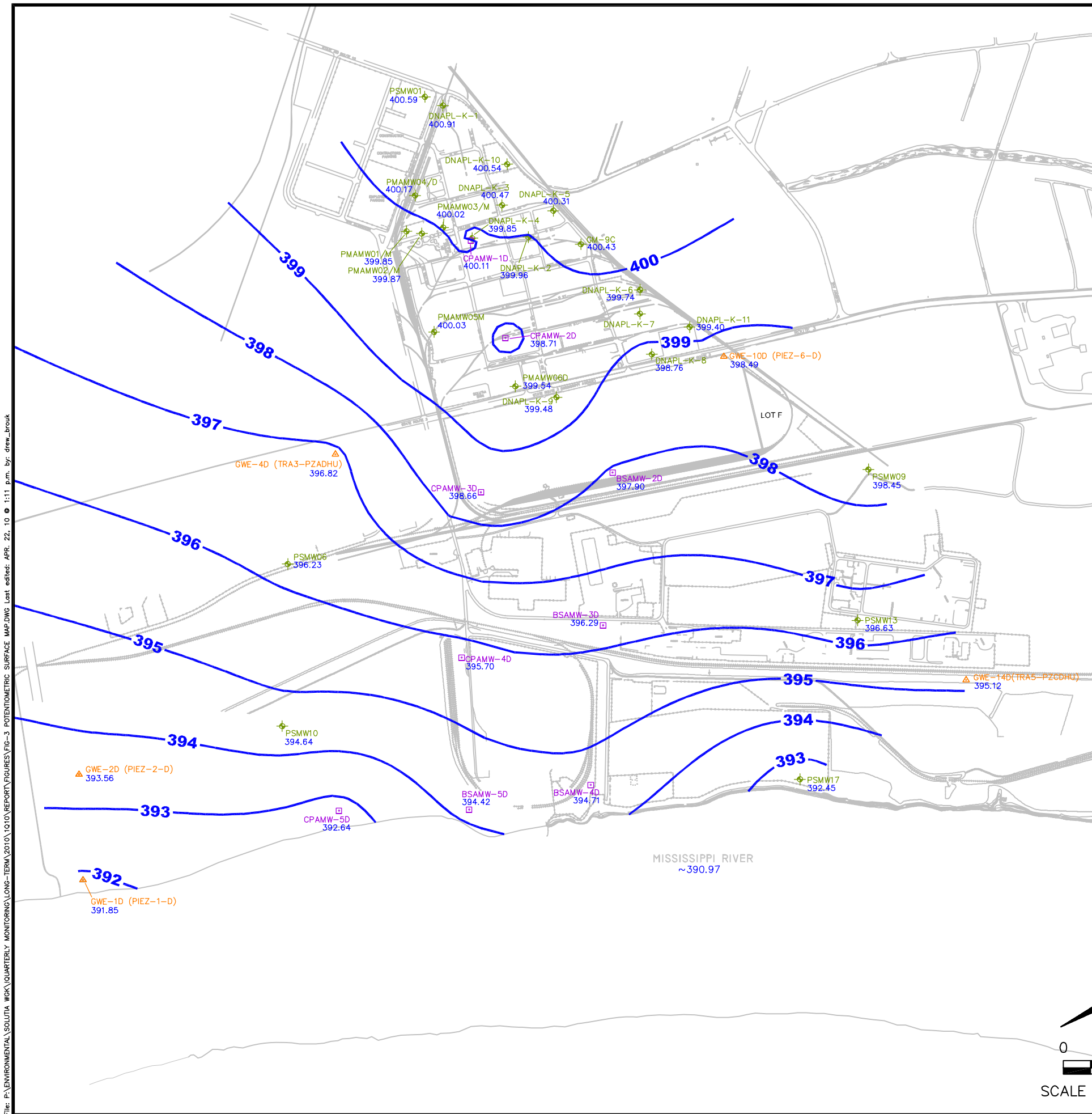
NOTES:

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



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

File: P:\ENVIRONMENTAL\SOLUTIONS\WQ\QUARTERLY MONITORING\LONG-TERM\2010\1010\REPORT\FIGURES\FIG-3 POTENTIOMETRIC SURFACE MAP.DWG Last edited: APR. 22, 10 @ 1:11 p.m. by: drew_brouk



LEGEND

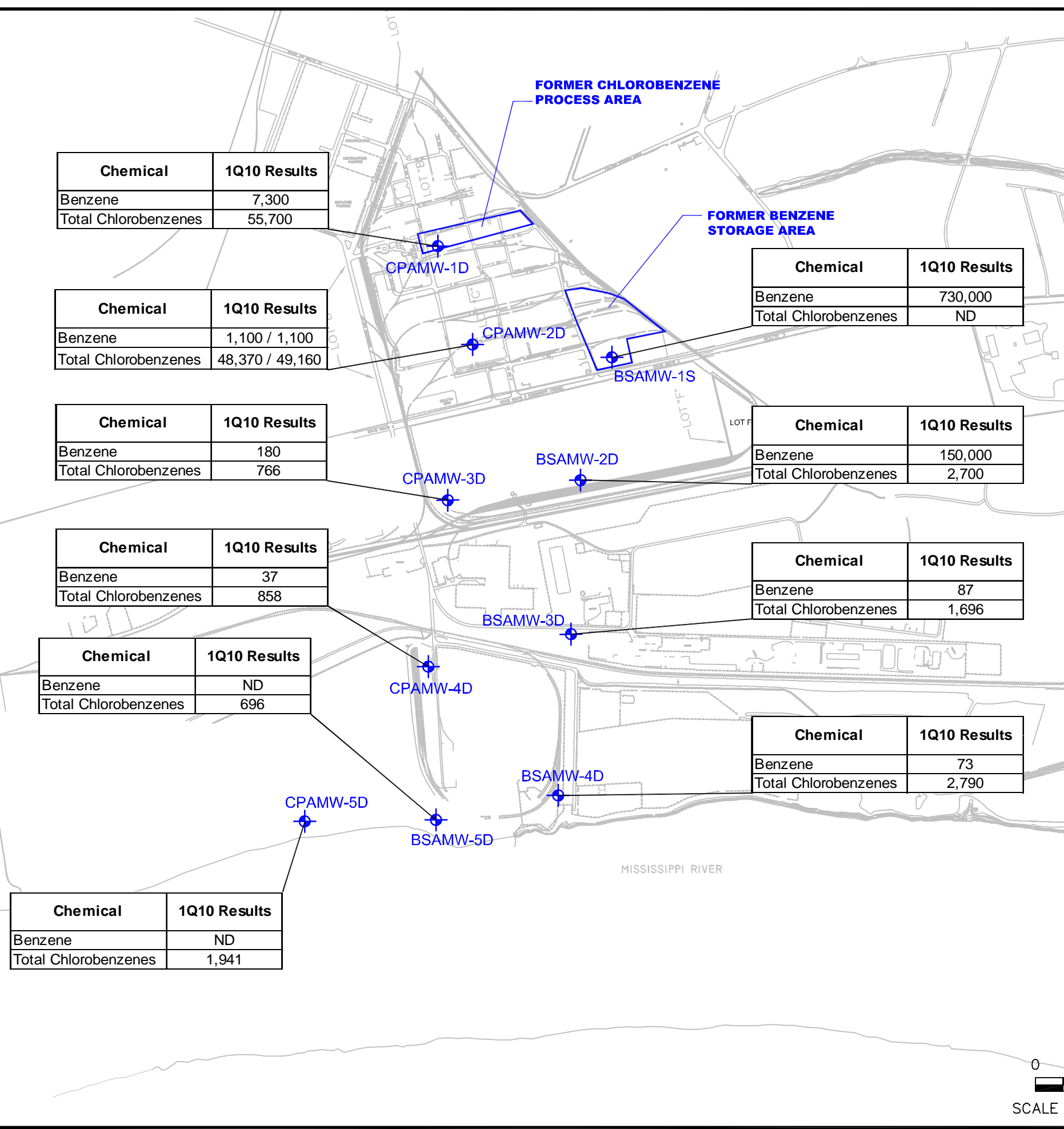
- LONG-TERM MONITORING WELL USED FOR GROUNDWATER CONTOURING
- OTHER MONITORING WELL USED FOR GROUNDWATER CONTOURING
- PIEZOMETER CLUSTER USED FOR GROUNDWATER CONTOURING
- 393 GROUNDWATER ELEVATION CONTOUR (FT NAVD)

NOTES:

- GROUNDWATER LEVELS WERE MEASURED FEBRUARY 12, 2010.
- CONTOURS GENERATED PRIMARILY USING SURFER SOFTWARE VERSION 8. SOME INTERPRETATION WAS DONE USING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
- 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.
- LOCATIONS WITH WELLS SCREENED IN BOTH THE MHU AND DHU UTILIZED THE DHU WELL FOR DEVELOPMENT OF THE POTENTIOMETRIC SURFACE MAP.

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: <i>[Signature]</i>	Potentiometric Surface Map Middle/Deep Hydrogeologic Unit	FIG. NO. 3

File: P:\ENVIRONMENTAL\SOLUTIONS\WQ\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



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

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: [Signature]	Benzene and Total Chlorobenzenes Results	FIG. NO. 4

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 SO ₄ (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

SAMPLING DATA SHEET

PROJECT NAME: LTM Program
DATE: 2/17/10
MONITORING WELL ID: BSAMW01S

PROJECT NUMBER: 21562401.00001

FIELD PERSONNEL:

Mike Corbett, Nathan McNurten

DATE: 2/17/10

WEATHER: cloudy, 22°F

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 Length 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 bto

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

[illegible]

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

Sample Time: 1050

Sample Flow Rate: 300 ml/min

Analysis: VOCs, SVOCs, Metals, MNA

QA/QC Samples: **none**

VOA Vials, No Headspace ☒ Initials: MC

COMMENTS:

MNA – Alkalinity, CO₂, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC

Ferrous Iron (Filtered 0.2 micron) = 1.17 ppm

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

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 Length 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 < 4 ft,
 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

Pump Type: _____ Stainless Steel Monsoon

[illegible]

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

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

MNA -- Alkalinity, CO₂, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC

Ferrous Iron (Filtered 0.2 micron) = 1.87 ppm

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

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 Length 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): 1150 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

Pump Type: Stainless Steel Monsoon

[illegible]

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

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

MNA – Alkalinity, CO₂, 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
 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 Length 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

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

SAMPLING DATA

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

COMMENTS:

MNA - Alkalinity, CO₂, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC

Ferrous Iron (Filtered 0.2 micron) = overrange

SAMPLING DATA SHEET

PROJECT NAME: LTM Program
DATE: 2/15/10
MONITORING WELL ID: BSAMW05D

PROJECT NUMBER: 21562401.00001
WEATHER: cloudy, 25°F

FIELD PERSONNEL: Mike Corbett, Nathan McNurten

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 Length 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	16:07	27.63	colorless	hydrocarbon	6.87	14.50	2.455	2.5	0.92	-151.5
1200	16:11	↓	↓	↓	6.85	14.29	2.465	1.0	0.25	-150.8
2400	16:15				6.85	14.26	2.467	0.6	0.20	-151.3
3600	16:19				6.84	14.36	2.462	0.8	0.20	-152.7
4800	16:23				6.85	14.50	2.465	0.7	0.12	-153.3
NEC										

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

Sample Time: 1630
Sample Flow Rate: 300 mL/min

Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: none

VOA Vials, No Headspace ☒ Initials: MC

COMMENTS:

MNA -- Alkalinity, CO₂, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC

Ferrous Iron (Filtered 0.2 micron) = overrange

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 Length 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: 8.1 ppm
Wellbore PID/FID Reading: 17.4 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

[illegible]

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, CO₂, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC

Ferrous Iron (Filtered 0.2 micron) = 0.69 ppm

SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00001 FIELD PERSONNEL: Mike Corbett, Nathan McNurden
DATE: 7/17/10 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 Length 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:

COMMENTS: MNA – Alkalinity, CO₂, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
 Ferrous Iron (Filtered 0.2 micron) = 0.06 mg/L

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

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 Length 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

Pump Type: Stainless Steel Monsoon

[illegible]

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

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

MNA – Alkalinity, CO₂, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC

Ferrous Iron (Filtered 0.2 micron) = overrange

SAMPLING DATA SHEET

Mike Corbett, Nathan McNurlen

WEATHER: clouds, light snow, windy, 19°F

SAMPLE ID:

CPAMW04D-0210

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 Length is < 4 feet, 118.57
 Place Pump at: Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = 723.57 ft btoe
 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 btoe
 If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = _____ ft btoe

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

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: 1129
Stop Time: 1140

Elapsed Time: 16 min.
Average Purge Rate (mL/min): 300

Water Quality Meter ID: YSI 6920
Date Calibrated: 2/15/10

Sample Date: 2/15/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace ☒ Initials: MY

Sample Time: 1150
Sample Flow Rate: 300 mL/min

Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: none

MNA – Alkalinity, CO₂, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, TOC

Ferrous Iron (Filtered 0.2 micron) = overrange

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: <u>2</u> in	Water Column Height (do not include LNAPL or DNAPL): <u>91.63</u> ft	Volume of Flow Through Cell: <u>1,150</u> mL
Measured Well Depth (btoc): <u>114.67</u> ft	If Depth to Top of Screen is > Depth to Water AND Screen Length is < 4 feet,	Minimum Purge Volume =
Constructed Well Depth (btoc): <u>114.75</u> ft	Place Pump at: Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = <u>112.25</u> ft btoc	(3 x Flow Through Cell Volume) <u>3,450</u> mL
Depth to Water (btoc): <u>23.04</u> ft	If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,	Ambient PID/FID Reading: <u>0.0</u> ppm
Depth to LNAPL/DNAPL (btoc): <u>—</u> ft	Place Pump at: Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = <u>—</u> ft btoc	Wellbore PID/FID Reading: <u>0.0</u> ppm
Depth to Top of Screen (btoc): <u>109.75</u> ft	If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = <u>—</u> ft btoc	
Screen Length: <u>5</u> ft		

PURGE DATA

Pump Type: Stainless Steel Monsoon

[illegible]

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

SAMPLING DATA

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

COMMENTS:

MNA -- Alkalinity, CO₂, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC

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		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		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 <u>Standard</u>															
(314) 429-0462 FAX		<input type="checkbox"/> 2 weeks															
Project Name: 1Q10 LTM GW Sampling		<input type="checkbox"/> 1 week															
Site: Solutia WG Krummrich Facility		<input type="checkbox"/> 2 days															
P O #		<input type="checkbox"/> 1 day															
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.			Sample Specific Notes:								
CPA -MW-4D-0210		2/15/10	1150	G	Water	14	3	2	1	*SVOCs per semi-annual list							
CPA -MW-4D-F(0.2)-0210			1150	G	Water	2	X										
BSA -MW-5D-0210			1630	G	Water	14	3	2	1								
BSA -MW-5D-F(0.2)-0210		✓	1630	G	Water	2	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 # 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							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)										
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown							<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months										
Special Instructions/QC Requirements & Comments: Level 4 Data Package														Temp 5.2			
Relinquished by: <i>Mike Corbett</i>		Company: URS		Date/Time: 2/15/10 1200		Received by: <i>Beth A. Daugherty</i>		Company: TA SAV		Date/Time: 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

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

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		<input type="checkbox"/> 2 weeks																		
Project Name: 1Q10 LTM GW Sampling		<input type="checkbox"/> 1 week																		
Site: Solutia WG Krummrich Facility		<input type="checkbox"/> 2 days																		
P O #		<input type="checkbox"/> 1 day						Sample Specific Notes:												
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs by 8260	SVOCs by 8270C*	Total Fe/Mn by 6010B	Al/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				
BSA -MW-4D-0210	2/16/10	1010	G	Water	14		3	2	1	1	1	3	2	1						
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 1 3 1 2 4 2													
Possible Hazard Identification							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)													
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>							<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months													
Special Instructions/QC Requirements & Comments: Level 4 Data Package																				
Relinquished by: <i>Mike Corbett</i>		Company: URS		Date/Time: 2/16/10 1700		Received by: <i>Shane</i>		Company: TA		Date/Time: 2/16/10 1700										
Relinquished by: <i>Shane</i>		Company: TA		Date/Time: 2/16/10 1715		Received by:		Company:		Date/Time:										
Relinquished by:		Company:		Date/Time:		Received by: <i>Shane</i>		Company: TA SA		Date/Time: 2/17/10 0907										

680-55111 0.8/1.4/2.0

Savannah
5102 LaRoche Avenue

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

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 Gullizia		Carrier: FedEx		1 of 1 COCs		
1001 Highlands Plaza Drive West, Suite 300		Analysis Turnaround Time		VOCs by 8260 SVOCs by 8270C* Total Fe/Mn by 6010B Al/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		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		<input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day								
Project Name: 1Q10 LTM GW Sampling										
Site: Solutia WG Krummrich Facility										
P O #										
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.			Sample Specific Notes:	
BSA -MW-18-0210		2/17/10	1050	G	Water	14	3	2	1	*SVOCs per semi-annual list
BSA -MW-15-F(0.2)-0210			1050	G	Water	2	X			
CPA -MW-1D-0210			1305	G	Water	14	3	2	1	
CPA -MW-1D-F(0.2)-0210			1305	G	Water	2	X			
CPA -MW-2D-0210			1450	G	Water	14	3	2	1	
CPA -MW-2D-F(0.2)-0210		✓	1450	G	Water	2	X			
-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							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
Possible Hazard Identification							<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown										
Special Instructions/QC Requirements & Comments: Level 4 Data Package							TEMPERATURE 2.4 2.2			
Relinquished by: <i>MLC</i>		Company: URS		Date/Time: 2/17/10 1100		Received by: <i>m. k. [signature]</i>		Company: TA		
Relinquished by:		Company:		Date/Time:		Received by: 680-55143		Company:		
Relinquished by:		Company:		Date/Time:		Received by:		Company:		
Relinquished by:		Company:		Date/Time:		Received by:		Company:		

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: <u>2/18/10</u>		COC No:												
URS Corporation		Tel/Fax: (314) 743-4154		Lab Contact: Lidya Gulizia		Carrier: <u>FedEx</u>		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 <u>Standard</u>						SDG No.												
(314) 429-0462 FAX		<input type="checkbox"/> 2 weeks																		
Project Name: 1Q10 LTM GW Sampling		<input type="checkbox"/> 1 week																		
Site: Solutia WG Krummrich Facility		<input type="checkbox"/> 2 days																		
P O #		<input type="checkbox"/> 1 day						Sample Specific Notes:												
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	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				
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- -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							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)													
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>							<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months													
Special Instructions/QC Requirements & Comments: Level 4 Data Package																				
Relinquished by: <u>Mike Corbett</u>		Company: URS		Date/Time: 2/18/10 1515		Received by: <u>Betha Oaughty</u>		Company: <u>TH Sav</u>		Date/Time: 2-19-10 0930										
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:										
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:										

TestAmerica

 **TestAmerica Savannah**
5102 LaRoche Avenue
Savannah, GA 31404

☐ Alternate Laboratory Name/Location

PROJECT REFERENCE UGK 12 th QTR 2010 River	PROJECT NO. 21562401.00005	PROJECT LOCATION (STATE) IL
LAB (LAB) PROJECT MANAGER LIDYA GULIZIA	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 601 Highlands Plaza DR W St. Louis MO 63110		
COMPANY CONTRACTING THIS WORK (if applicable)		

	COMPOSITE (C) OR GRAB (G) INDICATE
AQUEOUS (WATER)	
SOLID OR SEMISOLID	
AIR	
NONAQUEOUS LIQUID (OIL SOLVENT ...)	

PAGE 2 OF 2

STANDARD REPORT
DELIVERY

DATE DUE _____

EXPEDITED REPORT
DELIVERY
(SURCHARGE)

DATE DUE _____

NUMBER OF COOLERS SUBMITTED
PER SHIPMENT: 3

NUMBER OF CONTAINERS SUBMITTED

REMARKS

SAMPLE		SAMPLE IDENTIFICATION
DATE	TIME	
2/17/10	1540	SED-R2007-1-0210EB
↓	0910	TRIP BLANK 021710

G	X			3	2
G	X			2	

For VOC + SVOC
lists see Page 1

2/17/10

RELINQUISHED BY: (SIGNATURE)

DATE	TIME
2/17/10	1900
DATE	TIME

RELINQUISHED BY: (SIGNATURE)

DATE	TIME
------	------

RELINQUISHED BY: (SIGNATURE)

DATE	TIME
------	------

RECEIVED BY: (SIGNATURE)

DATE	TIME
------	------

RECEIVED BY: (SIGNATURE)

DATE	TIME
------	------

RECEIVED BY: (SIGNATURE)

DATE	TIME
------	------

RECEIVED FOR LABORATORY BY:
SIGNATURE) /

DATE	TIME
------	------

CUSTODY INTACT
YES ☐
NO ☐

LABORATORY USE ONLY

CUSTODY
SEAL NO.

SAVANNAH
LOG NO.
680-55137

LABORATORY REMARKS

Appendix C

Surface Water and Sediment Sampling Forms



Surface Water / Sediment Sampling Field Data Sheet

Project Number:			Sampling Event: 1 st QTR 2010		
Sampling Personnel: K Miller B Crafton			Sample Location: R-2007-1		
Sample Date/Time: 2/17/10			Sample Coordinates: Approx 20' away		
SW: 1250		Sed: 1450			
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/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 Organic 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		Rip Rap encountered @ #1			
Comments/Notes: DUP collected here					



Surface Water / Sediment Sampling Field Data Sheet

Project Number:		Sampling Event: 1 st Qtr 2010			
Sampling Personnel: K Pulley & B Crafton		Sample Location: R 2007-2			
Sample Date/Time: 2/17/10		Sample Coordinates: Approx 12' from location			
SW: 1120	Sed: 1200				
Field Descriptions and Observations: Took approx 9 pulls Sed coarse sand (Tan/Brown) w some gravel water is clear Depth = 32' To get sample due to low water velocity preventing net from closing					
Weather Conditions: Mostly Cloudy Temp 25°F Wind 10-15 mph					
Water Quality Parameters Turb 17					
Specific Conductance (µmhos/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 Organic 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:					



Surface Water / Sediment Sampling Field Data Sheet

Project Number:			Sampling Event: 1 st Qtr 2010		
Sampling Personnel: K. Pulley B. Crafton			Sample Location: R-2007-3		
Sample Date/Time: 2/17/10			Sample Coordinates: Ag 7' from s. rd		
SW: 0910		Sed: 1035			
Field Descriptions and Observations: Sed is Coarse sand Brown & Tan Depth = 230 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 Organic 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 that 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

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3.0	TRIP BLANKS, LABORATORY METHOD BLANK AND EQUIPMENT BLANK SAMPLES.	4
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5.0	LABORATORY CONTROL SAMPLE RECOVERIES	5
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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 $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 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 $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 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-d₁₂ 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 $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ criteria. Samples received were in good condition and not frozen; therefore, no qualification of data was required.

3.0 Holding Times

Were 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	$\mu\text{g/L}$
BSA-MW-3D-0210-EB	VOCs	Chlorobenzene	2.3	$\mu\text{g/L}$

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

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



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

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

MAR 23 2010 ELK

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.

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TestAmerica Laboratories, Inc.

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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.

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

SAMPLE RESULTS

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55082-1

Date Sampled: 02/15/2010 1150

Client Matrix: Water

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 ETR

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55082-3

Date Sampled: 02/15/2010 1630

Client Matrix: Water

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 *ELR*

Analytical Data

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

Date Sampled: 02/15/2010 0000

Client Matrix: Water

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

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

Date Sampled: 02/16/2010 1010

Client Matrix: Water

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 E2R

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-3

Date Sampled: 02/16/2010 1200

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-5

Date Sampled: 02/16/2010 1400

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-7

Date Sampled: 02/16/2010 1530

Client Matrix: Water

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

Analytical Data

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

Date Sampled: 02/16/2010 1245

Client Matrix: Water

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 *ELV*

Analytical Data

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

Date Sampled: 02/16/2010 0000

Client Matrix: Water

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 ELK

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-1

Date Sampled: 02/17/2010 1050

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-3

Date Sampled: 02/17/2010 1305

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-5

Date Sampled: 02/17/2010 1450

Client Matrix: Water

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

Analytical Data

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

Date Sampled: 02/17/2010 1450

Client Matrix: Water

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

Analytical Data

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

Date Sampled: 02/17/2010 0000

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55185-1

Date Sampled: 02/18/2010 0945

Client Matrix: Water

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

Analytical Data

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

Date Sampled: 02/18/2010 0000

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55082-1

Date Sampled: 02/15/2010 1150

Client Matrix: Water

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 

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55082-3

Date Sampled: 02/15/2010 1630

Client Matrix: Water

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*

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

Date Sampled: 02/16/2010 1010

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-3

Date Sampled: 02/16/2010 1200

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-5

Date Sampled: 02/16/2010 1400

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-7

Date Sampled: 02/16/2010 1530

Client Matrix: Water

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 

Analytical Data

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

Date Sampled: 02/16/2010 1245

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-1

Date Sampled: 02/17/2010 1050

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-3

Date Sampled: 02/17/2010 1305

Client Matrix: Water

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

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Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-5

Date Sampled: 02/17/2010 1450

Client Matrix: Water

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

Analytical Data

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

Date Sampled: 02/17/2010 1450

Client Matrix: Water

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

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Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55185-1

Date Sampled: 02/18/2010 0945

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55082-1

Date Sampled: 02/15/2010 1150

Client Matrix: Water

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

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Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55082-1

Date Sampled: 02/15/2010 1150

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55082-3

Date Sampled: 02/15/2010 1630

Client Matrix: Water

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

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Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55082-3

Date Sampled: 02/15/2010 1630

Client Matrix: Water

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

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

Date Sampled: 02/16/2010 1010

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-3

Date Sampled: 02/16/2010 1200

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-5

Date Sampled: 02/16/2010 1400

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-7

Date Sampled: 02/16/2010 1530

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-7

Date Sampled: 02/16/2010 1530

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-1

Date Sampled: 02/17/2010 1050

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-1

Date Sampled: 02/17/2010 1050

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-3

Date Sampled: 02/17/2010 1305

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-3

Date Sampled: 02/17/2010 1305

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-5

Date Sampled: 02/17/2010 1450

Client Matrix: Water

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 *ZZR*

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-5

Date Sampled: 02/17/2010 1450

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55185-1

Date Sampled: 02/18/2010 0945

Client Matrix: Water

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 

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55185-1

Date Sampled: 02/18/2010 0945

Client Matrix: Water

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 

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55082-1

Date Sampled: 02/15/2010 1150

Client Matrix: Water

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 

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

Date Sampled: 02/15/2010 1150

Client Matrix: Water

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

ETK

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55082-3

Date Sampled: 02/15/2010 1630

Client Matrix: Water

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



Analytical Data

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

Date Sampled: 02/15/2010 1630

Client Matrix: Water

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



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

Date Sampled: 02/16/2010 1010

Client Matrix: Water

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 E212

Analytical Data

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

Date Sampled: 02/16/2010 1010

Client Matrix: Water

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 *ERK*

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-3

Date Sampled: 02/16/2010 1200

Client Matrix: Water

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

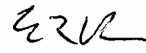
Initial Weight/Volume: 50 mL

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 

Analytical Data

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

Date Sampled: 02/16/2010 1200

Client Matrix: Water

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 *ENK*

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-5

Date Sampled: 02/16/2010 1400

Client Matrix: Water

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



Analytical Data

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

Date Sampled: 02/16/2010 1400

Client Matrix: Water

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

ER

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55111-7

Date Sampled: 02/16/2010 1530

Client Matrix: Water

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

EVR

Analytical Data

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

Date Sampled: 02/16/2010 1530

Client Matrix: Water

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 

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-1

Date Sampled: 02/17/2010 1050

Client Matrix: Water

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 

Analytical Data

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

Date Sampled: 02/17/2010 1050

Client Matrix: Water

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 

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-3

Date Sampled: 02/17/2010 1305

Client Matrix: Water

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



Analytical Data

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

Date Sampled: 02/17/2010 1305

Client Matrix: Water

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



Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55143-5

Date Sampled: 02/17/2010 1450

Client Matrix: Water

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 

Analytical Data

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

Date Sampled: 02/17/2010 1450

Client Matrix: Water

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 *zak*

Analytical Data

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

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

Lab Sample ID: 680-55185-1

Date Sampled: 02/18/2010 0945

Client Matrix: Water

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 

Analytical Data

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

Date Sampled: 02/18/2010 0945

Client Matrix: Water

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

Analytical Data

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

Date Sampled: 02/15/2010 1150

Client Matrix: Water

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

Analytical Data

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 

Analytical Data

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

Date Sampled: 02/15/2010 1630

Client Matrix: Water

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 

Analytical Data

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*

Analytical Data

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

Date Sampled: 02/16/2010 1010

Client Matrix: Water

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 

Analytical Data

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

Date Sampled: 02/16/2010 1010

Client Matrix: Water

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*

Analytical Data

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 

Analytical Data

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

Date Sampled: 02/16/2010 1200

Client Matrix: Water

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 EZK

Analytical Data

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

Date Sampled: 02/16/2010 1400

Client Matrix: Water

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 

Analytical Data

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 *ERK*

Analytical Data

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 *ERK*

Analytical Data

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

Date Sampled: 02/16/2010 1530

Client Matrix: Water

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*

Analytical Data

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

Date Sampled: 02/17/2010 1050

Client Matrix: Water

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 

Analytical Data

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 *ELR*

Analytical Data

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*

Analytical Data

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 

Analytical Data

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 

Analytical Data

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

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Analytical Data

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

Date Sampled: 02/18/2010 0945

Client Matrix: Water

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

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Analytical Data

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

Date Sampled: 02/18/2010 0945

Client Matrix: Water

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 

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

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	

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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
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Report Basis

T = Total

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 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

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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 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

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 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

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
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	

TestAmerica Savannah

Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
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

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
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	

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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
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	

TestAmerica Savannah

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
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

Quality Control Results

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 

Quality Control Results

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 *EZH*

Quality Control Results

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-A D	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 *ERK*

Quality Control Results

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 *EZR*

Quality Control Results

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 *EZR*

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 

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

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 02/18/2010 0959

Date Prepared: 02/18/2010 0959

Analysis Batch: 680-161124

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq193.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-161124/7

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 02/18/2010 1028

Date Prepared: 02/18/2010 1028

Analysis Batch: 680-161124

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq195.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
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 *ERY*

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

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 02/19/2010 0940

Date Prepared: 02/19/2010 0940

Analysis Batch: 680-161233

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq207.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-161233/6

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 02/19/2010 1009

Date Prepared: 02/19/2010 1009

Analysis Batch: 680-161233

Prep Batch: N/A

Units: ug/L

Instrument ID: MSO

Lab File ID: oq209.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
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

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: 680-161234

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 680-161234/9

Analysis Batch: 680-161234

Instrument ID: MS02

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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/19/2010 0954
Date Prepared: 02/19/2010 0954

Analysis Batch: 680-161234
Prep Batch: N/A
Units: ug/L

Instrument ID: MSO2
Lab File ID: oq208.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-161234/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/19/2010 1023
Date Prepared: 02/19/2010 1023

Analysis Batch: 680-161234
Prep Batch: N/A
Units: ug/L

Instrument ID: MSO2
Lab File ID: oq210.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
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 EJR

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	

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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

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
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 *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

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.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
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 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: 680-161527

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

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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
Client Matrix: Water
Dilution: 20
Date Analyzed: 02/22/2010 2124
Date Prepared: 02/22/2010 2124

Analysis Batch: 680-161527
Prep Batch: N/A

Instrument ID: MSO
Lab File ID: o0361.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 680-55111-1
Client Matrix: Water
Dilution: 20
Date Analyzed: 02/22/2010 2153
Date Prepared: 02/22/2010 2153

Analysis Batch: 680-161527
Prep Batch: N/A

Instrument ID: MSO
Lab File ID: o0363.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
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			

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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: 680-161121**Method: 8270C**
Preparation: 3520CLab Sample ID: MB 680-161121/15-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/23/2010 1902
Date Prepared: 02/18/2010 1519Analysis Batch: 680-161551
Prep Batch: 680-161121
Units: ug/LInstrument ID: MSF
Lab File ID: f4538.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
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: 3520CLab Sample ID: LCS 680-161121/16-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 0046
Date Prepared: 02/18/2010 1519Analysis Batch: 680-161551
Prep Batch: 680-161121
Units: ug/LInstrument ID: MSF
Lab File ID: f4539.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
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

Calculations are performed before rounding to avoid round-off errors in calculated results.

MAR 23 2010 *ERK*

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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1640
Date Prepared: 02/18/2010 1519

Analysis Batch: 680-161641
Prep Batch: 680-161121

Instrument ID: MSF
Lab File ID: f4562.d
Initial Weight/Volume: 1060 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

MSD Lab Sample ID: 680-55111-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/25/2010 1236
Date Prepared: 02/18/2010 1519

Analysis Batch: 680-161672
Prep Batch: 680-161121

Instrument ID: MSF
Lab File ID: f4590.d
Initial Weight/Volume: 1060 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
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.

Quality Control 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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/01/2010 1703
Date Prepared: 02/19/2010 1513

Analysis Batch: 680-161991
Prep Batch: 680-161199
Units: ug/L

Instrument ID: MSG
Lab File ID: g0163.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/01/2010 1731
Date Prepared: 02/19/2010 1513

Analysis Batch: 680-161991
Prep Batch: 680-161199
Units: ug/L

Instrument ID: MSG
Lab File ID: g0164.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
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.

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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/25/2010 1305
Date Prepared: 02/23/2010 1319

Analysis Batch: 680-161650
Prep Batch: 680-161413
Units: ug/L

Instrument ID: MSG
Lab File ID: g0133.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/25/2010 1332
Date Prepared: 02/23/2010 1319

Analysis Batch: 680-161650
Prep Batch: 680-161413
Units: ug/L

Instrument ID: MSG
Lab File ID: g0134.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
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 *ELR*

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
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 02/25/2010 1802
 Date Prepared: 02/23/2010 1319

Analysis Batch: 680-161650
 Prep Batch: 680-161413

Instrument ID: MSG
 Lab File ID: g0143.d
 Initial Weight/Volume: 500 mL
 Final Weight/Volume: 0.5 mL
 Injection Volume: 1 uL

MSD Lab Sample ID: 680-55185-1
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 02/25/2010 1829
 Date Prepared: 02/23/2010 1319

Analysis Batch: 680-161650
 Prep Batch: 680-161413

Instrument ID: MSG
 Lab File ID: g0144.d
 Initial Weight/Volume: 500 mL
 Final Weight/Volume: 0.5 mL
 Injection Volume: 1 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
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.

Quality Control 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

Analysis Batch: 680-161547

Instrument ID: VGUFID2

Client Matrix: Water

Prep Batch: N/A

Lab File ID: UQ249.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 17000 uL

Date Analyzed: 02/24/2010 1012

Final Weight/Volume: 17 mL

Date Prepared: N/A

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/

Method: RSK-175

Lab Control Sample Duplicate Recovery Report - Batch: 680-161547

Preparation: N/A

LCS Lab Sample ID: LCS 680-161547/15

Analysis Batch: 680-161547

Instrument ID: VGUFID2

Client Matrix: Water

Prep Batch: N/A

Lab File ID: UQ246.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 17000 uL

Date Analyzed: 02/24/2010 0909

Final Weight/Volume: 17 mL

Date Prepared: N/A

Injection Volume: 1 uL

Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 680-161547/16

Analysis Batch: 680-161547

Instrument ID: VGUFID2

Client Matrix: Water

Prep Batch: N/A

Lab File ID: UQ247.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 17000 uL

Date Analyzed: 02/24/2010 0950

Final Weight/Volume: 17 mL

Date Prepared: N/A

Injection Volume: 1 uL

Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Ethane	107	112	75 - 125	5	30		
Ethylene	113	118	75 - 125	4	30		
Methane	88	92	75 - 125	4	30		

MAR 23 2010 *ER*

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

Analysis Batch: 680-161548

Instrument ID: VGUTCD1

Client Matrix: Water

Prep Batch: N/A

Lab File ID: UQ249.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 17000 uL

Date Analyzed: 02/24/2010 1012

Final Weight/Volume: 17 mL

Date Prepared: N/A

Injection Volume: 1 uL

Column ID: PRIMARY

Analyte	Result	Qual	RL
Methane	0.19	U	0.19

Lab Control Sample/

Method: RSK-175

Lab Control Sample Duplicate Recovery Report - Batch: 680-161548

Preparation: N/A

LCS Lab Sample ID: LCS 680-161548/9

Analysis Batch: 680-161548

Instrument ID: VGUTCD1

Client Matrix: Water

Prep Batch: N/A

Lab File ID: UQ242.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 17000 uL

Date Analyzed: 02/24/2010 0818

Final Weight/Volume: 17 mL

Date Prepared: N/A

Injection Volume: 1 uL

Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 680-161548/10

Analysis Batch: 680-161548

Instrument ID: VGUTCD1

Client Matrix: Water

Prep Batch: N/A

Lab File ID: UQ243.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 17000 uL

Date Analyzed: 02/24/2010 0831

Final Weight/Volume: 17 mL

Date Prepared: N/A

Injection Volume: 1 uL

Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Methane	87	94	75 - 125	7	30		

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: 680-161109

Lab Sample ID: MB 680-161109/16-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/18/2010 2001
Date Prepared: 02/18/2010 1225

Analysis Batch: 680-161225
Prep Batch: 680-161109
Units: mg/L

Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPD
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	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

Lab Sample ID: LCS 680-161109/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/18/2010 2006
Date Prepared: 02/18/2010 1225

Analysis Batch: 680-161225
Prep Batch: 680-161109
Units: mg/L

Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPD
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	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.

Quality Control Results

Client: Solutia Inc.

Job Number: 680-55082-1

Sdg Number: KPS056

Method Blank - Batch: 680-161475

Lab Sample ID: MB 680-161475/15-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 2030
Date Prepared: 02/23/2010 1652

Analysis Batch: 680-161776
Prep Batch: 680-161475
Units: mg/L

Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPD
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	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

Lab Sample ID: LCS 680-161475/16-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 2035
Date Prepared: 02/23/2010 1652

Analysis Batch: 680-161776
Prep Batch: 680-161475
Units: mg/L

Method: 6010B Preparation: 3005A Total Recoverable

Instrument ID: ICPD
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	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
Client Matrix: Water Prep Batch: 680-161475
Dilution: 1.0
Date Analyzed: 02/24/2010 2056
Date Prepared: 02/23/2010 1652

Instrument ID: ICPD
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 680-55143-1 Analysis Batch: 680-161776
Client Matrix: Water Prep Batch: 680-161475
Dilution: 1.0
Date Analyzed: 02/24/2010 2101
Date Prepared: 02/23/2010 1652

Instrument ID: ICPD
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
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		

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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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/22/2010 1233
Date Prepared: N/A

Analysis Batch: 680-161368
Prep Batch: N/A
Units: mg/L

Instrument ID: MANTECH
Lab File ID: N/A
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/22/2010 1240
Date Prepared: N/A

Analysis Batch: 680-161368
Prep Batch: N/A
Units: mg/L

Instrument ID: MANTECH
Lab File ID: N/A
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Alkalinity	226	226	100	80 - 120	

MAR 23 2010 

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 *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: 680-162285

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.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	60	59	85 - 115	0	30	4	4

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: 680-162120

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
Client Matrix: Water Prep Batch: N/A
Dilution: 1.0
Date Analyzed: 02/16/2010 1229
Date Prepared: N/A

Instrument ID: KONELAB2
Lab File ID: N/A
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 680-55082-1 Analysis Batch: 680-162120
Client Matrix: Water Prep Batch: N/A
Dilution: 1.0
Date Analyzed: 02/16/2010 1229
Date Prepared: N/A

Instrument ID: KONELAB2
Lab File ID: N/A
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Nitrate as N	100	102	90 - 110	3	10		
Nitrate Nitrite as N	100	102	90 - 110	3	10		

MAR 23 2010 *ERIC*

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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/25/2010 1017
Date Prepared: N/A

Analysis Batch: 680-161667
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
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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/25/2010 1017
Date Prepared: N/A

Analysis Batch: 680-161667
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
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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1129
Date Prepared: N/A

Analysis Batch: 680-161728
Prep Batch: N/A
Units: mg/L

Instrument ID: TOC3
Lab File ID: N/A
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1159
Date Prepared: N/A

Analysis Batch: 680-161728
Prep Batch: N/A
Units: mg/L

Instrument ID: TOC3
Lab File ID: N/A
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

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 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: 680-162884

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 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: 680-162889

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 *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: 680-162953

Method: 415.1

Preparation: N/A

Lab Sample ID: MB 680-162953/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2010 1026
Date Prepared: N/A

Analysis Batch: 680-162953
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: 680-162953

Method: 415.1

Preparation: N/A

Lab Sample ID: LCS 680-162953/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2010 1026
Date Prepared: N/A

Analysis Batch: 680-162953
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	18.9	95	80 - 120	

MAR 23 2010 

Calculations are performed before rounding to avoid round-off errors in calculated results.

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Savannah, GA 31404
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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		<div style="display: flex; flex-direction: row-reverse;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> VOCs by 8260 SVOCs by 8270C* Total Fe/Mn by 6010B Al/CO2 by 310.1 Chloride by 325.2/Sulfate by 375.4 Methane, Ethane, Ethene by BSK 175 Nitrate by 353.2 TOC by 415.1 Dissolved Fe/Mn by 6010B DOC by 415.1 </div> </div>		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		<input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day															
Project Name: 1Q10 LTM GW Sampling																	
Site: Solutia WG Krummrich Facility																	
P O #																	
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.			Sample Specific Notes:								
CPA -MW-4D-0210 ✓		2/15/10	1150	G	Water	14	3	2	1	*SVOCs per semi-annual list							
CPA -MW-4D-F(0.2)-0210 ✓			1150	G	Water	2	X										
BSA -MW-5D-0210 ✓			1630	G	Water	14	3	2	1								
BSA -MW-5D-F(0.2)-0210 ✓		✓	1630	G	Water	2	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 # 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							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)										
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown							<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months										
Special Instructions/QC Requirements & Comments: Level 4 Data Package																	
Temp 5.2																	
Relinquished by: Mike Corbett		Company: URS		Date/Time: 2/15/10 1800		Received by: Ruth A. Doughty		Company: TA SAV		Date/Time: 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 E-ZK

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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		<input type="checkbox"/> 2 weeks															
Project Name: 1Q10 LTM GW Sampling		<input type="checkbox"/> 1 week															
Site: Solutia WG Krummrich Facility		<input type="checkbox"/> 2 days															
P O #		<input type="checkbox"/> 1 day															
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs by 8260	SVOCs by 8270C*	Total Fe/Mn by 6010B	Al/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							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)										
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>							<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months										
Special Instructions/QC Requirements & Comments: Level 4 Data Package																	
680-55111 0.8/1.4/2.0																	
Relinquished by: <i>John Calit</i>	Company: URS	Date/Time: 2/16/10 1700	Received by: <i>Shedden</i>	Company: <i>TA</i>	Date/Time: 2/16/10 1700												
Relinquished by: <i>Shedden</i>	Company: <i>TA</i>	Date/Time: 2/16/10 1715	Received by:	Company:	Date/Time:												
Relinquished by:	Company:	Date/Time:	Received by: <i>George Klonner</i>	Company: <i>TA SA</i>	Date/Time: 2/17/10 0407												

MAR 23 2010 *EZK*

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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 Gulliza		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		<input type="checkbox"/> 2 weeks																	
Project Name: 1Q10 LTM GW Sampling		<input type="checkbox"/> 1 week																	
Site: Solutia WG Krummrich Facility		<input type="checkbox"/> 2 days																	
P O #		<input type="checkbox"/> 1 day																	
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs by 8260	SVOCs by 8270C	Total Fe/Mn by 6010B	Al/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-18-0210 ✓		2/17/10	1050	G	Water	14	3	2	1	1	1	3	2	1					*SVOCs per semi-annual list
BSA -MW-15-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 # 2 ✓		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							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)												
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>							<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months												
Special Instructions/QC Requirements & Comments: Level 4 Data Package																			
<div style="text-align: right;">TEMPERATURE 2.4 2.2</div>																			
Relinquished by: <i>MLC</i>		Company: URS		Date/Time: 2/17/10 1700		Received by: <i>m. baldryllan</i>		Company: TA		Date/Time: 2/18/10 09:59									
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:									
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:									

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MAR 23 2010 E2K

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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		<div style="display: flex; flex-direction: column; align-items: center;"> <div>VOCs by 8260</div> <div>SVOCs by 8270C*</div> <div>Total Fe/Mn by 6010B</div> <div>AH/CO2 by 310.1</div> <div>Chloride by 3252/Sulfate by 375.4</div> <div>Methane, Ethane, Ethene by RSK 175</div> <div>Nitrate by 353.2</div> <div>TOC by 415.1</div> <div>Dissolved Fe/Mn by 6010B</div> <div>DOC by 415.1</div> </div>		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		<input type="checkbox"/> 2 weeks																	
Project Name: 1Q10 LTM GW Sampling		<input type="checkbox"/> 1 week																	
Site: Solutia WG Krummrich Facility		<input type="checkbox"/> 2 days																	
P O #		<input type="checkbox"/> 1 day																	
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.			Sample Specific Notes:										
CPA -MW- 3D-0210 ✓		2/18/10	0945	G	Water	14	3	2	1	*SVOCs per semi-annual list									
CPA -MW- 3D-F(0.2)-0210 ✓		↓	0945	G	Water	2	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- -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							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)												
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown							<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months												
Special Instructions/QC Requirements & Comments: Level 4 Data Package																			
Temp 2.0/1.6/0.9																			
Relinquished by: <i>Mike Corbett</i>		Company: URS		Date/Time: 2/18/10 1515		Received by: Beth O'Daugherty		Company: TRS		Date/Time: 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 *ez*

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55082-1

SDG Number: KPS056

Login Number: 55082

List Source: TestAmerica Savannah

Creator: Daughtry, Beth

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
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	

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55082-1

SDG Number: KPS056

Login Number: 55111

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	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	

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55082-1

SDG Number: KPS056

Login Number: 55143

List Source: TestAmerica Savannah

Creator: Kicklighter, Marilyn

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	2 coolers 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	

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55082-1

SDG Number: KPS056

Login Number: 55185

List Source: TestAmerica Savannah

Creator: Daughtry, Beth

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	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	

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 $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ criteria. Samples received were in good condition and not frozen; therefore, no qualification of data was required.

3.0 Holding Times

Were 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

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

Project Manager I

lidya.gulizia@testamericainc.com

03/22/2010

Approved for release.
Lidya Gulizia
Project Manager I
3/22/2010 2:48 PM

Reviewed
on

MAR 23 2010 EJR

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.

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TestAmerica Laboratories, Inc.

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404

Tel (912) 354-7858 Fax (912) 352-0165 www.testamericainc.com



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

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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

SAMPLE RESULTS

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-1

Sdg Number: KRS009

Client Sample ID: SW-R2007-3-0210

Lab Sample ID: 680-55137-1

Date Sampled: 02/17/2010 0910

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-1

Sdg Number: KRS009

Client Sample ID: SW-R2007-2-0210

Lab Sample ID: 680-55137-3

Date Sampled: 02/17/2010 1120

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-1

Sdg Number: KRS009

Client Sample ID: SW-R2007-1-0210

Lab Sample ID: 680-55137-5

Date Sampled: 02/17/2010 1250

Client Matrix: Water

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	

Analytical Data

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

Date Sampled: 02/17/2010 1250

Client Matrix: Water

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

Analytical Data

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

Date Sampled: 02/17/2010 1540

Client Matrix: Water

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	

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-1

Sdg Number: KRS009

Client Sample ID: TRIP BLANK 021710

Lab Sample ID: 680-55137-10TB

Date Sampled: 02/17/2010 0910

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-1

Sdg Number: KRS009

Client Sample ID: SW-R2007-3-0210

Lab Sample ID: 680-55137-1

Date Sampled: 02/17/2010 0910

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-1

Sdg Number: KRS009

Client Sample ID: SW-R2007-2-0210

Lab Sample ID: 680-55137-3

Date Sampled: 02/17/2010 1120

Client Matrix: Water

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-1

Sdg Number: KRS009

Client Sample ID: SW-R2007-1-0210

Lab Sample ID: 680-55137-5

Date Sampled: 02/17/2010 1250

Client Matrix: Water

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

Analytical Data

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

Date Sampled: 02/17/2010 1250

Client Matrix: Water

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

Analytical Data

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

Date Sampled: 02/17/2010 1540

Client Matrix: Water

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

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

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

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 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

Quality Control Results

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

Quality Control Results

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		83	74	84	73	71	98
680-161199/13-A							
LCS		78	69	71	69	83	110
680-161199/13-A							
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

Quality Control Results

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.

Quality Control Results

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.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
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.

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
Client Matrix: Water Prep Batch: N/A
Dilution: 1.0
Date Analyzed: 02/19/2010 2038
Date Prepared: 02/19/2010 2038

Instrument ID: MSP
Lab File ID: p0031.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 680-55137-1 Analysis Batch: 680-161320
Client Matrix: Water Prep Batch: N/A
Dilution: 1.0
Date Analyzed: 02/19/2010 2107
Date Prepared: 02/19/2010 2107

Instrument ID: MSP
Lab File ID: p0033.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
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.

Quality Control Results

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.

Quality Control Results

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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/22/2010 1525
Date Prepared: 02/19/2010 1513

Analysis Batch: 680-161396
Prep Batch: 680-161199
Units: ug/L

Instrument ID: MSN
Lab File ID: n6355.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/01/2010 1731
Date Prepared: 02/19/2010 1513

Analysis Batch: 680-161991
Prep Batch: 680-161199
Units: ug/L

Instrument ID: MSG
Lab File ID: g0164.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
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.

Quality Control Results

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
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/22/2010 1640
Date Prepared: 02/19/2010 1513

Analysis Batch: 680-161396
Prep Batch: 680-161199

Instrument ID: MSN
Lab File ID: n6358.d
Initial Weight/Volume: 1060 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

MSD Lab Sample ID: 680-55137-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/22/2010 1705
Date Prepared: 02/19/2010 1513

Analysis Batch: 680-161396
Prep Batch: 680-161199

Instrument ID: MSN
Lab File ID: n6358.d
Initial Weight/Volume: 1060 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
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.

gzk

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 W6K 1st QTR 2010 River		PROJECT NO. 21562401.00005	PROJECT LOCATION (STATE) IL	MATRIX TYPE		REQUIRED ANALYSIS										PAGE 1 OF 2										
TAL (LAB) PROJECT MANAGER LIDYA GULLIZIA		P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...)		VOC 8260B SVOC 8270C VOC 8260B SVOC 8270C 2nd Thio 3rd Thio 4th Thio 5th Thio 6th Thio 7th Thio 8th Thio 9th Thio 10th Thio 11th Thio 12th Thio 13th Thio 14th Thio 15th Thio 16th Thio 17th Thio 18th Thio 19th Thio 20th Thio 21st Thio 22nd Thio 23rd Thio 24th Thio 25th Thio 26th Thio 27th Thio 28th Thio 29th Thio 30th Thio 31st Thio 32nd Thio 33rd Thio 34th Thio 35th Thio 36th Thio 37th Thio 38th Thio 39th Thio 40th Thio 41st Thio 42nd Thio 43rd Thio 44th Thio 45th Thio 46th Thio 47th Thio 48th Thio 49th Thio 50th Thio 51st Thio 52nd Thio 53rd Thio 54th Thio 55th Thio 56th Thio 57th Thio 58th Thio 59th Thio 60th Thio 61st Thio 62nd Thio 63rd Thio 64th Thio 65th Thio 66th Thio 67th Thio 68th Thio 69th Thio 70th Thio 71st Thio 72nd Thio 73rd Thio 74th Thio 75th Thio 76th Thio 77th Thio 78th Thio 79th Thio 80th Thio 81st Thio 82nd Thio 83rd Thio 84th Thio 85th Thio 86th Thio 87th Thio 88th Thio 89th Thio 90th Thio 91st Thio 92nd Thio 93rd Thio 94th Thio 95th Thio 96th Thio 97th Thio 98th Thio 99th Thio 100th Thio										STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>										
CLIENT (SITE) PM Dave Palmer		CLIENT PHONE 314 429 0100	CLIENT FAX 314 429 0100																							DATE DUE
CLIENT NAME URS CORP.		CLIENT E-MAIL dave_palmer@urscorp.com																								EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>
CLIENT ADDRESS 1001 H. H. H. Plaza Drive W St Louis MO 63110																										DATE DUE
COMPANY CONTRACTING THIS WORK (if applicable)														NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 3												
SAMPLE		SAMPLE IDENTIFICATION				NUMBER OF CONTAINERS SUBMITTED										REMARKS										
DATE	TIME																									
2/17/10	0910	SW-R2007-3-0210		G	X	3 2										VOC= Benzene Chlorobenzene										
	1035	SED-R2007-3-0210		G	X	3 1										1,2-Dichlorobenzene (DC)										
	0910	SW-R2007-3-0210 MS		G	X	3 2										1,3 DCB + 1,4 DCB										
	1035	SED-R2007-3-0210 MS		G	X	3 1										SVOC= 4-chloroanisole										
	0910	SW-R2007-3-0210 MSD		G	X	3 2										2-chlorophenol										
	1035	SED-R2007-3-0210 MSD		G	X	3 1										1,4-Dioxane										
	1120	SW-R2007-2-0210		G	X	3 2										1,24-Trichlorobenzene										
	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																				
RELINQUISHED BY: (SIGNATURE) [Signature]		DATE 2/17/10	TIME 1900	RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RELINQUISHED BY: (SIGNATURE)		DATE	TIME											
RECEIVED BY: (SIGNATURE) Fedex		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME											
LABORATORY USE ONLY																										
RECEIVED FOR LABORATORY BY: (SIGNATURE) [Signature]		DATE 2/18/10	TIME 0459	CUSTODY INTACT YES <input type="radio"/> NO <input type="radio"/>		CUSTODY SEAL NO.		SAVANNAH LOG NO. 680-55137		LABORATORY REMARKS 1.0/1.6/1.4																

TAL8240-680 (1207)

MAR 23 2010 **EZK**

Serial Number 026878

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

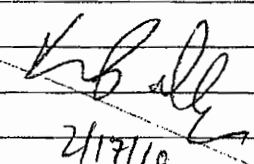
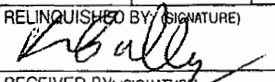
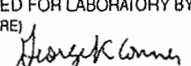
THE LEADER IN ENVIRONMENTAL TESTING

☒ 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 121 QTR 2010 River		PROJECT NO. 21562401.00005	PROJECT LOCATION (STATE) IL	REQUIRED ANALYSIS										PAGE 2 OF 2					
TAL (LAB) PROJECT MANAGER LIDYA GULIZIA		P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	<div style="display: flex; justify-content: space-around;"> <div>VOC (8240B)</div> <div>SVOC (8270C)</div> <div>VOC (8240B)</div> <div>SVOC (8270C)</div> </div>										STANDARD REPORT DELIVERY <input type="radio"/>
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) <input type="radio"/>
CLIENT ADDRESS 1001 Highlands Plaza DR W St. Louis MO 63110		COMPANY CONTRACTING THIS WORK (if applicable)																	DATE DUE
SAMPLE		SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS SUBMITTED		REMARKS													
DATE	TIME																		
2/17/10	1540	SED-R2007-1-0210EB		G	X			3	2										
↓	0910	TRIP BLANK 021710		G	X			2											
 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)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE)		DATE	TIME								
Fed Ex																			
LABORATORY USE ONLY																			
RECEIVED FOR LABORATORY BY: (SIGNATURE)		DATE	TIME	CUSTODY INTACT YES <input type="radio"/> NO <input type="radio"/>	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS												
						680-55107													

TAL8240-080 (1207)

MAR 23 2010 *ERK*

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55137-1

SDG Number: KRS009

Login Number: 55137

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	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	

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

Were 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

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



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



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.

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TestAmerica Laboratories, Inc.

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404

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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.

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

SAMPLE RESULTS

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-2

Sdg Number: KRS010

Client Sample ID: SED-R2007-3-0210

Lab Sample ID: 680-55137-2

Date Sampled: 02/17/2010 1035

Client Matrix: Solid

% Moisture: 14.8

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	

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-2

Sdg Number: KRS010

Client Sample ID: SED-R2007-2-0210

Lab Sample ID: 680-55137-4

Date Sampled: 02/17/2010 1200

Client Matrix: Solid

% Moisture: 15.5

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-2

Sdg Number: KRS010

Client Sample ID: SED-R2007-1-0210

Lab Sample ID: 680-55137-6

Date Sampled: 02/17/2010 1450

Client Matrix: Solid

% Moisture: 18.9

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

Analytical Data

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

Date Sampled: 02/17/2010 1450

Client Matrix: Solid

% Moisture: 27.7

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	

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-2

Sdg Number: KRS010

Client Sample ID: SED-R2007-3-0210

Lab Sample ID: 680-55137-2

Date Sampled: 02/17/2010 1035

Client Matrix: Solid

% Moisture: 14.8

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-2

Sdg Number: KRS010

Client Sample ID: SED-R2007-2-0210

Lab Sample ID: 680-55137-4

Date Sampled: 02/17/2010 1200

Client Matrix: Solid

% Moisture: 15.5

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-55137-2

Sdg Number: KRS010

Client Sample ID: SED-R2007-1-0210

Lab Sample ID: 680-55137-6

Date Sampled: 02/17/2010 1450

Client Matrix: Solid

% Moisture: 18.9

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

Analytical Data

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

Date Sampled: 02/17/2010 1450

Client Matrix: Solid

% Moisture: 27.7

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	"U5"	71	900
2-Chlorophenol		450	"U5"	55	450
1,2,4-Trichlorobenzene		450	"U5"	42	450
1,4-Dioxane		450	"U5"	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

Analytical Data

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

Date Sampled: 02/17/2010 1035

Client Matrix: Solid

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

Analytical Data

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	

Analytical Data

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

Analytical Data

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

Date Sampled: 02/17/2010 1450

Client Matrix: Solid

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	

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

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

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 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

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
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

Quality Control Results

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

Quality Control Results

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		69	63	63	65	75	72
680-161178/10-A							
LCS		70	60	63	63	86	88
680-161995/17-A							
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
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/02/2010 1307
Date Prepared: 02/18/2010 1100

Analysis Batch: 680-162060
Prep Batch: 680-161094

Instrument ID: MSL
Lab File ID: I0054.d
Initial Weight/Volume: 6.6 g
Final Weight/Volume: 5 g

MSD Lab Sample ID: 680-55137-2
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/02/2010 1328
Date Prepared: 02/18/2010 1100

Analysis Batch: 680-162060
Prep Batch: 680-161094

Instrument ID: MSL
Lab File ID: I0055.d
Initial Weight/Volume: 6.1 g
Final Weight/Volume: 5 g

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
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.

Quality Control Results

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.

Quality Control Results

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.

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
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/02/2010 1156
Date Prepared: N/A

Analysis Batch: 680-162060
Prep Batch: N/A
Units: ug/Kg

Instrument ID: MSL
Lab File ID: lq039.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	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
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/02/2010 1030
Date Prepared: N/A

Analysis Batch: 680-162060
Prep Batch: N/A
Units: ug/Kg

Instrument ID: MSL
Lab File ID: lq036.d
Initial Weight/Volume: 5 g
Final Weight/Volume: 5 mL

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.

Quality Control Results

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
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 02/24/2010 1812
Date Prepared: 02/19/2010 1345

Analysis Batch: 680-161641
Prep Batch: 680-161178
Units: ug/Kg

Instrument ID: MSF
Lab File ID: f4565.d
Initial Weight/Volume: 30.28 g
Final Weight/Volume: 1 mL
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
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 02/24/2010 2201
Date Prepared: 02/19/2010 1345

Analysis Batch: 680-161641
Prep Batch: 680-161178
Units: ug/Kg

Instrument ID: MSF
Lab File ID: f4575.d
Initial Weight/Volume: 30.15 g
Final Weight/Volume: 1 mL
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.

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
 Client Matrix: Solid
 Dilution: 1.0
 Date Analyzed: 02/25/2010 0105
 Date Prepared: 02/19/2010 1345

Analysis Batch: 680-161641
 Prep Batch: 680-161178

Instrument ID: MSF
 Lab File ID: f4583.d
 Initial Weight/Volume: 30.27 g
 Final Weight/Volume: 1 mL
 Injection Volume: 1 uL

MSD Lab Sample ID: 680-55137-2
 Client Matrix: Solid
 Dilution: 1.0
 Date Analyzed: 02/25/2010 0128
 Date Prepared: 02/19/2010 1345

Analysis Batch: 680-161641
 Prep Batch: 680-161178

Instrument ID: MSF
 Lab File ID: f4584.d
 Initial Weight/Volume: 30.11 g
 Final Weight/Volume: 1 mL
 Injection Volume: 1 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
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.

Quality Control Results

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
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/03/2010 1458
Date Prepared: 03/02/2010 1425

Analysis Batch: 680-162186
Prep Batch: 680-161995
Units: ug/Kg

Instrument ID: MSF
Lab File ID: f4733.d
Initial Weight/Volume: 30.12 g
Final Weight/Volume: 1 mL
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
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/03/2010 1825
Date Prepared: 03/02/2010 1425

Analysis Batch: 680-162186
Prep Batch: 680-161995
Units: ug/Kg

Instrument ID: MSF
Lab File ID: f4734.d
Initial Weight/Volume: 30.38 g
Final Weight/Volume: 1 mL
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.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

 **TestAmerica Savannah**
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

☐ Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE		PROJECT NO.		PROJECT LOCATION (STATE)		MATRIX TYPE		REQUIRED ANALYSIS										PAGE			
TAL (LAB) PROJECT MANAGER		P.O. NUMBER		CONTRACT NO.		COMPOSITE (C) OR GRAB (G) INDICATE		AQUEOUS (WATER)		SOLID OR SEMISOLID		AIR		NONAQUEOUS LIQUID (OIL, SOLVENT, ...)		STANDARD REPORT DELIVERY					
CLIENT (SITE) PM		CLIENT PHONE		CLIENT FAX												DATE DUE					
CLIENT NAME		CLIENT E-MAIL														EXPEDITED REPORT DELIVERY (SURCHARGE)					
CLIENT ADDRESS																DATE DUE					
COMPANY CONTRACTING THIS WORK (if applicable)																NUMBER OF COOLERS SUBMITTED PER SHIPMENT:					
SAMPLE		DATE		TIME		SAMPLE IDENTIFICATION		COMPOSITE (C) OR GRAB (G) INDICATE		AQUEOUS (WATER)		SOLID OR SEMISOLID		AIR		NONAQUEOUS LIQUID (OIL, SOLVENT, ...)		NUMBER OF CONTAINERS SUBMITTED		REMARKS	
2/17/10		0910				SW-R2007-3-0210		GX										3 2		VOC = Benzene Chlorobenzene 1,2-Dichlorobenzene (DCB) 1,3 DCB + 1,4 DCB	
2/17/10		1035				SED-R2007-3-0210		G X										3 1			
2/17/10		0910				SW-R2007-3-0210 MS		GX										3 2			
2/17/10		1035				SED-R2007-3-0210 MS		G X										3 1		SVOC = 4-chloroanisole 2-chlorophenol 1,4-Dioxane 1,2,4-Trichlorobenzene	
2/17/10		0910				SW-R2007-3-0210 MSD		GX										3 2			
2/17/10		1035				SED-R2007-3-0210 MSD		G X										3 1			
2/17/10		1120				SW-R2007-2-0210		GX										3 2			
2/17/10		1200				SED-R2007-2-0210		G X										3 1			
2/17/10		1250				SW-R2007-1-0210		GX										3 2			
2/17/10		1450				SED-R2007-1-0210		G X										3 1			
2/17/10		1250				SW-R2007-1-0210 AD		GX										3 2			
2/17/10		1450				SED-R2007-1-0210 AD		G X										3 1			
RELINQUISHED BY: (SIGNATURE)		DATE		TIME		RELINQUISHED BY: (SIGNATURE)		DATE		TIME		RELINQUISHED BY: (SIGNATURE)		DATE		TIME					
[Signature]		2/17/10		1900		[Signature]						[Signature]									
RECEIVED BY: (SIGNATURE)		DATE		TIME		RECEIVED BY: (SIGNATURE)		DATE		TIME		RECEIVED BY: (SIGNATURE)		DATE		TIME					
[Signature]						[Signature]						[Signature]									
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 <input type="radio"/> NO <input type="radio"/>				680-55137		1.0/1.6/1.4									


MAR 23 2010 *g-v*

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
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○ Alternate Laboratory Name/Location

Phone:
Fax:

[illegible]

TAL8240-680 (1207)

MAR 23 2010 *ZZK*

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55137-2

SDG Number: KRS010

Login Number: 55137

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	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	

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:

A handwritten signature in black ink, appearing to read 'Susan Lewis', on a light-colored background.

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-021 0	BSAMW02D-021 0	BSAMW02D- 0210-13C Benzene	BSAMW03D-0 210	BSAMW04D-02 10
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

Client: URS Corp
Project: Solutia WG Krummrich Long Term Monitoring

MI Project Number: 028HB
Date Received: 02/16/2010

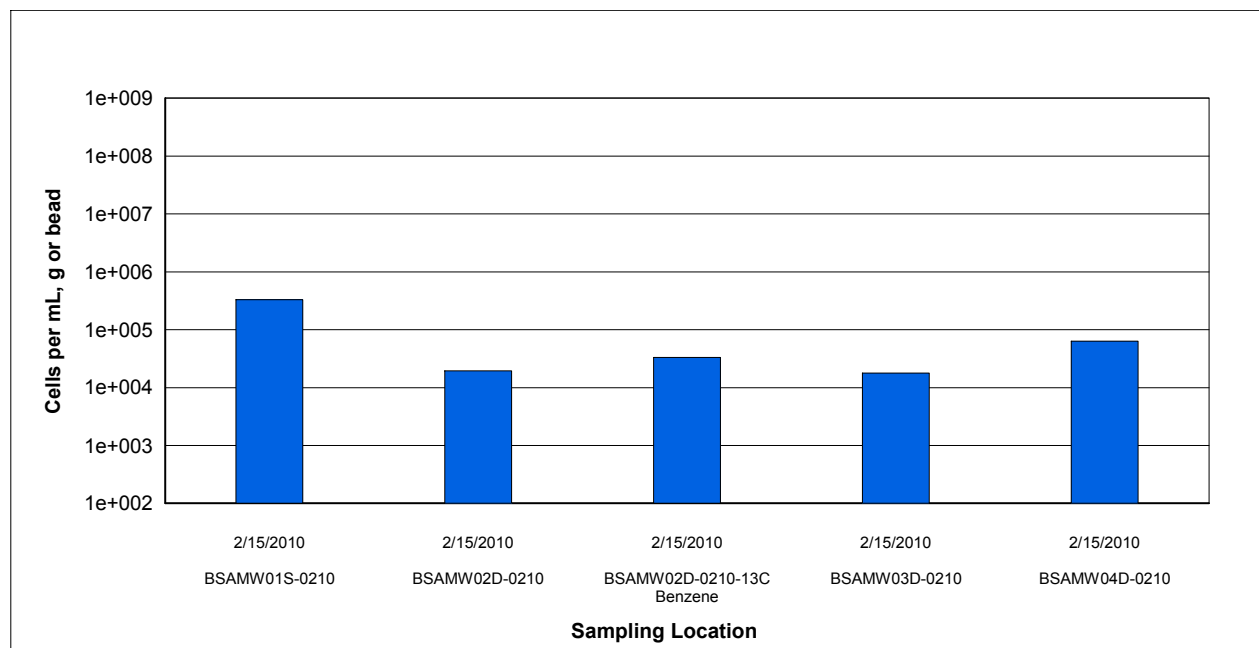


Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

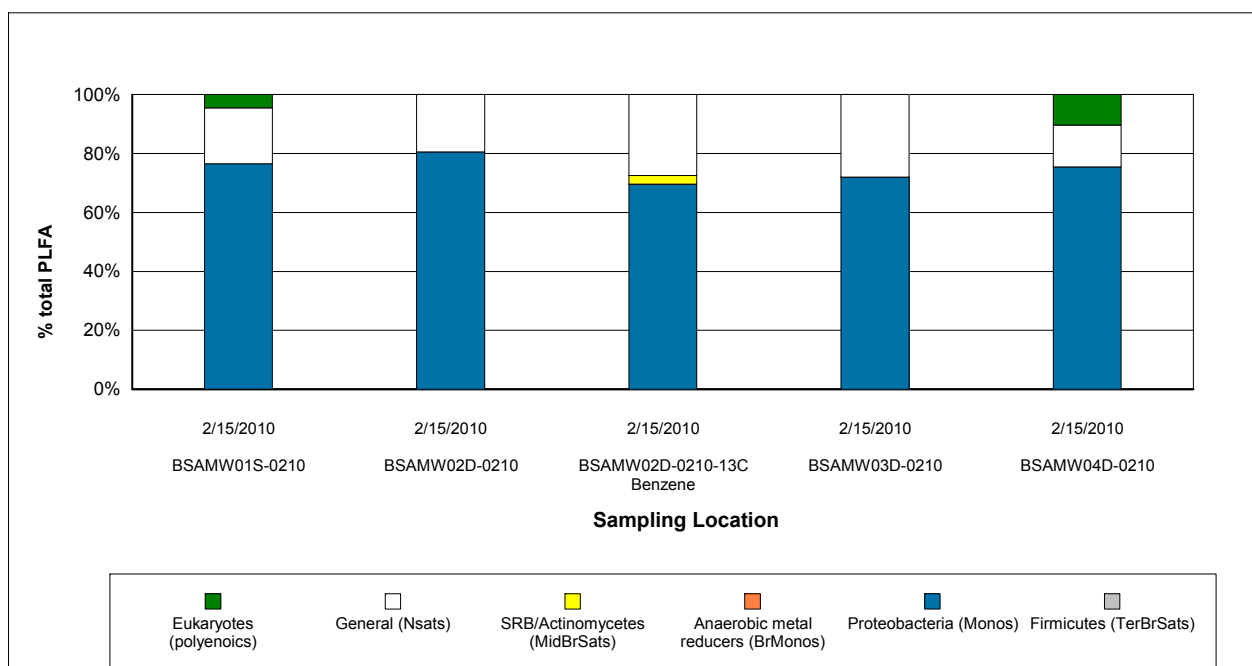


Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

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-021	CPAMW01D-021	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
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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

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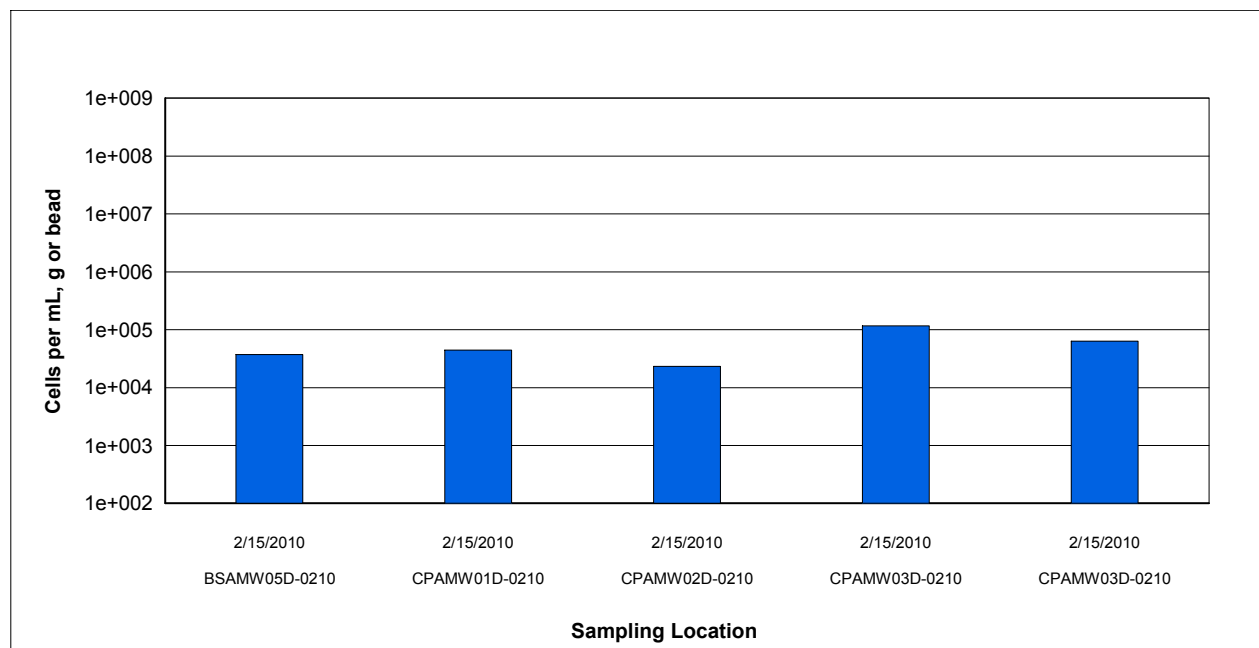


Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

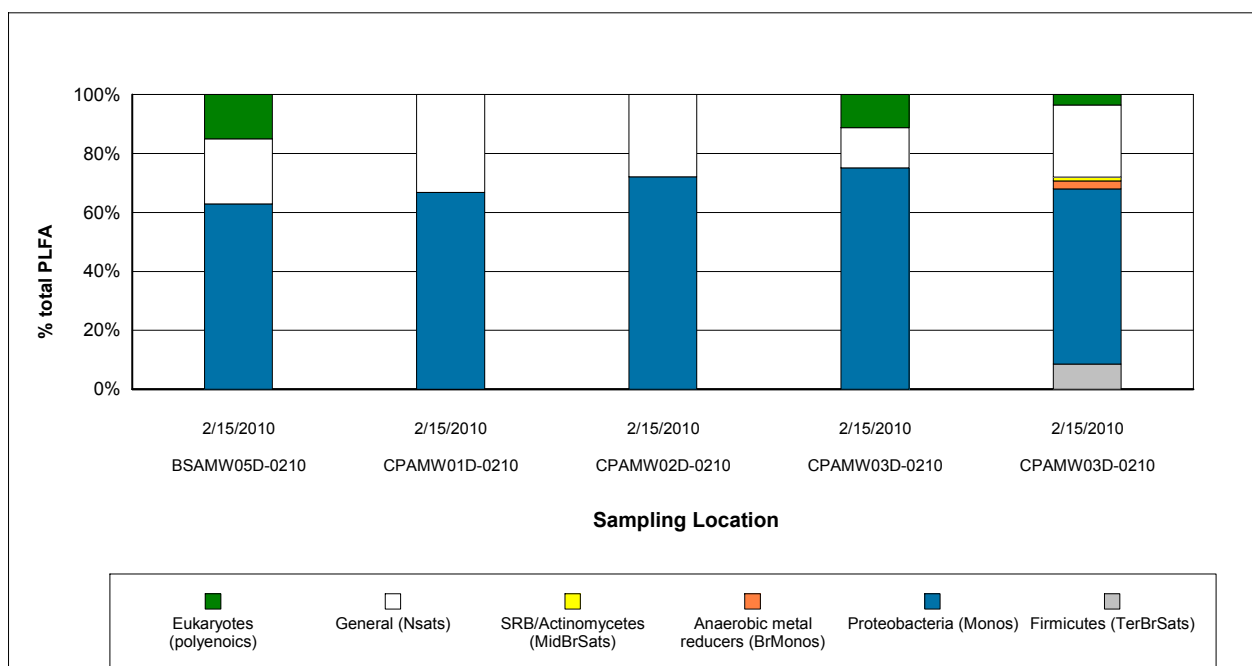


Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
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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-021	CPAMW05D-021
	0	0
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)

	0.00	0.00
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)

	0.00	0.00
Slowed Growth	0.00	0.00
Decreased Permeability	0.00	0.00

Legend:

NA = Not Analyzed NS = Not Sampled

Client: URS Corp
Project: Solutia WG Krummrich Long Term Monitoring

MI Project Number: 028HB
Date Received: 02/16/2010

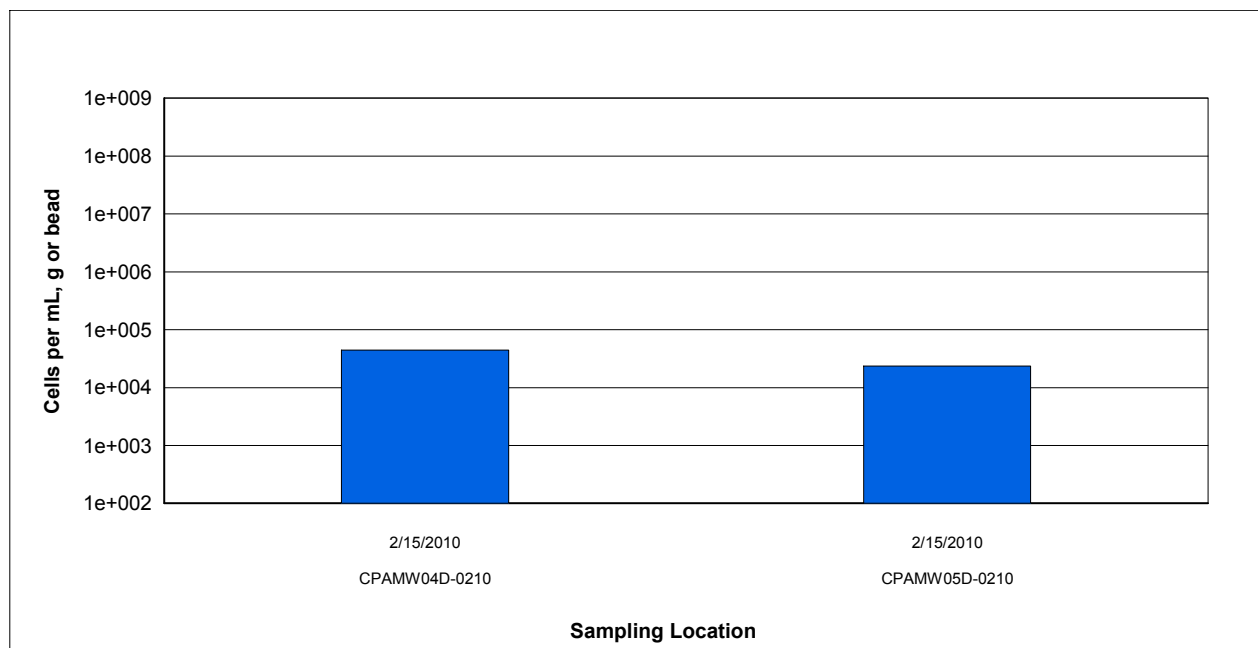


Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

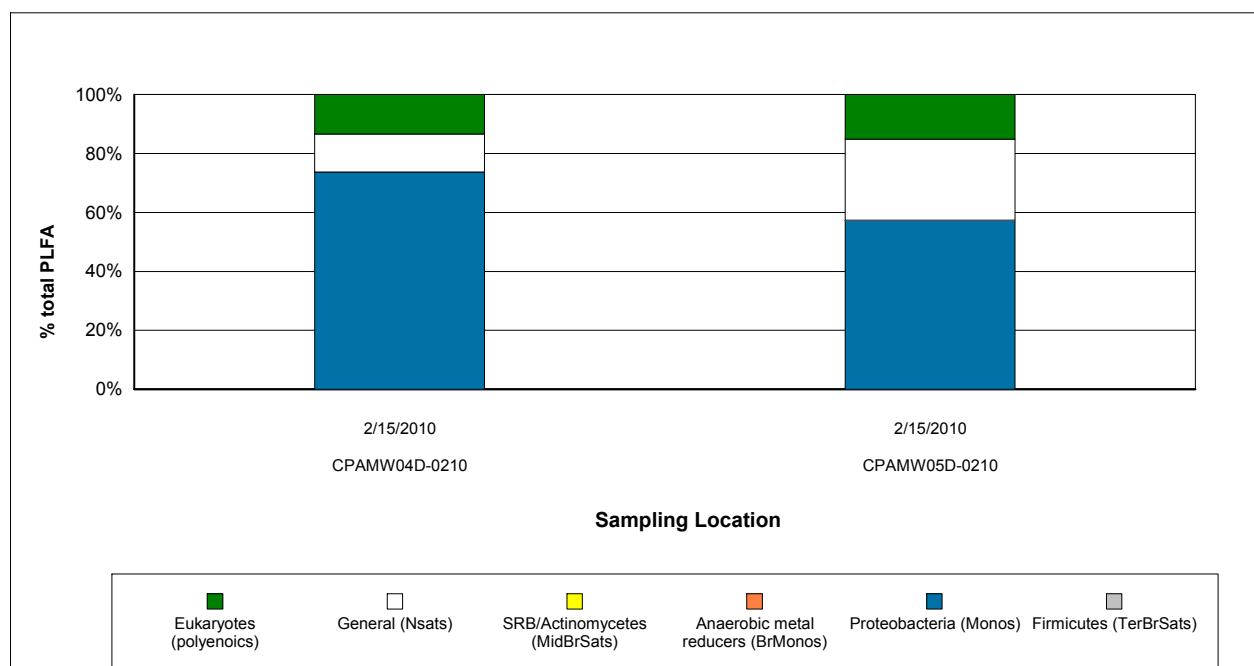


Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.



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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.

SITE LOGIC Report

Stable Isotope Probing (SIP) Study

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MI Identifier: 028HB

Report Date: March 29, 2010

Project: Solutia WGK Long Term Monitoring 21562401.00001

Comments:

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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 ($\sim 10^4$ 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.

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.

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
¹³C 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 & ¹³C 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
¹³C Mineralization		
DIC Del (‰)	8698	36
% ¹³ C	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

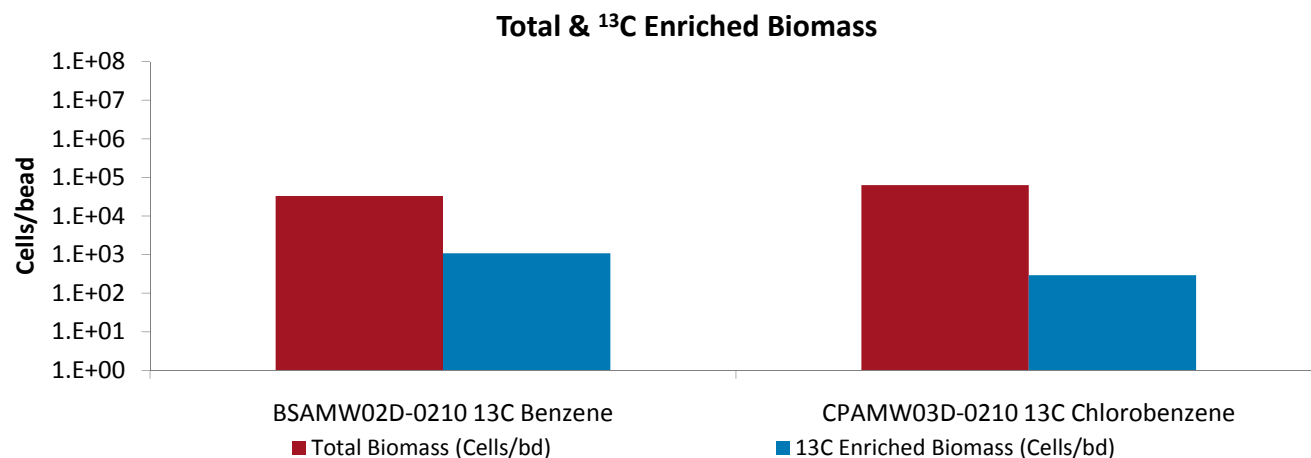


Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass (associated with higher organisms).

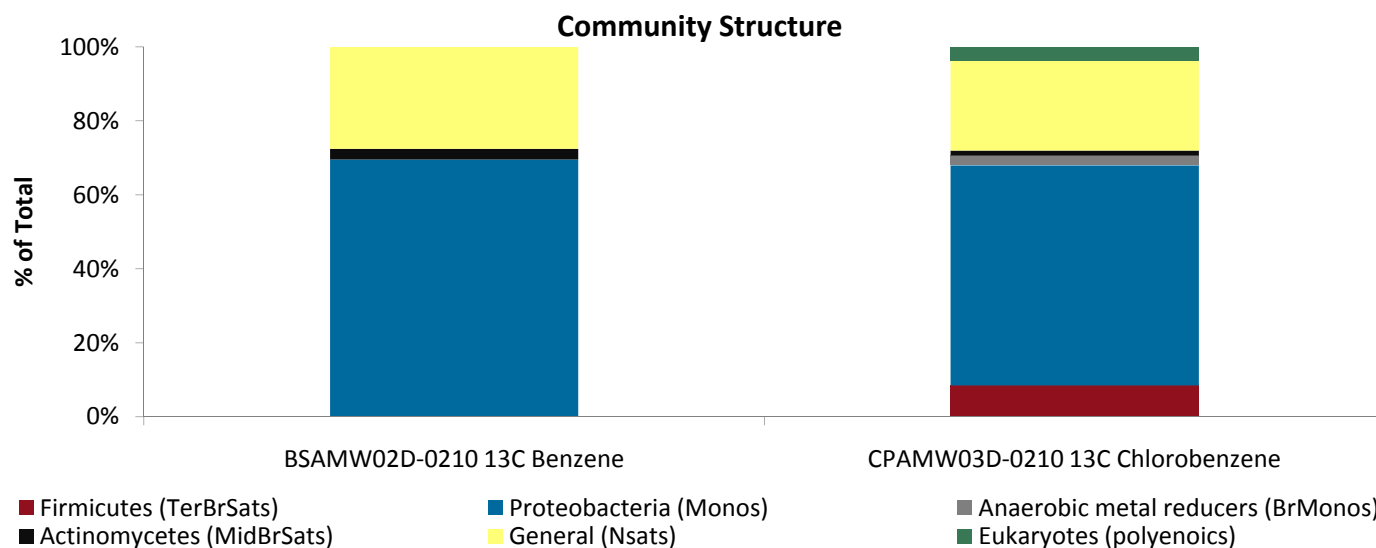


Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis. See the table in the interpretation section for detailed descriptions of the structural groups.

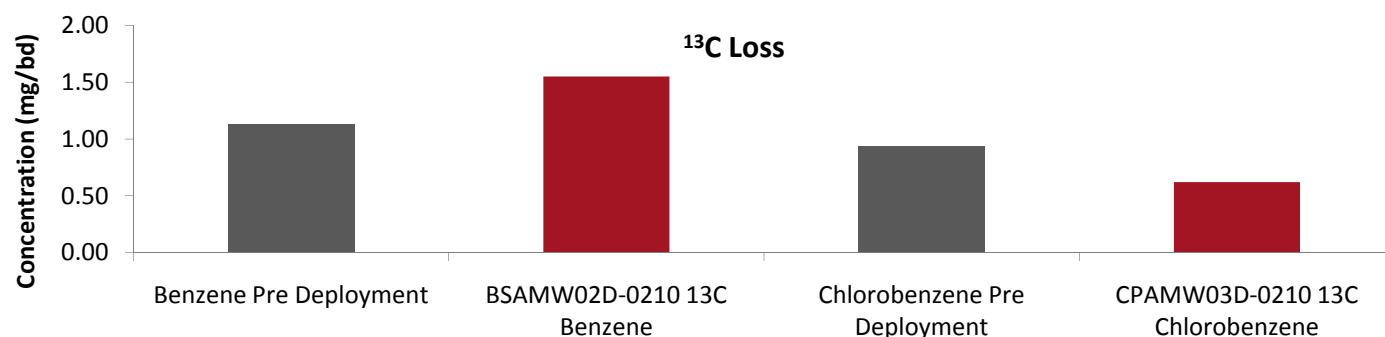


Figure 3. Comparison of Pre-deployment concentrations loaded on Bio-Sep beads to the concentrations detected after incubation.

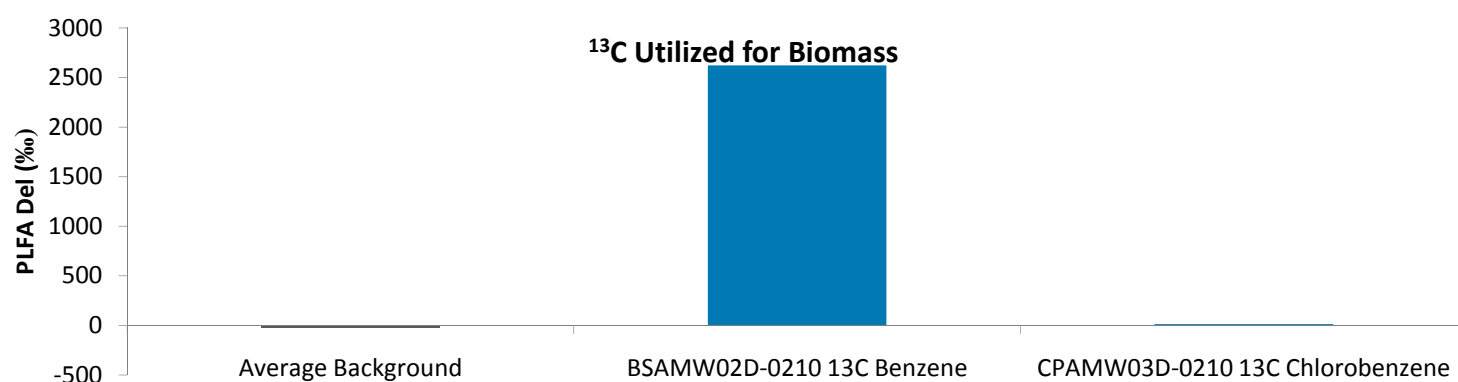


Figure 4. Comparison of the average Del value obtained from PLFA biomarkers from each Bio-Trap® unit to the average background Del observed in samples not exposed to ^{13}C enriched compounds.

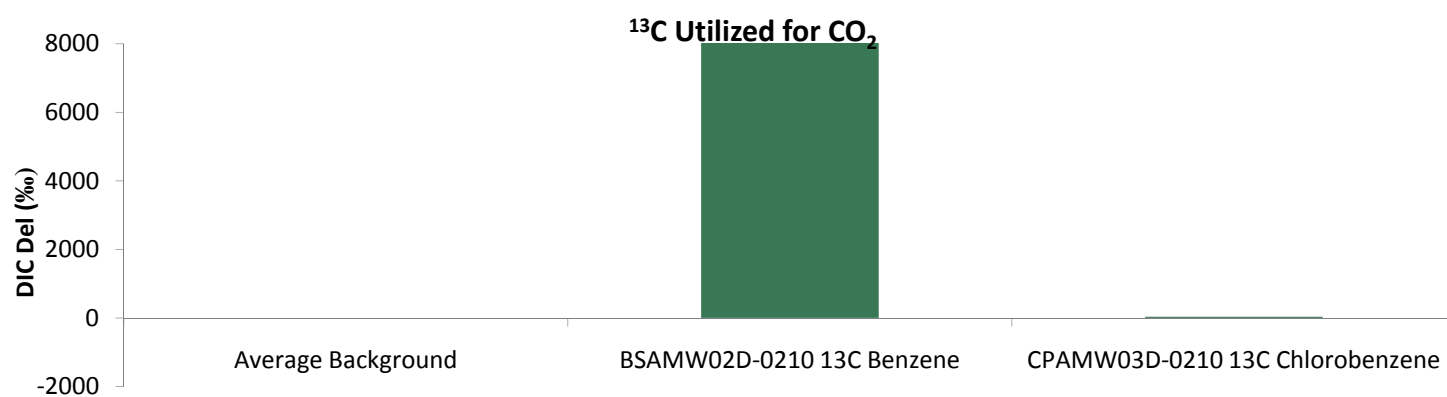


Figure 5. Comparison of the Del value obtained from DIC from each Bio-Trap® unit to the average background Del observed in samples not exposed to ^{13}C enriched compounds.

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 ($^{13}\text{C}/^{12}\text{C}$) of the sample (R_s) 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 ‰).

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 *Actinomyces*, 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.

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 <i>Clostridia</i> / <i>Bacteriodes</i> -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.

Glossary

Del: A Del value is the difference between the isotopic ratio ($^{13}\text{C}/^{12}\text{C}$) 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 ‰).

$$\text{Del} = (R_x - R_{\text{std}}) / R_{\text{std}} \times 1000$$

First Order Rate Constant: The first order rate expression is $C = C_0 e^{-kt}$ where C is the post-deployment concentration (mg/bead), C_0 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, $k = -\ln(C/C_0)/t$.

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 $C = C_0/2$. 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 cholerae*: 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.

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Project Manager: Dave Palmer
 Project Name: Solutra W6 Krummrich - Long Term Monitoring
 Project No.: 21562401.00001

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.

INVOICE TO:

For Invoices paid by a third party it is imperative that contact information & corresponding reference No. be provided.

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 Company: (← SAME)
 Address: _____
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 Phone: ()
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Please Check One:

- ☐ More samples to follow
☒ No Additional Samples

Saturday Delivery

Please see sampling protocol for instructions

Sample Information					CENSUS: Please select the target organism/gene																															
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	PLFA	VFA	MEE	DGGE+3D	DGGE+5D	qDHC (Dehalococcoides)	DHC Functional genes	qDHB (Dehalobacter)	qDSM (Desulfomonas)	qDSB (Desulfobacterium)	qEBAC (Total)	qDSR (SRBs only)	qSRBIRB	qMGN (methanogens)	qMOB (methanotrophs)	qDNF (Denitrifying)	qAOB (ammonia oxidizing)	qPM1 (MTBE aerobic)	qTOD (Initial PAHs aerobic)	qCAT (Intermediate PAHs aerobic)	qBSS (Toluene/Xylene Anaerobic)	qNAH (Naphthalene aerobic)	add qPCR	add qPCR	add qPCR	RNA (Expression Option)*	Other: Benzene SIP	Other: Chlorobenzene SIP	Other:	Other:		
028HB	1 BSAMW015-0210	2/15/10	1500	water	X																															
	2 BSAMW02D-0210		1416		X																												X			
	3 BSAMW03D-0210		1510		X																															
	4 BSAMW04D-0210		1000		X																															
	6 BSAMW05D-0210		1545		X																															
	7 CPAMW01D-0210		1440		X																															
	8 CPAMW02D-0210		1450		X																															
	9 CPAMW03D-0210		1400		X																														X	
	11 CPAMW04D-0210		1100		X																															
	12 CPAMW05D-0210		1730		X																															

Relinquished by: nd Clit Date: 2/15/10 Received by: Prasanna Janki 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.