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May 4, 2012

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 2012 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

Dear Mr. Bardo:

Enclosed please find the Long-Term Monitoring Program 1st Quarter 2012 Data Report for Solutia Inc.'s W. G. Krummrich Plant, Sauget, IL. (The report of the related Supplemental Groundwater Monitoring Program is being submitted separately.)

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

Sincerely,

Gerald M. Rinaldi
Manager, Remediation Services

Enclosure

cc: Distribution List

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DISTRIBUTION LIST

Long-Term Monitoring Program
1st Quarter 2012 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

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1ST QUARTER 2012
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 2012

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1.0 INTRODUCTION

This report presents the results of the 1st Quarter 2012 (1Q12) 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 CPA-MW-1D, 2D, 3D, 4D and 5D are located within the limiting flow lines downgradient of the Former Chlorobenzene Process Area. Monitoring wells BSA-MW-1S, 2D, 3D, 4D and 5D are located within the limiting flow lines downgradient of the Former Benzene Storage Area. Source areas and monitoring well locations are presented in **Figure 2**.

Quarterly sampling under the LTMP commenced 3Q08 and a total of fifteen quarters have been completed as of 1Q12.

Groundwater Sampling Parameters - During the 1Q12 groundwater sampling event, groundwater samples were analyzed for benzene, chlorobenzene, 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

Samples for analysis of MNA parameters were collected from all ten LTMP 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 (PLFA) Analysis, along with Stable Isotope Probes (SIPs) baited with benzene or chlorobenzene.

Surface Water and Sediment Sampling – Surface water and sediment samples are collected during winter and summer low flow conditions as part of the site LTMP. 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 1Q12 sampling activities from February 13 through 15, 2012. Activities were completed 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, the thickness of non-aqueous phase liquid if (NAPL) if present, and total depths to 0.01 feet. Depth to groundwater measurements were collected on February 9 and 10, 2012 from accessible existing wells (i.e., BSA-, CPA-, GM-, K- , PS-MW-, and PMA-series) and piezometers clusters (installed for the Sauget Area 2 RI/FS and

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WGK CA-750 Environmental Indicator projects) specified in the Revised LTMP Work Plan (**Figure 3**). NAPL was not detected within any of the ten LTMP monitoring wells.

Well gauging information for the 1Q12 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 – 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 approximately 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-through 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-through 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)
- Semivolatile Organic Compounds (SVOCs)
- General Chemistry (i.e., alkalinity, chloride, total and dissolved iron, total and dissolved manganese, nitrate, sulfate, total and dissolved organic carbon, and ferrous iron)

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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 QA/QC sample was labeled immediately following collection. Each sample identification number consisted of the following nomenclature "AAA-MW#-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.: February (1st quarter), 2012 (0212)
- **"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 a chain-of-custody (COC). Coolers were sealed between the lid and sides with a custody seal, and then shipped to TestAmerica in Savannah, Georgia by means of an overnight delivery service. Sampling data forms are included in **Appendix A**, while copies of COCs 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.

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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 SIPs provided by Microbial Insights, Inc. (Rockford, TN), were utilized in the LTMP wells 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 5, 2012, URS field personnel deployed Bio-Trap® samplers in each of the ten LTMP wells for PLFA analysis. A benzene SIP and a chlorobenzene SIP were placed in monitoring wells BSA-MW-2D and CPA-MW-3D, respectively. Bio-Trap® samplers and SIPs were attached to a stainless steel line secured to the well cap and lowered to the middle of the well screen.

On February 9, 2012, 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 1Q12 groundwater sampling event on February 16, 2012. 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 384.92; BSA-MW-5D, el 386.82; and BSA-MW-4D, el 387.35) were higher than the Mississippi River (~383.96), 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.

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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-53 at a depth of one foot below the water surface, and recorded on field data forms (**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 dredge. 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. At locations R2007-1 and R2007-2, a single grab sample was sufficient to provide the needed sample quantity. Multiple deployments of the ponar grab sampler were required at location R2007-3 to collect sufficient sample volume. 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**.

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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), dissolved gases (RSK 175), nitrate (353.2), sulfate (375.4), and total and dissolved organic carbon (415.1).

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 LTMP 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**. The laboratory reports along with data reviews are included in **Appendix E** and **Appendix F**.

A total of 13 groundwater samples (ten investigative samples, one field duplicate, one MS/MSD pair) were prepared and analyzed by TestAmerica for combinations of VOCs, dissolved gases, metals, and general chemistry. In addition, three trip blanks 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) KPS071. The samples contained in SDG KPS071 (**Appendix E**) are listed below:

KPS071	
BSA-MW-4D-0212	BSA-MW-1S-0212-EB
CPA-MW-4D-0212	CPA-MW-1D-0212
BSA-MW-5D-0212	CPA-MW-2D-0212
BSA-MW-2D-0212	CPA-MW-2D-0212-AD
CPA-MW-3D-0212	1Q12 LTM Trip Blank #1
CPA-MW-5D-0212	1Q12 LTM Trip Blank #2
BSA-MW-3D-0212	1Q12 LTM Trip Blank #3
BSA-MW-1S-0212	

A total of 13 surface water and sediment samples (six investigative samples - three surface water and three sediment, two field duplicates, two MS/MSD pairs) were prepared and analyzed by TestAmerica for combinations of VOCs and SVOCs. In addition, one equipment blank was collected and analyzed for project parameters. One trip blank 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 for the various analyses were submitted as SDGs KRS011 and KRS012 (**Appendix F)**. The samples contained in each SDG are listed below:

KRS011	KRS012
SW-R2007-3-0212	SED-R2007-3-0212
SW-R2007-2-0212	SED-R2007-2-0212
SW-R2007-1-0212	SED-R2007-1-0212
SW-R2007-1-0212-AD	SED-R2007-1-0212-AD
SED-R2007-1-0212 EB	
TB-021612	

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 Superfund Inorganic Data Review (USEPA 2010), and the Revised LTMP Work Plan (Solutia 2009).

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 WGK Long Term Monitoring Plan (URS 2009).

Based on the above mentioned criteria, groundwater results reported for the analyses performed were accepted for their intended use with the exception of nitrate data in samples BSA-MW-4D-0212, CPA-MW-4D-0212, and BSA-MW-5D-0212. Nitrate in samples BSA-MW-4D-0212, CPA-MW-4D-0212, and BSA-MW-5D-0212 was analyzed 1 day outside analysis hold time. Acceptable levels of accuracy, precision, and representativeness (based on MS/MSD, laboratory control sample (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 greater than 98 percent, which meets the completeness goal of 95 percent.

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 (**J/UJ**) data was 100 percent, which meets the completeness goal of 95 percent.

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5.0 OBSERVATIONS

Groundwater analytical detections and MNA results for the 1Q12 LTMP sampling event are presented in **Tables 2** and **3**, respectively. Benzene and chlorobenzenes were reported in samples collected from the LTMP wells during this sampling event. Each of these constituents is discussed below:

Benzene – Benzene was detected in samples collected from six of the ten wells, at concentrations ranging from 2.1 µg/L (CPA-MW-4D) to 300,000 µg/L (BSA-MW-1S).

Downgradient of the Former Benzene Storage Area, benzene was detected in the DHU at concentrations of 200,000 µg/L (BSA-MW-2D) and 37 µg/L (BSA-MW-3D). Near the river north of the GMCS, benzene was detected in the DHU at a concentrations of 34 µg/L (BSA-MW-4D).

Benzene was detected at the Former Chlorobenzene Process Area (CPA) at an estimated concentration of 9,300 µg/L (CPA-MW-1D). Downgradient of the Former Chlorobenzene Process Area, benzene was detected in the DHU at a concentration of 2.1 µg/L (CPA-MW-4D).

Benzene was not detected downgradient of the Former Chlorobenzene Process Area in the DHU at monitoring wells CPA-MW-2D or CPA-MW-3D. Benzene was also not detected in the DHU near the river north of GMCS at monitoring well CPA-MW-5D.

Chlorobenzenes (Total) – Total chlorobenzenes (i.e., sum of chlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4, dichlorobenzene) were detected in nine of the ten wells sampled in 1Q12, at concentrations ranging from 356.1 µg/L (BSA-MW-5D) to 55,500 µg/L (CPA-MW-1D).

Downgradient of the Former Chlorobenzene Process Area, total chlorobenzenes were detected in the DHU at concentrations of 29,400/29,300 µg/L at the North Tank Farm (CPA-MW-2D and duplicate), along with concentrations of 1,017 µg/L (CPA-MW-3D) and 395.5 µg/L (CPA-MW-4D). Total chlorobenzenes were detected in the DHU near the river north of the GMCS at a concentration of 1,700 µg/L (CPA-MW-5D).

Downgradient of the Former Benzene Storage Area, total chlorobenzenes were detected at concentrations of 3,500 µg/L (BSA-MW-2D) and 2,876 µg/L (BSA-MW-3D). North of the SA2 GMCS, near the river, total chlorobenzenes were detected in the DHU at concentrations of 2,347 µg/L (BSA-MW-4D) and 356.1 µg/L (BSA-MW-5D).

Figure 4 displays benzene and total chlorobenzenes results from the 1Q12 sampling event.

1,4-Dioxane – Groundwater samples were collected from four monitoring wells downgradient of the Former Benzene and Chlorobenzene Process 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-3D and BSA-MW-4D at concentrations of 14 µg/L and 20 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 well CPA-MW-4D (450 µg/L).

2-Chlorophenol – Of the ten samples available for analysis during 1Q12, 2-chlorophenol was detected in five of the LTMP wells at concentrations ranging from 10 µg/L (BSA-MW-4D and CPA-MW-5D) to 33 µg/L (CPA-MW-2D-AD); both located along the limiting flow lines. 2-Chlorophenol was also detected in monitoring wells BSA-MW-3D and BSA-MW-4D at concentrations of 12 µg/L and 17 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**:**

- None of these constituents were detected in the surface water samples (various reporting limits)
- The sediment sample from location R2007-3 indicated a chlorobenzene concentration of 9.8 µg/Kg. No other constituents were detected in the samples (variable reporting limits). Sample location R2007-3 is approximately 150 feet from the shoreline, and downgradient from monitoring well BSA-MW-4D.

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**.

6.0 REFERENCES

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

USEPA, 2010. Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Data Review.

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

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Figures

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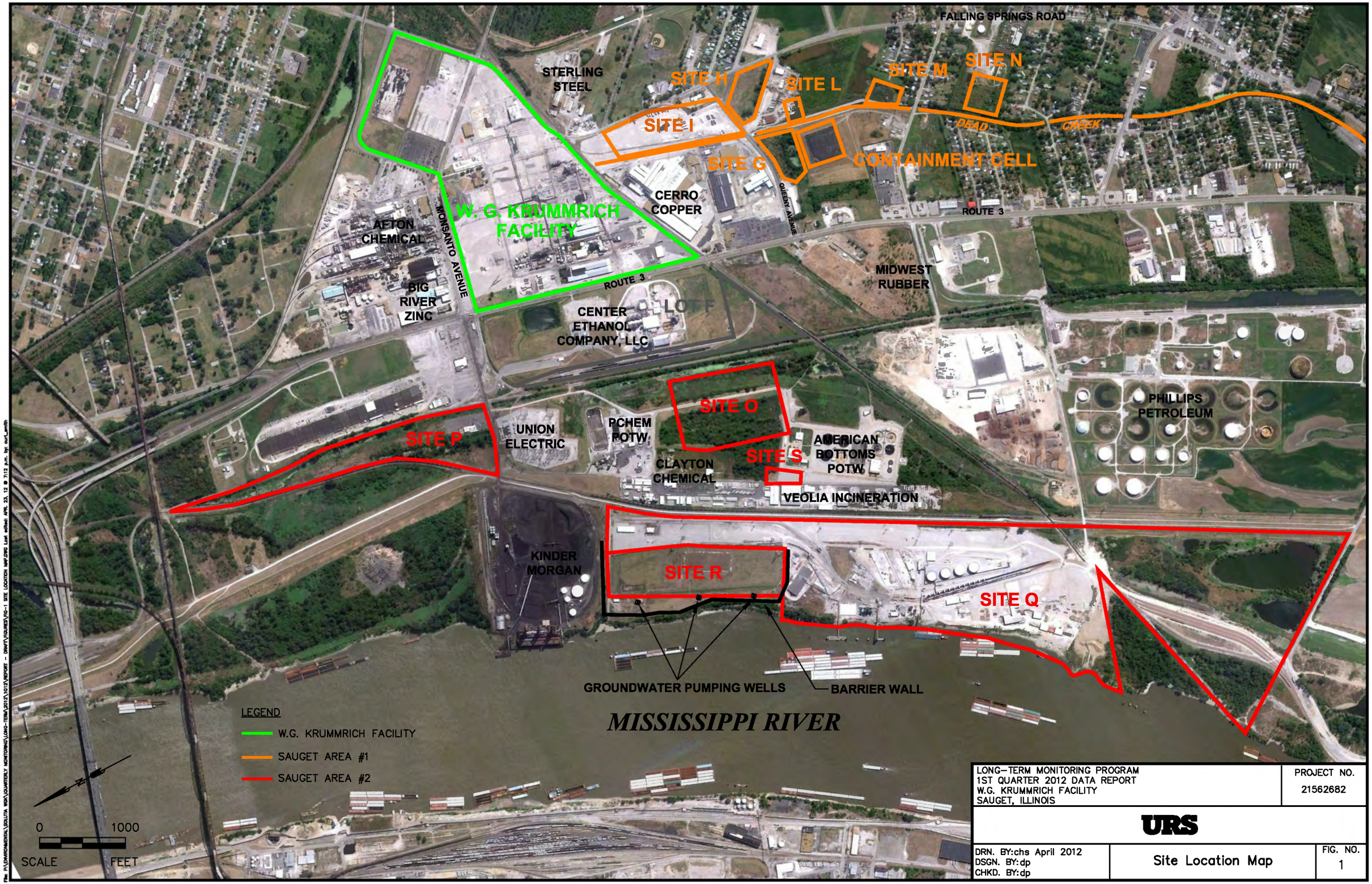

LONG-TERM MONITORING PROGRAM
1ST QUARTER 2012 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562682

URS

DRN. BY:chs April 2012
DSGN. BY:dp
CHKD. BY:dp

Site Location Map

FIG. NO. 1

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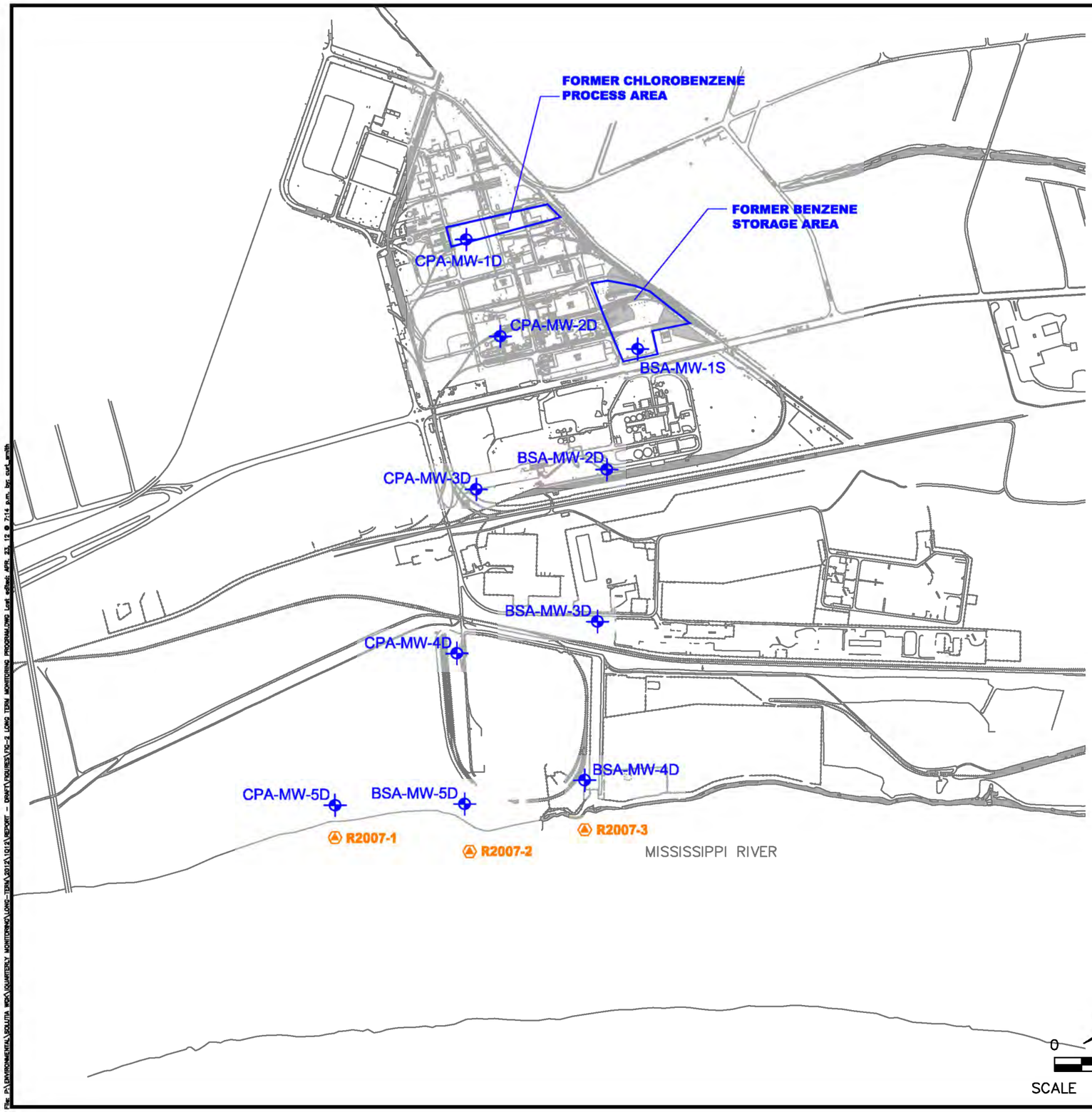

LEGEND

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

NOTES:

1. REFER TO TABLE 1 FOR MONITORING WELL CONSTRUCTION INFORMATION.

LONG-TERM MONITORING PROGRAM 1ST QUARTER 2012 DATA REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS	PROJECT NO. 21562682

URS

DRN. BY:chs April 2012 DSGN. BY:dp CHKD. BY:dp	Long-Term Monitoring Program Well Locations (with Surface Water/Sediment Sampling Locations)	FIG. NO. 2

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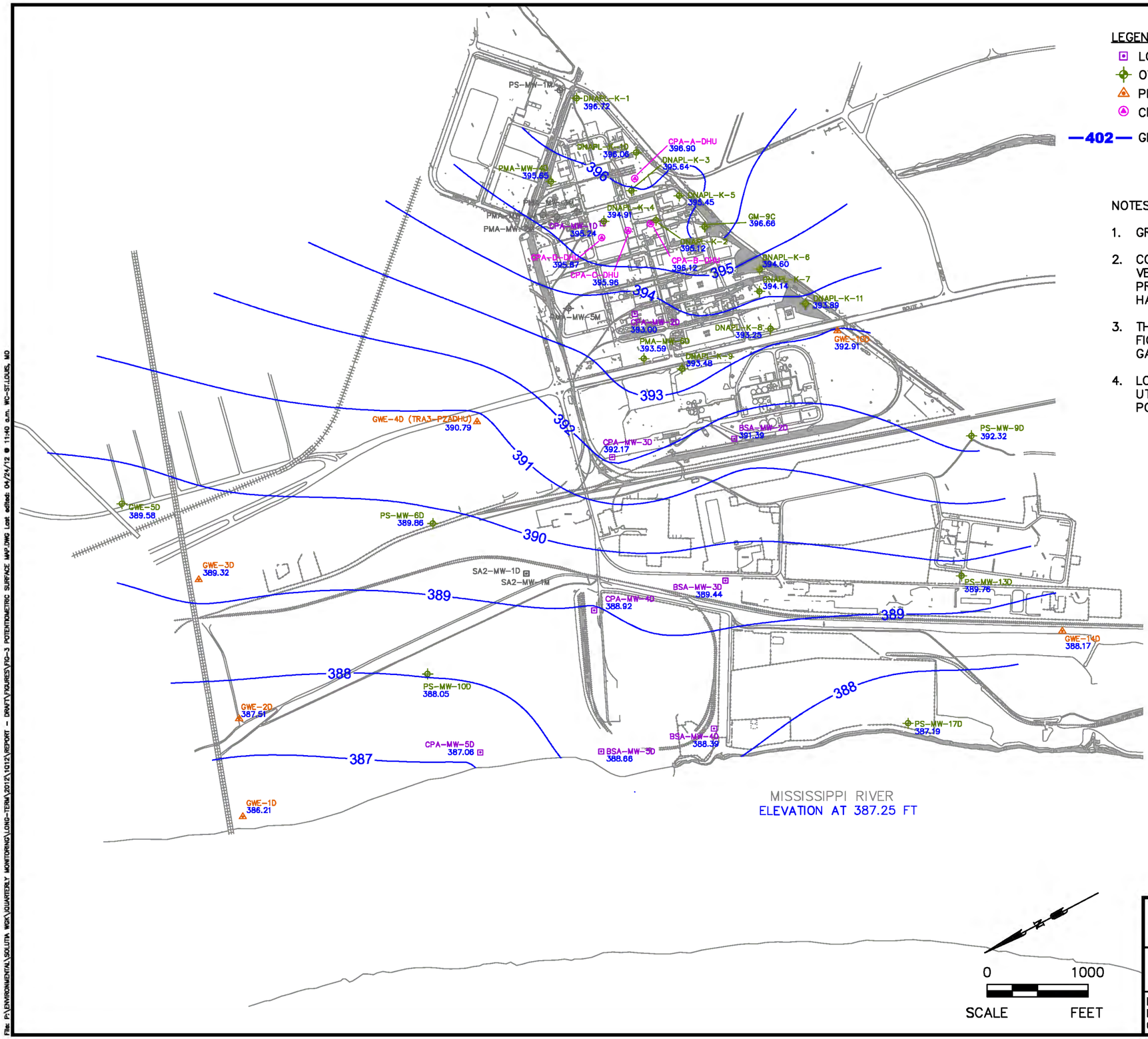

LEGEND

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

NOTES:

1. GROUNDWATER LEVELS WERE MEASURED FEBRUARY 9 & 10, 2012.
2. CONTOURS GENERATED PRIMARILY USING SURFER SOFTWARE VERSION 8. SOME INTERPRETATION WAS DONE USING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
3. THE MISSISSIPPI RIVER STAGE ELEVATION PRESENTED ON THE FIGURE IS AN AVERAGE ELEVATION FOR THE TIME OF THE GAUGING EVENT.
4. 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 2012 DATA REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS	PROJECT NO. 21562682
URS	
DRN. BY:chs April 2012 DSGN. BY:dp CHKD. BY:dp	Potentiometric Surface Map Middle/Deep Hydrogeologic Unit
	FIG. NO. 3

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\LONG-TERM\2012\1Q12\REPORT - DRAFT\FIGURES\FIG-3 POTENTIOMETRIC SURFACE MAP.DWG Last edited: 04/24/12 @ 11:40 a.m. WG-STLOUIS, MO

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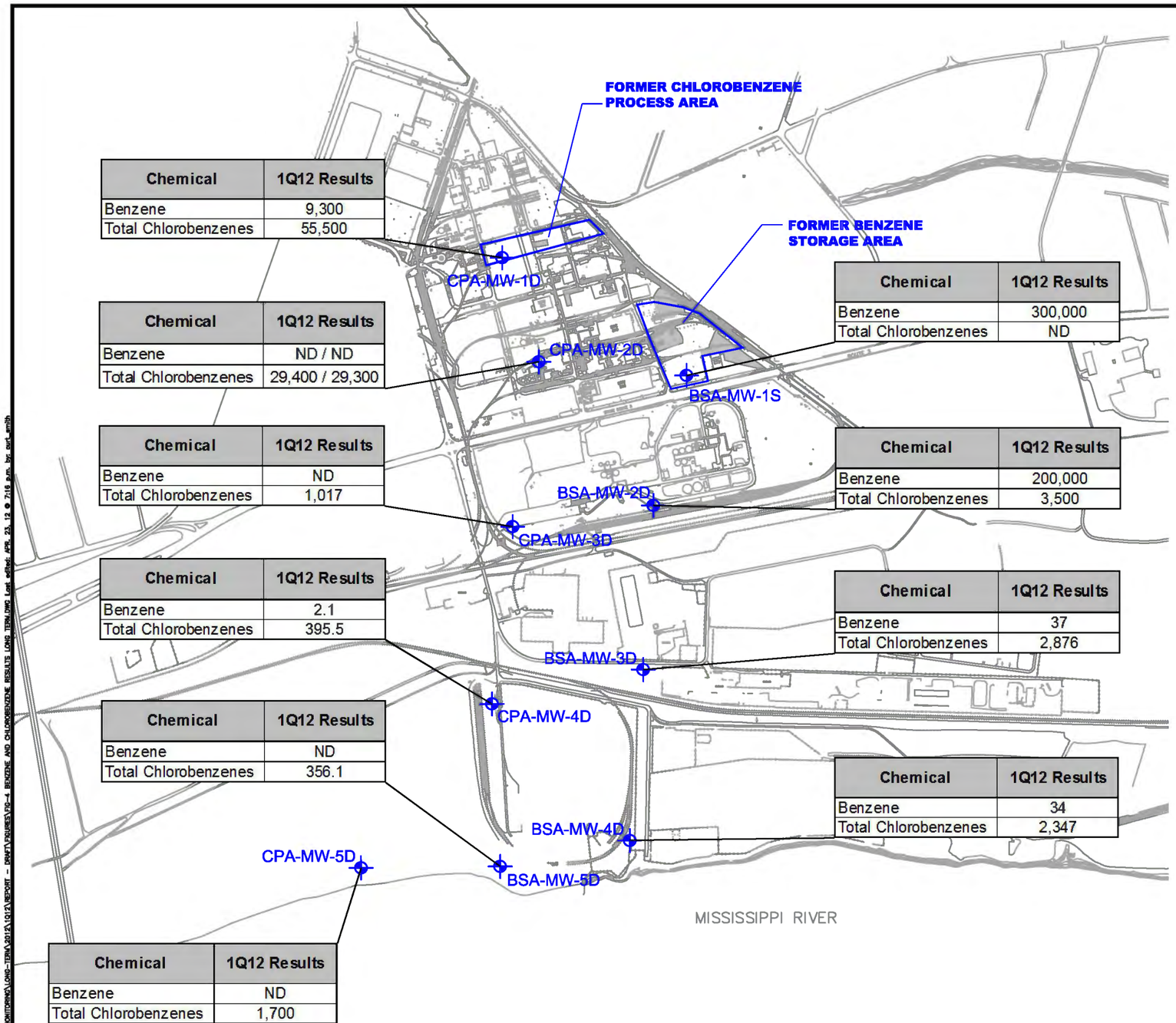

Chemical	1Q12 Results
Benzene	9,300
Total Chlorobenzenes	55,500

Chemical	1Q12 Results
Benzene	ND / ND
Total Chlorobenzenes	29,400 / 29,300

Chemical	1Q12 Results
Benzene	ND
Total Chlorobenzenes	1,017

Chemical	1Q12 Results
Benzene	2.1
Total Chlorobenzenes	395.5

Chemical	1Q12 Results
Benzene	ND
Total Chlorobenzenes	356.1

Chemical	1Q12 Results
Benzene	ND
Total Chlorobenzenes	1,700

Chemical	1Q12 Results
Benzene	300,000
Total Chlorobenzenes	ND

Chemical	1Q12 Results
Benzene	200,000
Total Chlorobenzenes	3,500

Chemical	1Q12 Results
Benzene	37
Total Chlorobenzenes	2,876

Chemical	1Q12 Results
Benzene	34
Total Chlorobenzenes	2,347

LEGEND

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 = NOT DETECTED.
4. MULTIPLE SAMPLE RESULTS INDICATE A DUPLICATE SAMPLE.

0 1000
SCALE FEET

LONG–TERM MONITORING PROGRAM
1ST QUARTER 2012 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562682

URS

DRN. BY:chs April 2012
DSGN. BY:dp
CHKD. BY:dp

Benzene and Total Chlorobenzenes Results

FIG. NO. 4

Tables

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See last page of table for notes.

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						February 9-10, 2012			
	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)	NAPL Thickness (feet)	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	18.89	--	27.32	393.42
Middle Hydrogeologic Unit (MHU 380-350 feet NAVD 88)										
PMA-MW-1M	410.32	410.08	54.54	59.54	355.78	350.78	14.90	--	59.61	395.18
PMA-MW-2M	412.26	411.93	56.87	61.87	355.39	350.39	17.72	--	61.26	394.21
PMA-MW-3M	412.36	412.10	57.07	62.07	355.29	350.29	16.77	--	61.81	395.33
PMA-MW-5M	411.27	410.97	52.17	57.17	359.10	354.10	16.45	--	56.99	394.52
PS-MW-1M	409.37	412.59	37.78	42.78	371.59	366.59	15.75	--	46.06	396.84
Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock)										
BSA-MW-2D	412.00	415.13	68.92	73.92	343.08	338.08	23.74	--	77.04	391.39
BSA-MW-3D	412.91	415.74	107.02	112.02	305.89	300.89	26.30	--	114.80	389.44
BSA-MW-4D	425.00	424.69	118.54	123.54	306.46	301.46	36.30	--	123.22	388.39
BSA-MW-5D	420.80	420.49	115.85	120.85	304.95	299.95	31.81	--	120.55	388.68
CPA-MW-1D	408.62	412.23	66.12	71.12	342.50	337.50	16.99	--	74.68	395.24
CPA-MW-2D	408.51	408.20	99.96	104.96	308.55	303.55	15.20	--	104.65	393.00
CPA-MW-3D	410.87	410.67	108.20	113.20	302.67	297.67	18.50	--	114.80	392.17
CPA-MW-4D	421.57	421.20	116.44	121.44	305.13	300.13	32.28	--	120.99	388.92
CPA-MW-5D	411.03	413.15	107.63	112.63	303.40	298.40	26.09	--	114.65	387.06
DNAPL-K-1	413.07	415.56	108.20	123.20	304.87	289.87	18.84	--	123.15	396.72
DNAPL-K-2	407.94	407.72	97.63	112.63	310.31	295.31	12.60	--	112.35	395.12
DNAPL-K-3	412.13	415.91	104.80	119.80	307.33	292.33	20.27	--	123.28	395.64
DNAPL-K-4	409.48	412.53	102.55	117.55	306.93	291.93	17.62	--	118.91	394.91
DNAPL-K-5	412.27	411.91	102.15	117.15	310.12	295.12	16.46	--	116.50	395.45
DNAPL-K-6	410.43	410.09	102.47	117.47	307.96	292.96	15.49	--	116.90	394.60
DNAPL-K-7	408.32	407.72	100.40	115.40	307.92	292.92	13.58	--	115.43	394.14
DNAPL-K-8	408.56	411.38	102.65	117.65	305.91	290.91	18.13	--	117.57	393.25
DNAPL-K-9	406.45	405.97	97.42	112.42	309.03	294.03	12.49	--	111.21	393.48
DNAPL-K-10	413.50	413.25	105.43	120.43	308.07	293.07	17.19	--	120.20	396.06
DNAPL-K-11	412.20	411.78	105.46	120.46	306.74	291.74	17.89	--	120.20	393.89
GM-9C	409.54	411.21	88.00	108.00	321.54	301.54	14.55	--	23.22	396.66

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Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						February 9-10, 2012			
	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)	NAPL Thickness (feet)	Depth to Bottom (feet btoc)	Water Elevation* (feet)
Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock) (continued)										
GWE-1D	412.80	415.60	117.00	127.00	295.80	285.80	29.39	--	128.51	386.21
GWE-2D	417.45	417.14	127.00	137.00	290.45	280.45	29.63	--	137.26	387.51
GWE-3D	415.03	417.66	104.60	114.60	313.06	303.06	28.34	--	114.98	389.32
GWE-4D	406.05	405.74	74.00	80.00	332.05	326.05	14.95	--	78.78	390.79
GWE-5D	408.79	408.38	100.43	105.43	308.36	303.36	18.80	--	105.31	389.58
GWE-10D	410.15	412.87	102.50	112.50	307.65	297.65	19.96	--	114.88	392.91
GWE-14D	420.47	422.90	90.00	96.00	330.47	324.47	34.73	--	97.09	388.17
PMA-MW-4D	411.22	410.88	68.84	73.84	342.38	337.38	15.23	--	73.33	395.65
PMA-MW-6D	407.63	407.32	96.49	101.49	311.14	306.14	13.73	--	101.30	393.59
PS-MW-6	404.11	406.63	102.32	107.32	304.31	299.31	16.77	--	109.81	389.86
PS-MW-9D	403.92	403.52	100.40	105.40	303.52	298.52	11.20	--	105.15	392.32
PS-MW-10	409.63	412.18	103.78	108.78	308.40	303.40	24.13	--	111.28	388.05
PS-MW-13D	405.80	405.53	106.08	111.08	299.72	294.72	15.77	--	110.65	389.76
PS-MW-17D	420.22	423.26	121.25	126.25	298.97	293.97	36.07	--	135.90	387.19
SA2-MW-1D	403.79	406.03	105.01	115.01	301.02	291.02	25.16	--	102.40	380.87

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

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Table 2
Groundwater Analytical Results

Sample ID	Sample Date	VOCs (µg/L)					SVOCs (µg/L)			
		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-0212	2/15/2012	**300,000**	<5000	<5000	<5000	<5000	NA	<9.5	NA	<9.5
BSA-MW-2D-0212	2/14/2012	**200,000**	**3,500**	<2000	<2000	<2000	NA	<9.5	<9.5	<9.5
BSA-MW-3D-0212	2/14/2012	**37**	**2,400**	**26**	<20	**450**	NA	**12**	**14**	<9.5
BSA-MW-4D-0212	2/13/2012	**34**	**2,300**	<20	<20	**47**	NA	**10**	**20**	<9.5
BSA-MW-5D-0212	2/13/2012	<5	**350**	<5	<5	**6.1**	NA	<9.5	<9.5	<9.5
CHLOROBENZENE PROCESS AREA										
CPA-MW-1D-0212	2/15/2012	**9,300**	**23,000**	**18,000**	**1,500**	**13,000**	NA	<95	NA	**870**
CPA-MW-2D-0212	2/15/2012	<500	**24,000**	<500	<500	**5,400**	NA	**32**	NA	<9.5
CPA-MW-2D-0212-AD	2/15/2012	<500	**24,000**	<500	<500	**5,300**	NA	**33**	NA	<9.5
CPA-MW-3D-0212	2/14/2012	<10	**990**	<10	<10	**27**	<19	<9.5	NA	<9.5
CPA-MW-4D-0212	2/13/2012	**2.1**	**390**	<2	<2	**5.5**	**450 D**	<9.5	NA	<9.5
CPA-MW-5D-0212	2/14/2012	<20	**1,700**	<20	<20	<20	<19	**10**	NA	<9.5

Notes:
µg/L = micrograms per liter
< = Result is non-detect, less than the reporting limit given.
* = Indicates samples that are collected semi-annually (1st and 3rd Quarter)
BOLD indicates concentration greater than reporting limit.
AD = Analytical Duplicate
D = compound analyzed at a dilution
NA = sample not analyzed for select analyte in accordance with Revised LTMP Work Plan

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Table 3
Monitored Natural Attenuation Results Summary

Sample ID	Sample Date	Alkalinity (mg/L)	Carbon Dioxide (mg/L)	Chloride (mg/L)	Dissolved Oxygen (mg/L)	Ethane (ug/L)	Ethylene (ug/L)	Ferrous Iron (mg/L)	Iron (mg/L)	Iron, Dissolved (mg/L)	Manganese (mg/L)	Manganese, Dissolved (mg/L)	Methane (ug/L)	Nitrogen, Nitrate (mg/L)	Sulfate as SO4 (mg/L)	Total Organic Carbon (mg/L)	Dissolved Organic Carbon	ORP (mV)
Benzene Storage Area																		
BSA-MW-1S-0212	2/15/2012	760	21	180	0.02	<1.1	<1		5.2		0.71		16000	<0.05	<50	5.4		-155.26
BSA-MW-1S-F(0.2)-0212	2/15/2012							0.02		5		0.7					4.9	
BSA-MW-2D-0212	2/14/2012	690	30	97	0.05	16	<1		3.1		0.49		5100	<0.05	<5	6.6		-139.00
BSA-MW-2D-F(0.2)-0212	2/14/2012							2.44		3		0.48					5.4	
BSA-MW-3D-0212	2/14/2012	570	35	130	0.03	2.3	<1		13		0.63		2200	<0.05	69	3.9		-123.11
BSA-MW-3D-F(0.2)-0212	2/14/2012							2.66		13		0.63					3.7	
BSA-MW-4D-0212	2/13/2012	580	32	130	0.04	4.4	<1		7.3		0.58		170	R	85	6.5		-0.15
BSA-MW-4D-F(0.2)-0212	2/13/2012							>3.30		7.3		0.58					5.8	
BSA-MW-5D-0212	2/13/2012	760	33	260	0.08	15	<1		13		0.37		6900	R	<5	5.6		-138.63
BSA-MW-5D-F(0.2)-0212	2/13/2012							>3.30		13		0.36					5.2	
Chlorobenzene Process Area																		
CPA-MW-1D-0212	2/15/2012	930	<5	140	0.01	36	<1		0.73		0.074		15000	<0.05	6.6	12		-167.57
CPA-MW-1D-F(0.2)-0212	2/15/2012							<0.03		0.31		0.04					12	
CPA-MW-2D-0212	2/15/2012	550	35	51	0.08	3.5	<1		6.5		0.4		1300	<0.05	37	11		-70.72
CPA-MW-2D-F(0.2)-0212	2/15/2012							>3.30		6.4		0.42					9.1	
CPA-MW-3D-0212	2/14/2012	530	21	100	0.03	4.2	<1		8.1		0.5		1300	<0.05	51	8.6		-80.28
CPA-MW-3D-F(0.2)-0212	2/14/2012							>3.30		7.9		0.5					7	
CPA-MW-4D-0212	2/13/2012	720	28	350	-0.08	24	<1		13		0.27		16000	R	<5	6.9		-161.68
CPA-MW-4D-F(0.2)-0212	2/13/2012							>3.30		13		0.27					6	
CPA-MW-5D-0212	2/14/2012	430	71	290	0.14	<1.1	<1		40		1.4		11	<0.05	590	3.7		-96.66
CPA-MW-5D-F(0.2)-0212	2/14/2012							>3.30		41		1.4					3.5	

Notes:
DO and ORP were measured in the field using a In-Situ Troll 9500 equipped with a flow-thru cell. Values presented represent final measurements before sampling.
Ferrous Iron readings were measured in the field using a Hach DR-890 Colorimeter after the groundwater passed through a 0.2 µm filter
F(0.2) = Sample was filtered utilizing a 0.2 µm filter during sample collection
mg/L = milligrams per liter
mV = millivolts
ug/L = micrograms per liter
R = Sample results rejected, the presence or absence of the analyte cannot be verified
< = Result is non-detect, less than the reporting limit given - indicated as a U qualifier on lab data
A blank space indicates sample not analyzed for select analyte

Appendix A

Groundwater Purging and Sampling Forms

US EPA ARCHIVE DOCUMENT

In-Situ Inc.

Troll 9000 | **Low-Flow System**
02/15/12 | **ISI Low-Flow Log**

Project Information:

Operator Name	dm lr
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - LTM

Pump Information:

Pump Model/Type	Proactive SS Monsoon
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	31 [ft]
Pump placement from TOC	

Well Information:

Well Id	BSA-MW-1S
Well diameter	2 [in]
Well total depth	27.5 [ft]
Depth to top of screen	22.5 [ft]
Screen length	60 [in]
Depth to Water	19.05 [ft]

Pumping information:

Final pumping rate	300 [mL/min]
Flowcell volume	772.84 [mL]
Calculated Sample Rate	155 [sec]
Sample rate	155 [sec]
Stabilized drawdown	

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-0.1	+/-1	+/-0.2	+/-20
				+/-3 %	+/-10 %	+/-10 %	
Last 5 Readings	10:24:04	60.30	7.19	1598.60	17.72	0.05	-150.13
	10:26:45	60.44	7.19	1602.10	14.93	0.04	-151.76
	10:29:25	60.48	7.20	1603.51	11.56	0.03	-153.04
	10:32:06	60.49	7.19	1604.46	10.09	0.03	-154.24
	10:34:46	60.51	7.20	1605.27	9.18	0.02	-155.26
Variance in last 3 readings	10:29:25	0.05	0.00	1.41	-3.36	-0.01	-1.28
	10:32:06	0.00	0.00	0.95	-1.47	-0.01	-1.20
	10:34:46	0.02	0.00	0.81	-0.91	0.00	-1.03

Notes:

US EPA ARCHIVE DOCUMENT

In-Situ Inc.

Troll 9000 | **Low-Flow System**
02/14/12 | **ISI Low-Flow Log**

Project Information:

Operator Name	dm lr
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - LTM

Pump Information:

Pump Model/Type	Proactive SS Monsoon
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	80.55 [ft]
Pump placement from TOC	

Well Information:

Well Id	BSA-MW-2D
Well diameter	2 [in]
Well total depth	77.05 [ft]
Depth to top of screen	72.05 [ft]
Screen length	60 [in]
Depth to Water	23.73 [ft]

Pumping information:

Final pumping rate	300 [mL/min]
Flowcell volume	1049.1 [mL]
Calculated Sample Rate	210 [sec]
Sample rate	210 [sec]
Stabilized drawdown	

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-0.1 +/-3 %	+/-1 +/-10 %	+/-0.2 +/-10 %	+/-20
Last 5 Readings	14:13:39	59.38	7.03	1284.23	8.93	0.30	-133.97
	14:17:11	59.38	7.03	1285.86	12.73	0.16	-134.79
	14:20:42	59.37	7.02	1288.02	4.14	0.11	-136.33
	14:24:14	59.40	7.03	1286.93	3.52	0.09	-137.84
	14:27:45	59.41	7.02	1290.07	2.68	0.05	-139.00
Variance in last 3 readings	14:20:42	-0.01	0.00	2.16	-8.59	-0.05	-1.55
	14:24:14	0.03	0.00	-1.09	-0.62	-0.02	-1.50
	14:27:45	0.01	0.00	3.14	-0.83	-0.03	-1.16

Notes:

US EPA ARCHIVE DOCUMENT

In-Situ Inc.

Troll 9000 | **Low-Flow System**
02/14/12 | **ISI Low-Flow Log**

Project Information:

Operator Name	mc, js, dm, lr
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - LTM

Pump Information:

Pump Model/Type	Proactive SS Monsoon
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	118.35 [ft]
Pump placement from TOC	

Well Information:

Well Id	BSA-MW-3D
Well diameter	2 [in]
Well total depth	114.85 [ft]
Depth to top of screen	109.85 [ft]
Screen length	60 [in]
Depth to Water	26.42 [ft]

Pumping information:

Final pumping rate	300 [mL/min]
Flowcell volume	1259.85 [mL]
Calculated Sample Rate	252 [sec]
Sample rate	252 [sec]
Stabilized drawdown	

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-0.1 +/-3 %	+/-1 +/-10 %	+/-0.2 +/-10 %	+/-20
Last 5 Readings	11:09:10	59.56	6.84	1317.25	6.28	0.19	-114.35
	11:13:23	59.48	6.84	1320.81	6.31	0.15	-117.12
	11:17:36	59.36	6.84	1320.66	13.00	0.12	-119.26
	11:21:50	59.53	6.85	1313.27	2.41	0.04	-121.19
	11:26:04	59.78	6.85	1321.41	3.52	0.03	-123.11
Variance in last 3 readings	11:17:36	-0.12	0.00	-0.14	6.69	-0.03	-2.14
	11:21:50	0.17	0.00	-7.39	-10.59	-0.08	-1.93
	11:26:04	0.25	0.00	8.13	1.11	-0.01	-1.92

Notes:

US EPA ARCHIVE DOCUMENT

In-Situ Inc.

Troll 9000
02/13/12

Low-Flow System
ISI Low-Flow Log

Project Information:

Operator Name	M. Corbett
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - LTM

Pump Information:

Pump Model/Type	Proactive SS Monsoon
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	126.73 [ft]
Pump placement from TOC	

Well Information:

Well Id	BSA-MW-4D
Well diameter	2 [in]
Well total depth	123.23 [ft]
Depth to top of screen	118.23 [ft]
Screen length	60 [in]
Depth to Water	37.03 [ft]

Pumping information:

Final pumping rate	300 [mL/min]
Flowcell volume	1306.58 [mL]
Calculated Sample Rate	262 [sec]
Sample rate	262 [sec]
Stabilized drawdown	

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [FNU]	RDO [mg/L]	ORP [V]
Stabilization Settings			+/-0.2	+/-0.1 +/-3 %	+/-1 +/-10 %	+/-0.2 +/-10 %	+/-20
Last 5 Readings	9:57:28	58.00	6.97	1257.72	3.16	0.19	-0.12
	10:02:00	58.41	6.98	1263.50	1.29	0.10	-0.13
	10:06:31	58.40	6.99	1262.97	0.46	0.07	-0.14
	10:11:03	58.56	6.99	1263.29	0.02	0.05	-0.14
	10:15:33	58.58	6.99	1262.98	0.08	0.04	-0.15
Variance in last 3 readings	10:06:31	0.00	0.02	-0.54	-0.83	-0.03	-0.01
	10:11:03	0.16	0.00	0.33	-0.44	-0.02	0.00
	10:15:33	0.02	0.00	-0.31	0.05	-0.01	0.00

Notes:

US EPA ARCHIVE DOCUMENT

In-Situ Inc.

Troll 9000 | **Low-Flow System**
02/13/12 | **ISI Low-Flow Log**

Project Information:

Operator Name	M. Corbett
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - LTM

Pump Information:

Pump Model/Type	Proactive SS Monsoon
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	124.04 [ft]
Pump placement from TOC	

Well Information:

Well Id	BSA-MW-5D
Well diameter	2 [in]
Well total depth	120.54 [ft]
Depth to top of screen	115.54 [ft]
Screen length	60 [in]
Depth to Water	

Pumping information:

Final pumping rate	300 [mL/min]
Flowcell volume	1291.58 [mL]
Calculated Sample Rate	259 [sec]
Sample rate	259 [sec]
Stabilized drawdown	

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-0.1 +/-3 %	+/-1 +/-10 %	+/-0.2 +/-10 %	+/-20
Last 5 Readings	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00
	12:11:13	59.47	7.01	1804.92	3134.37	0.09	-136.19
	12:15:41	59.10	7.02	1788.35	3134.37	0.07	-137.48
	12:20:09	58.69	7.02	1776.93	3134.39	0.07	-137.94
	12:24:38	58.65	7.01	1790.08	3134.41	0.08	-138.63
Variance in last 3 readings	12:15:41	-0.37	0.00	-16.56	0.01	-0.02	-1.28
	12:20:09	-0.41	0.01	-11.42	0.01	0.00	-0.47
	12:24:38	-0.04	-0.01	13.15	0.02	0.00	-0.68

Notes: Turbidity sensor error. Purge water visually clear at time of sample collection.

US EPA ARCHIVE DOCUMENT

In-Situ Inc.

Troll 9000 | **Low-Flow System**
02/15/12 | **ISI Low-Flow Log**

Project Information:

Operator Name	dm lr
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - LTM

Pump Information:

Pump Model/Type	Proactive SS Monsoon
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	73.32 [ft]
Pump placement from TOC	

Well Information:

Well Id	CPA-MW-1D
Well diameter	2 [in]
Well total depth	70.82 [ft]
Depth to top of screen	65.82 [ft]
Screen length	60 [in]
Depth to Water	17.07 [ft]

Pumping information:

Final pumping rate	300 [mL/min]
Flowcell volume	1008.79 [mL]
Calculated Sample Rate	202 [sec]
Sample rate	202 [sec]
Stabilized drawdown	

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-0.1 +/-3 %	+/-1 +/-10 %	+/-0.2 +/-10 %	+/-20
Last 5 Readings	13:32:08	62.00	8.47	1702.79	4.34	0.11	-138.92
	13:35:38	61.94	8.60	1756.47	4.09	0.07	-149.35
	13:39:07	61.86	8.70	1792.94	3.71	0.04	-157.73
	13:42:36	61.92	8.76	1827.43	3.68	0.02	-163.51
	13:46:05	61.83	8.80	1838.79	4.67	0.01	-167.57
Variance in last 3 readings	13:39:07	-0.07	0.10	36.47	-0.37	-0.02	-8.38
	13:42:36	0.05	0.06	34.49	-0.03	-0.02	-5.77
	13:46:05	-0.09	0.04	11.36	0.99	-0.01	-4.06

Notes:

US EPA ARCHIVE DOCUMENT

In-Situ Inc.

Troll 9000 | **Low-Flow System**
02/15/12 | **ISI Low-Flow Log**

Project Information:

Operator Name	M. Corbett
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - LTM

Pump Information:

Pump Model/Type	Proactive SS Monsoon
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	108.15 [ft]
Pump placement from TOC	

Well Information:

Well Id	CPA-MW-2D
Well diameter	2 [in]
Well total depth	104.65 [ft]
Depth to top of screen	99.65 [ft]
Screen length	60 [in]
Depth to Water	15.2 [ft]

Pumping information:

Final pumping rate	300 [mL/min]
Flowcell volume	1202.98 [mL]
Calculated Sample Rate	241 [sec]
Sample rate	241 [sec]
Stabilized drawdown	

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-0.1 +/-3 %	+/-1 +/-10 %	+/-0.2 +/-10 %	+/-20
Last 5 Readings	13:35:48	63.00	6.75	1031.42	12.48	0.17	-35.45
	13:39:51	62.97	6.78	1039.15	8.00	0.13	-49.33
	13:43:53	62.99	6.80	1041.27	2.94	0.11	-58.71
	13:47:56	63.00	6.81	1044.15	1.63	0.09	-65.53
	13:51:59	62.95	6.82	1044.91	0.85	0.08	-70.72
Variance in last 3 readings	13:43:53	0.02	0.02	2.13	-5.06	-0.02	-9.38
	13:47:56	0.01	0.02	2.88	-1.31	-0.02	-6.82
	13:51:59	-0.04	0.01	0.77	-0.79	-0.02	-5.19

Notes:

US EPA ARCHIVE DOCUMENT

In-Situ Inc.

Troll 9000 | **Low-Flow System**
02/14/12 | **ISI Low-Flow Log**

Project Information:

Operator Name	M. Corbett
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - LTM

Pump Information:

Pump Model/Type	Proactive SS Monsoon
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	116.5 [ft]
Pump placement from TOC	

Well Information:

Well Id	CPA-MW-3D
Well diameter	2 [in]
Well total depth	113 [ft]
Depth to top of screen	108 [ft]
Screen length	60 [in]
Depth to Water	18.47 [ft]

Pumping information:

Final pumping rate	300 [mL/min]
Flowcell volume	1249.54 [mL]
Calculated Sample Rate	250 [sec]
Sample rate	250 [sec]
Stabilized drawdown	

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-0.1 +/-3 %	+/-1 +/-10 %	+/-0.2 +/-10 %	+/-20
Last 5 Readings	14:35:15	61.93	6.63	1131.95	3.68	0.12	-38.45
	14:39:34	61.59	6.69	1122.28	0.63	0.09	-51.74
	14:43:53	61.71	6.73	1120.97	0.42	0.06	-62.97
	14:48:12	61.81	6.76	1118.47	0.23	0.04	-72.49
	14:52:32	61.82	6.79	1115.79	0.37	0.03	-80.28
Variance in last 3 readings	14:43:53	0.12	0.04	-1.32	-0.21	-0.03	-11.23
	14:48:12	0.10	0.03	-2.50	-0.19	-0.02	-9.51
	14:52:32	0.01	0.03	-2.68	0.14	-0.01	-7.80

Notes:

US EPA ARCHIVE DOCUMENT

In-Situ Inc.

Troll 9000 | **Low-Flow System**
02/13/12 | **ISI Low-Flow Log**

Project Information:

Operator Name	dm, lr
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - LTM

Pump Information:

Pump Model/Type	Proactive SS Monsoon
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	124.57 [ft]
Pump placement from TOC	118.57 [ft]

Well Information:

Well Id	CPA-MW-4D
Well diameter	2 [in]
Well total depth	121.07 [ft]
Depth to top of screen	116.07 [ft]
Screen length	60 [in]
Depth to Water	32.5 [ft]

Pumping information:

Final pumping rate	300 [mL/min]
Flowcell volume	1294.53 [mL]
Calculated Sample Rate	259 [sec]
Sample rate	259 [sec]
Stabilized drawdown	

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-0.1 +/-3 %	+/-1 +/-10 %	+/-0.2 +/-10 %	+/-20
Last 5 Readings	13:13:05	59.95	7.04	2238.55	610.39	-0.07	-160.23
	13:17:26	60.02	7.03	1988.74	9.62	-0.07	-160.23
	13:21:47	60.10	7.03	2037.01	76.08	-0.07	-160.79
	13:26:07	60.23	7.03	2068.75	13.55	-0.08	-161.43
	13:30:28	60.40	7.03	2031.43	6.48	-0.08	-161.68
Variance in last 3 readings	13:21:47	0.08	0.00	48.27	66.47	-0.01	-0.55
	13:26:07	0.14	0.00	31.74	-62.53	0.00	-0.64
	13:30:28	0.17	0.00	-37.32	-7.07	0.00	-0.25

Notes:

US EPA ARCHIVE DOCUMENT

In-Situ Inc.

Troll 9000 | **Low-Flow System**
02/14/12 | **ISI Low-Flow Log**

Project Information:

Operator Name	js
Company Name	URS Corporation
Project Name	Solutia WGK
Site Name	Quarterly Groundwater Sampling - LTM

Pump Information:

Pump Model/Type	Proactive SS Monsoon
Tubing Type	LDPE
Tubing Diameter	0.19 [in]
Tubing Length	118.25 [ft]
Pump placement from TOC	112.25 [ft]

Well Information:

Well Id	CPA-MW-5D
Well diameter	2 [in]
Well total depth	114.75 [ft]
Depth to top of screen	109.75 [ft]
Screen length	60 [in]
Depth to Water	28.31 [ft]

Pumping information:

Final pumping rate	300 [mL/min]
Flowcell volume	1259.3 [mL]
Calculated Sample Rate	252 [sec]
Sample rate	252 [sec]
Stabilized drawdown	

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-0.1 +/-3 %	+/-1 +/-10 %	+/-0.2 +/-10 %	+/-20
Last 5 Readings	9:30:55	57.02	6.49	2174.12	6.10	0.50	-92.30
	9:35:09	56.98	6.49	2177.95	6.72	0.32	-93.43
	9:39:21	57.04	6.49	2182.90	8.87	0.25	-94.68
	9:43:36	57.08	6.49	2184.92	10.16	0.18	-95.76
	9:47:50	57.23	6.49	2191.15	0.90	0.14	-96.66
Variance in last 3 readings	9:39:21	0.05	0.00	4.95	2.14	-0.07	-1.25
	9:43:36	0.04	0.00	2.02	1.29	-0.07	-1.08
	9:47:50	0.16	0.00	6.23	-9.26	-0.05	-0.90

Notes:

US EPA ARCHIVE DOCUMENT

Appendix B

Chains-of-Custody

US EPA ARCHIVE DOCUMENT

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: Michael Corbett	Date: 2/14/12	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) _____			21562682.00006
(314) 429-0100 Phone	TAT if different from Below _____			SDG No.
(314) 429-0462 FAX	[X] 2 weeks			
Project Name: 1Q12 LTM GW Sampling	[ ] 1 week			
Site: Solutia WG Krummrich Facility	[ ] 2 days			
P O #	[ ] 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs by 8260	SVOCs by 8270C*	Total Fe/Mn by 6010B	Alk/CO2 by 310.1	Chloride by 325.2/Sulfate by 375.4	Methane 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-2D-0212	2/14/12	1435	G	Water	14		3	2	1	1	1	3	2	1			*SVOCs per semi-annual list
BSA-MW-2D-F(0.2)-0212		1435	G	Water	2	X									1	1	
CPA-MW-3D-0212		1500	G	Water	14		3	2	1	1	1	3	2	1			
CPA-MW-3D-F(0.2)-0212		1500	G	Water	2	X									1	1	
CPA-MW-5D-0212		1000	G	Water	14		3	2	1	1	1	3	2	1			
CPA-MW-5D-F(0.2)-0212		1000	G	Water	2	X									1	1	
BSA-MW-3D-0212		1130	G	Water	14		3	2	1	1	1	3	2	1			
BSA-MW-3D-F(0.2)-0212	✓	1130	G	Water	2	X									1	1	
1Q12 LTM Trip Blank # 2	2/14/12	—	—	Water	2		2										
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____							2	1	4	1	1	1	3,1	2	4	2	

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

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

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

2 4 3.3°C 60 76926

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	2/14/12 1545	[signature]	TA	2.14.12 1545
Relinquished by: [signature]	Company: TA	Date/Time: 2/14/12 1615	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by: [signature]	Company: TAS	Date/Time: 2/15/12 0944

MAR 20 2012

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Michael Corbett	Date: 2/13/12	COC No:
URS Corporation	Tel/Fax: (314) 743-4154	Lab Contact: Lidya Gulizia	Carrier: Fed Ex	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No.
St. Louis, MO 63110	Calendar (C) or Work Days (W) C			21562682.00006
(314) 429-0100 Phone	TAT if different from Below			
(314) 429-0462 FAX	☒ 2 weeks			SDG No.
Project Name: 1Q12 LTM GW Sampling	☐ 1 week			
Site: Solutia WG Krummrich Facility	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs by 8260	SVOCs by 8270C*	Total Fe/Mn by 6010B	Alk/CO2 by 310.1	Chloride by 325.2/Sulfate by 375.4	Methane 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-0212	2/13/12	1020	G	Water	14		3	2	1	1	1	3	2	1			*SVOCs per semi-annual list
BSA-MW-4D-F(0.2)-0212	2/13/12	1020	G	Water	2	X									1	1	
CPA-MW-4D-0212	2/13/12	1335	G	Water	14		3	2	1	1	1	3	2	1			
CPA-MW-4D-F(0.2)-0212	2/13/12	1335	G	Water	2	X									1	1	
BSA-MW-5D-0212	2/13/12	1230	G	Water	14		3	2	1	1	1	3	2	1			
BSA-MW-5D-F(0.2)-0212	2/13/12	1230	G	Water	2	X									1	1	
BSA-MW-4D-0212-MS	2/13/12	1020	G	Water	5		3	2									
BSA-MW-4D-0212-MSD	2/13/12	1020	G	Water	5		3	2									
1Q12 LTM Trip Blank # 1	2/13/12	—	—	Water	2		2										
							2	1	4	1	1	1	3,1	2	4	2	

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

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

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

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

2.6/3.1°C

680-76526

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
McClat	URS	2/13/12 1630			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
			Mongelli	TAS	2/15/12 0949

MAR 20 2012

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: Michael Corbett	Date: 2/15/12	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. 680-76957 21562682.00006
St. Louis, MO 63110	Calendar (C) or Work Days (W) _____			
(314) 429-0100 Phone	TAT if different from Below _____			
(314) 429-0462 FAX	☒ 2 weeks			SDG No.
Project Name: 1Q12 LTM GW Sampling	☐ 1 week			
Site: Solutia WG Krummrich Facility	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs by 8260	SVOCs by 8270C*	Total Fe/Mn by 6010B	Alk/CO2 by 310.1	Chloride by 325.2/Sulfate by 375.4	Methane by RSK 175	Nitrate by 353.2	TOC by 415.1	Dissolved Fe/Mn by 6010B	DOC by 415.1	Sample Specific Notes:
BSA-MW-1S-0212	2/15/12	1040	G	Water	14		3	2	1	1	1	3	2	1			*SVOCs per semi-annual list
BSA-MW-1S-F(0.2)-0212	2/15/12	1040	G	Water	2	X									1	1	
BSA-MW-1S-0212-EB	2/15/12	0850	G	Water	5		3	2									
CPA-MW-1D-0212	2/15/12	1350	G	Water	14		3	2	1	1	1	3	2	1			
CPA-MW-1D-F(0.2)-0212	2/15/12	1350	G	Water	2	X									1	1	
CPA-MW-2D-0212	2/15/12	1400	G	Water	14		3	2	1	1	1	3	2	1			
CPA-MW-2D-F(0.2)-0212	2/15/12	1400	G	Water	2	X									1	1	
CPA-MW-2D-0212-AD	2/15/12	1400	G	Water	5		3	2									
1Q12 LTM Trip Blank # 3	2/15/12	—	—	Water	2		2										
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____							2	1	4	1	1	1	3,1	2	4	2	

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

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

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

Temp 2.0°C, 1.6°C

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	2/15/12 1600	[signature]	TA	2-15-12 / 1600
Relinquished by: [signature]	Company: TA	Date/Time: 2.15.12 1710	Received by: Beth A Daugherty	Company: TA SFV	Date/Time: 02.16.12 0921
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

MAR 20 2012

Serial Number 49713

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: Solutia WGK River	PROJECT NO.: 21562682.0000	PROJECT LOCATION (STATE): IL
TAL (LAB) PROJECT MANAGER: Lidya Gulizia	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Dave Palmer	CLIENT PHONE: 314 429 0400	CLIENT FAX: 314 429 0462
CLIENT NAME: URS Corporation	CLIENT E-MAIL: dave.palmer@urs.com	
CLIENT ADDRESS: 1001 Highlands Plaza Dr W Ste 300 St. Louis MO 63110		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 1 OF 2

STANDARD REPORT DELIVERY ☒
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSIS: 8260B (Screen, HL 5.0 ug/L) Total Chlorobenzene; 8260B 1,2,4-Trichlorobenzene; 8270D (Screen, HL 5.0 ug/L) 1,2,4-Trichlorobenzene; 8270D 1-Chloronaphthalene

PRESERVATIVE: HCL; Ice

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	8260B (Screen, HL 5.0 ug/L) Total Chlorobenzene	8260B 1,2,4-Trichlorobenzene	8270D (Screen, HL 5.0 ug/L) 1,2,4-Trichlorobenzene	8270D 1-Chloronaphthalene	REMARKS
2/16/12	1015	SW-R2007-3-0212	G	X				3	2			
	1030	SED-R2007-3-0212	G		X					4	1	
	1015	SW-R2007-3-0212-MS	G	X				3	2			
	1015	SW-R2007-3-0212-MSD	G	X				3	2			
	1030	SED-R2007-3-0212-MS	G		X					4	1	
	1030	SED-R2007-3-0212-MSD	G		X					4	1	
	1110	SW-R2007-2-0212	G	X				3	2			
	1125	SED-R2007-2-0212	G		X					4	1	
	1205	SW-R2007-1-0212	G	X				3	2			
	1215	SED-R2007-1-0212-AD	G		X					4	1	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/16/12	1700						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
Fed Ex	2/16/12	1700						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	02/17/12	0924	YES ○ NO ○		77018	3.6 °C / 5.2 °C / 5.0 °C

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MAR 23 2012

TA-9240.680 (1008)

Serial Number 49311

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: Sandy Creek River	PROJECT NO.: 21562682.00008	PROJECT LOCATION (STATE): FL	PAGE 2 OF 2
TAL (LAB) PROJECT MANAGER: Linda Gunnels	P.O. NUMBER	CONTRACT NO.	STANDARD REPORT DELIVERY ☒
CLIENT (SITE) PM: Dave Palmer	CLIENT PHONE: 314 429 0100	CLIENT FAX: 314 429 0462	DATE DUE
CLIENT NAME: URS Corporation	CLIENT E-MAIL: dave.palmer@urs.com		EXPEDITED REPORT DELIVERY (SURCHARGE) ○
CLIENT ADDRESS: 1001 Highlands Plaza Dr W Ste 300 St Louis MO 63146			DATE DUE
COMPANY CONTRACTING THIS WORK (if applicable)			NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSIS: 524.2 (Benzene, Toluene, Ethylbenzene, Xylenes) (MTBE) (1,2-Dichloroethane) (1,2-Dichloroethane)

PRESERVATIVE: HCl HCl

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED		REMARKS
2/16/12	1220	SED-R2007-1-0212-EB	G	X				3	2	
↓	1015	TB021612	G	X				2		

2/16/12

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/16/12	1700						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
Fed Ex	2/16/12	1700						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	02/17/12	0924	YES ○ NO ○		680 77016	3.6°C / 5.2°C / 5.0°C

MAR 23 2012

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TAL 8240-680 (1008)

Appendix C

Surface Water and Sediment Sampling Forms

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URS

Surface Water / Sediment Sampling Field Data Sheet

DUP

Project Number: 21562682.00008	**Sampling Event:** Feb 2012
Sampling Personnel: K Bolley, B Crafton, J Jackson	**Sample Location:** R2007-1 7.1' depth
Sample Date/Time: 2/16/12 SW: 1205 Sed: 1215	**Sample Coordinates:**

Field Descriptions and Observations:
Sediment is Gray fine sand
Water is clear

Weather Conditions: Mostly Cloudy, Temp 40's

Water Quality Parameters 25.7

Specific Conductance (µmhos): 1.92 mS/cm	**pH:** 8.21
Water Temperature (°C) 2.25	**Dissolved Oxygen (mg/L):** 19.16

Sample Collected (check)

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

Photographs

Photo Date/Time: 2/16/12 1210 Camera/Disk ID:

Number	Direction	Description	Number	Direction	Description
4	—	Sediment			

Comments/Notes: Also collect Duplicate for SW & SED here

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URS

Surface Water / Sediment Sampling Field Data Sheet

Project Number: 2156 2682.00008	**Sampling Event:** Feb 2012
Sampling Personnel: KPilley B Cupton J. Jackson	**Sample Location:** R-2007-2 29.5' Deep
Sample Date/Time: 2/16/12	**Sample Coordinates:**
SW: 1110 Sed: 1125	
Field Descriptions and Observations: Brown medium to Coarse Sand Water Clear	
Weather Conditions: Mostly Cloudy 40's	

Water Quality Parameters 24.5

Specific Conductance (µmhos): 1.90	**pH:** 7.99
Water Temperature (°C) 2.14	**Dissolved Oxygen (mg/L):** 14.25

Sample Collected (check)

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

Photographs

Photo Date/Time: 2/16/12 1130			Camera/Disk ID:		
Number	Direction	Description	Number	Direction	Description
3	–	Sediment material			

Comments/Notes:

US EPA ARCHIVE DOCUMENT

URS

Surface Water / Sediment Sampling Field Data Sheet

MS/MSD

Project Number: 21562682.00008	**Sampling Event:** Feb 2012
Sampling Personnel: K Pilley B Crafton J Jackson	**Sample Location:** R-2007-3 17' Deep
Sample Date/Time: 2/16/12	**Sample Coordinates:**
SW: 1015 Sed: 1030	

Field Descriptions and Observations: Brown ~~[illegible]~~ medium to coarse sand w/ few gravels Took 8 pulls to retrieve material

Weather Conditions: Mostly cloudy Temp 42°F

Water Quality Parameters 24.2

Specific Conductance (µmhos): 1.90 mS/cm	pH: 7.98
Water Temperature (°C) 2.11	Dissolved Oxygen (mg/L): 15.66

Sample Collected (check)

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

Photographs

Photo Date/Time: 2/16/12 1055-1100 Camera/Disk ID:

Number	Direction	Description	Number	Direction	Description
1	—	Sediment sample			
2	—	Rip-rap material			

Comments/Notes: MS/MSD ~~[illegible]~~ samples also collected for SW+SED at this location.

Took 8 pulls of the PONAR to get sampleable material, other 7 pulls were of Rip-rap.

Appendix D

Quality Assurance Report

US EPA ARCHIVE DOCUMENT

QUALITY ASSURANCE REPORT

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

Long-Term Monitoring Program
1st Quarter 2012 Data Report

Prepared for

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

April 2012

URS Corporation
1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100
Project # 21562682

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1.0 INTRODUCTION

This Quality Assurance Report presents the findings of a review of analytical data for groundwater samples collected in February of 2012 at the Solutia W.G. Krummrich plant as part of the 1st Quarter 2012 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), semi-volatile organic compounds (SVOCs), metals, dissolved gasses, and general chemistry parameters.

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

A total of 13 groundwater samples (ten investigative samples, one field duplicate pair, and one MS/MSD pair) were analyzed by Test America. In addition, one equipment blank was collected and analyzed for project parameters. Three 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) KPS071 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 (2-Chlorophenol, 1,4-Dioxane, and 1,2,4-Trichlorobenzene)
- Method 6010B for total and dissolved iron and manganese

Samples were also analyzed for MNA 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 12 surface water and sediment samples (six investigative - three surface water and three sediment, two field duplicates, two MS/MSD pairs) were analyzed by TestAmerica for combinations of VOCs and SVOCs. In addition, one equipment blank was collected and analyzed for project parameters. One trip blank was included in the cooler that contained surface water samples for

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VOC analysis and were analyzed for VOCs by USEPA SW-846 Method 8260B. The results were analyzed as two sample delivery groups (SDGs) KRS011 and KRS012, using 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 Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, 2008, USEPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Data Review, 2010 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 assigned by the data reviewer have been applied to the laboratory report. 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.

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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 with the exception of nitrate data in samples BSA-MW-4D-0212, CPA-MW-4D-0212, and BSA-MW-5D-0212. Nitrate in samples BSA-MW-4D-0212, CPA-MW-4D-0212, and BSA-MW-5D-0212 was analyzed 24 hours outside analysis hold time (24 hours). 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 greater than 98 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

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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.

Nitrate in groundwater samples BSA-MW-4D-0212, CPA-MW-4D-0212, and BSA-MW-5D-0212 was analyzed approximately 24 hours outside analysis hold time (24 hours). Nitrate analyses for these samples were performed on the second day following sample collection. Professional judgment was used to not qualify nitrate in samples analyzed 24 hours outside of analysis hold time when analyses were performed on the first day following sample collection. Data requiring qualification is summarized in the table below.

SDG	Sample ID	Parameter	Analyte	Qualification
KPS071	BSA-MW-4D-0212	General chemistry	Nitrate	**R**
KPS071	CPA-MW-4D-0212	General chemistry	Nitrate	**R**
KPS071	BSA-MW-5D-0212	General chemistry	Nitrate	**R**

The cooler receipt form indicated that one of six groundwater coolers was received by the laboratory at 1.6°C which is outside the 4°C ± 2°C criteria. The samples were received in good condition; therefore no qualification of data was required.

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 four trip blank sample sets. Trip blank samples were non-detect.

Laboratory method blank samples evaluate the existence and magnitude of contamination problems resulting from laboratory activities. Laboratory method blank samples were analyzed at the method prescribed frequencies. Method blank samples were non-detect.

Equipment blank samples are used to assess the effectiveness of equipment decontamination procedures. The equipment blank samples were non-detect.

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 surrogate recoveries were within evaluation criteria with the exception of those that are further discussed in data reviews in **Appendix C**. 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. No qualification of data was required.

5.0 LABORATORY CONTROL SAMPLE RECOVERIES

Groundwater, surface water and sediment laboratory control samples (LCS) were 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. Although not requested for MS/MSD analysis, the laboratory spiked and analyzed groundwater samples BSA-MW-1S-0212, BSA-MW-4D-F(0.2)-0212, and BSA-MW-1S-F(0.2)-0212 for various parameters as discussed further in the data review in **Appendix C**.

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 should not be qualified based on MS/MSD criteria alone. Therefore, if recoveries were outside evaluation criteria due to matrix interference or abundance of analytes, no qualifiers were assigned unless these analytes had other quality control criteria outside evaluation criteria.

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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 was collected for the ten 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. No qualification of data was required.

One pair of field duplicate samples was collected for the six investigative surface water and sediment samples. This satisfies the requirement in the work plan (one per 10 investigative samples or 10 percent). Field duplicate RPDs were within evaluation criteria. 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 and SVOCs.

The internal standards area responses for VOCs and SVOCs were verified for the data review. VOC and SVOC IS responses met the criteria as described above for groundwater, surface 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 due to high levels of target analyte. The diluted sample results for these analytes were reported for the associated samples.

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Appendix E

Groundwater Analytical Results

(with Data Review Reports)

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Solutia Krummrich Data Review
WGK LTM 1Q12

Laboratory SDG: KPS071

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 3/20/2012

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008. USEPA National Functional Guidelines for Superfund Inorganic Data Review 2010

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

Sample Identification	
BSA-MW-4D-0212	BSA-MW-4D-F(0.2)-0212
CPA-MW-4D-0212	CPA-MW-4D-F(0.2)-0212
BSA-MW-5D-0212	BSA-MW-5D-F(0.2)-0212
1Q12 LTM Trip Blank #1	BSA-MW-2D-0212
BSA-MW-2D-F(0.2)-0212	CPA-MW-3D-0212
CPA-MW-3D-F(0.2)-0212	CPA-MW-5D-0212
CPA-MW-5D-F(0.2)-0212	BSA-MW-3D-0212
BSA-MW-3D-F(0.2)-0212	1Q12 LTM Trip Blank #2
BSA-MW-1S-0212	BSA-MW-1S-F(0.2)-0212
BSA-MW-1S-0212-EB	CPA-MW-1D-0212
CPA-MW-1D-F(0.2)-0212	CPA-MW-2D-0212
CPA-MW-2D-F(0.2)-0212	CPA-MW-2D-0212-AD
1Q12 LTM Trip Blank #3	

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 nitrate analyses for samples BSA-MW-4D-0212, CPA-MW-4D-0212 and BSA-MW-5D-0212 were performed outside of hold time criteria. Samples were diluted due to high levels of target analytes. Sample CPA-MW-4D-0212 was diluted and re-analyzed to bring 4-chloroaniline within calibration range of the instrument. Results for 4-chloroaniline were reported from the re-analysis run and the remaining compounds were reported from the original analyses. Iron MS/MSD recoveries in sample BSA-MW-4D-0212 could not be evaluated because the sample concentrations were greater than four times (4X) the matrix spike concentration. These issues are addressed further in the appropriate sections below.

The cooler receipt form indicated that one of six coolers was received by the laboratory at 1.6°C which is outside the 4°C ± 2°C criteria. The samples were received in good condition; therefore no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

No, nitrate in samples BSA-MW-4D-0212, CPA-MW-4D-0212 and BSA-MW-5D-0212 was analyzed approximately 24 hours outside of hold time for analysis (24 hours). Nitrate analyses for these samples were performed on the second day following sample collection. Professional judgment was used to not qualify nitrate in samples analyzed 24 hours outside of analysis hold time when analyses were performed on the first day following sample collection. Data requiring qualification is summarized in the table below.

Sample ID	Parameter	Analyte	Qualification
BSA-MW-4D-0212	General chemistry	Nitrate	**R**
CPA-MW-4D-0212	General chemistry	Nitrate	**R**
BSA-MW-5D-0212	General chemistry	Nitrate	**R**

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?

Surrogates were diluted out and not recovered in SVOC Run #2 of sample CPA-MW-4D-0212, and in SVOC analysis of sample CPA-MW-1D-0212. No qualification of data is required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, sample BSA-MW-4D-0212 was spiked and analyzed for VOCs, SVOCs, metals, and total organic carbon. Although not requested for MS/MSD analyses, sample BSA-MW-1S-0212 was spiked and analyzed for nitrate and sulfate. Also samples BSA-MW-4D-F(0.2)-0212 and BSA-MW-1S-F(0.2)-0212 were spiked and analyzed for dissolved organic carbon.

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Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/ RPD Criteria
BSA-MW-4D-0212	Metals	Iron	NA/NA	1	75-125/20

Iron MS/MSD recoveries in sample BSA-MW-4D-0212 could not be evaluated because the sample concentrations were greater than four times (4X) the matrix spike concentration. No qualification of data is required.

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?

Yes, sample BSA-MW-2D-0212 was duplicated and analyzed for alkalinity, sample BSA-MW-3D-0212 was duplicated and analyzed for chloride and nitrogen, and sample BSA-MW-1S-0212 was duplicated and analyzed for total organic carbon.

Were laboratory duplicate sample 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-0212	CPA-MW-2D-0212-AD

Were field duplicates within evaluation criteria?

Yes

10.0 Sample Dilutions

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

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

11.0 Additional Qualifications

Were additional qualifications applied?

No

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SDG KPS071

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

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-76926-1
TestAmerica Sample Delivery Group: KPS071
Client Project/Site: WGK LTM - 1Q12 - FEB 2012

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

Attn: Mr. Jerry Rinaldi

Lidya Gulizia

Authorized for release by:
3/20/2012 11:50:30 AM

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

cc: Bob Billman

Reviewed on 3/20/2012 MM

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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MAR 20 2012

Job ID: 680-76926-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Solutia Inc.

Project: WGK LTM - 1Q12 - FEB 2012

Report Number: 680-76926-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 02/15/2012 and 02/16/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.6, 3.1, 2.4, 3.3, and 2.0, 1.6 C, respectively.

Due to the delay in sample receipt, nitrate samples were received outside of holding time for samples BSA-MW-4D-0212 (680-76926-1), CPA-MW-4D-0212 (680-76926-3), BSA-MW-5D-0212 (680-76926-5). Analysis was performed outside of holding time for nitrate on these samples at the client's instruction.

VOLATILE ORGANIC COMPOUNDS (GC-MS) VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples BSA-MW-4D-0212 (680-76926-1), CPA-MW-4D-0212 (680-76926-3), BSA-MW-5D-0212 (680-76926-5), 1Q12 LTM Trip Blank #1 (680-76926-7), BSA-MW-2D-0212 (680-76926-8), CPA-MW-3D-0212 (680-76926-10), CPA-MW-5D-0212 (680-76926-12), BSA-MW-3D-0212 (680-76926-14), 1Q12 LTM Trip Blank #2 (680-76926-16), BSA-MW-1S-0212 (680-76957-1), BSA-MW-1S-0212-EB (680-76957-3), CPA-MW-1D-0212 (680-76957-4), CPA-MW-2D-0212 (680-76957-6), CPA-MW-2D-0212-AD (680-76957-8) and 1Q12 LTM Trip Blank #3 (680-76957-9) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 02/17/2012, 02/22/2012, 02/23/2012, 02/24/2012, 02/27/2012 and 02/28/2012.

Samples BSA-MW-4D-0212 (680-76926-1)[20X], BSA-MW-1S-0212 (680-76926-1)[5000X], CPA-MW-4D-0212 (680-76926-3)[2X], CPA-MW-1D-0212 (680-76926-4)[250X], BSA-MW-5D-0212 (680-76926-5)[5X], CPA-MW-2D-0212 (680-76926-6)[500X], BSA-MW-2D-0212 (680-76926-8)[2000X], CPA-MW-2D-0212-AD (680-76926-8)[500X], CPA-MW-3D-0212 (680-76926-10)[10X], CPA-MW-5D-0212 (680-76926-12)[20X] and BSA-MW-3D-0212 (680-76926-14)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

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SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples BSA-MW-4D-0212 (680-76926-1), CPA-MW-4D-0212 (680-76926-3), BSA-MW-5D-0212 (680-76926-5), BSA-MW-2D-0212 (680-76926-8), CPA-MW-3D-0212 (680-76926-10), CPA-MW-5D-0212 (680-76926-12) and BSA-MW-3D-0212 (680-76926-14) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. Samples BSA-MW-1S-0212 (680-76957-1), BSA-MW-1S-0212-EB (680-76957-3), CPA-MW-1D-0212 (680-76957-4), CPA-MW-2D-0212 (680-76957-6) and CPA-MW-2D-0212-AD (680-76957-8) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846

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Laboratory: TestAmerica Savannah (Continued)

Method 8270C. The samples were prepared on 02/20/2012 and analyzed on 02/24/2012, 02/25/2012 and 03/14/2012.

The following sample(s) was diluted due to abundance of target analytes: CPA-MW-1D-0212 (680-76957-4) and CPA-MW-4D-0212 (680-76926-3). As such, surrogate recoveries are not reported, and elevated reporting limits (RLs) are provided.

Samples CPA-MW-4D-0212 (680-76926-3)[10X] and CPA-MW-1D-0212 (680-76926-4)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the semivolatiles analyses.

All other quality control parameters were within the acceptance limits.

DISSOLVED GASES DISSOLVED GASES

Samples BSA-MW-1S-0212 (680-76957-1), CPA-MW-1D-0212 (680-76957-4) and CPA-MW-2D-0212 (680-76957-6) were analyzed for dissolved gases in accordance with RSK-175. Samples BSA-MW-4D-0212 (680-76926-1), CPA-MW-4D-0212 (680-76926-3), BSA-MW-5D-0212 (680-76926-5), BSA-MW-2D-0212 (680-76926-8), CPA-MW-3D-0212 (680-76926-10), CPA-MW-5D-0212 (680-76926-12) and BSA-MW-3D-0212 (680-76926-14) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 02/21/2012 and 02/22/2012.

No difficulties were encountered during the dissolved gases analyses.

All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICP) DISSOLVED METALS (ICP)

Samples BSA-MW-1S-F(0.2)-0212 (680-76957-2), CPA-MW-1D-F(0.2)-0212 (680-76957-5) and CPA-MW-2D-F(0.2)-0212 (680-76957-7) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. Samples BSA-MW-4D-F(0.2)-0212 (680-76926-2), CPA-MW-4D-F(0.2)-0212 (680-76926-4), BSA-MW-5D-F(0.2)-0212 (680-76926-6), BSA-MW-2D-F(0.2)-0212 (680-76926-9), CPA-MW-3D-F(0.2)-0212 (680-76926-11), CPA-MW-5D-F(0.2)-0212 (680-76926-13) and BSA-MW-3D-F(0.2)-0212 (680-76926-15) were analyzed for dissolved metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 02/16/2012 and 02/17/2012 and analyzed on 02/20/2012 and 02/22/2012.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICP) TOTAL RECOVERABLE METALS (ICP)

Samples BSA-MW-4D-0212 (680-76926-1), CPA-MW-4D-0212 (680-76926-3), BSA-MW-5D-0212 (680-76926-5), BSA-MW-2D-0212 (680-76926-8), CPA-MW-3D-0212 (680-76926-10), CPA-MW-5D-0212 (680-76926-12) and BSA-MW-3D-0212 (680-76926-14) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. Samples BSA-MW-1S-0212 (680-76957-1), CPA-MW-1D-0212 (680-76957-4) and CPA-MW-2D-0212 (680-76957-6) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 02/16/2012 and 02/17/2012 and analyzed on 02/20/2012 and 02/22/2012.

Iron exceeded the recovery criteria low for the MSD of sample BSA-MW-4D-0212MSD (680-76926-1) in batch 680-229588.

Refer to the QC report for details.

No other difficulties were encountered during the metals analyses.

All other quality control parameters were within the acceptance limits.

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ALKALINITY ALKALINITY

Samples BSA-MW-4D-0212 (680-76926-1), CPA-MW-4D-0212 (680-76926-3), BSA-MW-5D-0212 (680-76926-5), BSA-MW-2D-0212 (680-76926-8), CPA-MW-3D-0212 (680-76926-10), CPA-MW-5D-0212 (680-76926-12) and BSA-MW-3D-0212 (680-76926-14) were analyzed for alkalinity in accordance with EPA Method 310.1. Samples BSA-MW-1S-0212 (680-76957-1), CPA-MW-1D-0212

Job ID: 680-76926-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

(680-76957-4) and CPA-MW-2D-0212 (680-76957-6) were analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 02/21/2012 and 02/22/2012.

No difficulties were encountered during the alkalinity analyses.

All quality control parameters were within the acceptance limits.

CHLORIDE CHLORIDE

Samples BSA-MW-4D-0212 (680-76926-1), CPA-MW-4D-0212 (680-76926-3), BSA-MW-5D-0212 (680-76926-5), BSA-MW-2D-0212 (680-76926-8), CPA-MW-3D-0212 (680-76926-10), CPA-MW-5D-0212 (680-76926-12) and BSA-MW-3D-0212 (680-76926-14) were analyzed for Chloride in accordance with EPA Method 325.2. Samples BSA-MW-1S-0212 (680-76957-1), CPA-MW-1D-0212 (680-76957-4) and CPA-MW-2D-0212 (680-76957-6) were analyzed for Chloride in accordance with EPA Method 325.2. The samples were analyzed on 02/28/2012.

Samples BSA-MW-4D-0212 (680-76926-1)[2X], BSA-MW-1S-0212 (680-76926-1)[2X], CPA-MW-4D-0212 (680-76926-3)[5X], CPA-MW-1D-0212 (680-76926-4)[2X], BSA-MW-5D-0212 (680-76926-5)[5X], BSA-MW-2D-0212 (680-76926-8)[2X], CPA-MW-3D-0212 (680-76926-10)[2X], CPA-MW-5D-0212 (680-76926-12)[5X] and BSA-MW-3D-0212 (680-76926-14)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Chloride analyses.

All other quality control parameters were within the acceptance limits.

NITRATE-NITRITE AS NITROGEN NITRATE-NITRITE AS NITROGEN

Samples BSA-MW-1S-0212 (680-76957-1), CPA-MW-1D-0212 (680-76957-4) and CPA-MW-2D-0212 (680-76957-6) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. Samples BSA-MW-4D-0212 (680-76926-1), CPA-MW-4D-0212 (680-76926-3), BSA-MW-5D-0212 (680-76926-5), BSA-MW-2D-0212 (680-76926-8), CPA-MW-3D-0212 (680-76926-10), CPA-MW-5D-0212 (680-76926-12) and BSA-MW-3D-0212 (680-76926-14) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 02/15/2012 and 02/16/2012.

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

All other quality control parameters were within the acceptance limits.

SULFATE SULFATE

Samples BSA-MW-1S-0212 (680-76957-1), CPA-MW-1D-0212 (680-76957-4) and CPA-MW-2D-0212 (680-76957-6) were analyzed for sulfate in accordance with EPA Method 375.4. Samples BSA-MW-4D-0212 (680-76926-1), CPA-MW-4D-0212 (680-76926-3), BSA-MW-5D-0212 (680-76926-5), BSA-MW-2D-0212 (680-76926-8), CPA-MW-3D-0212 (680-76926-10), CPA-MW-5D-0212 (680-76926-12) and BSA-MW-3D-0212 (680-76926-14) were analyzed for sulfate in accordance with EPA Method 375.4. The samples were analyzed on 02/27/2012 and 03/01/2012.

Sulfate exceeded the recovery criteria low for the MS of sample 680-76991-1 in batch 680-230125.

Refer to the QC report for details.

Samples BSA-MW-1S-0212 (680-76926-1)[10X], BSA-MW-4D-0212 (680-76926-1)[5X], CPA-MW-2D-0212 (680-76926-6)[2X], CPA-MW-3D-0212 (680-76926-10)[5X], CPA-MW-5D-0212 (680-76926-12)[20X] and BSA-MW-3D-0212 (680-76926-14)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the sulfate analyses.

All other quality control parameters were within the acceptance limits.

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TOTAL ORGANIC CARBON TOTAL ORGANIC CARBON

Samples BSA-MW-4D-0212 (680-76926-1), CPA-MW-4D-0212 (680-76926-3), BSA-MW-5D-0212 (680-76926-5), BSA-MW-2D-0212

Job ID: 680-76926-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

(680-76926-8), CPA-MW-3D-0212 (680-76926-10), CPA-MW-5D-0212 (680-76926-12) and BSA-MW-3D-0212 (680-76926-14) were analyzed for total organic carbon in accordance with EPA Method 415.1. Samples BSA-MW-1S-0212 (680-76957-1), CPA-MW-1D-0212 (680-76957-4) and CPA-MW-2D-0212 (680-76957-6) were analyzed for total organic carbon in accordance with EPA Method 415.1. The samples were analyzed on 02/22/2012 and 02/24/2012.

No difficulties were encountered during the TOC analyses.

All other quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON (DOC) DISSOLVED ORGANIC CARBON (DOC)

Samples BSA-MW-1S-F(0.2)-0212 (680-76957-2), CPA-MW-1D-F(0.2)-0212 (680-76957-5) and CPA-MW-2D-F(0.2)-0212 (680-76957-7) were analyzed for Dissolved Organic Carbon (DOC) in accordance with EPA Method 415.1. Samples BSA-MW-4D-F(0.2)-0212 (680-76926-2), CPA-MW-4D-F(0.2)-0212 (680-76926-4), BSA-MW-5D-F(0.2)-0212 (680-76926-6), BSA-MW-2D-F(0.2)-0212 (680-76926-9), CPA-MW-3D-F(0.2)-0212 (680-76926-11), CPA-MW-5D-F(0.2)-0212 (680-76926-13) and BSA-MW-3D-F(0.2)-0212 (680-76926-15) were analyzed for Dissolved Organic Carbon (DOC) in accordance with EPA Method 415.1. The samples were analyzed on 02/17/2012 and 02/24/2012.

No difficulties were encountered during the Dissolved Organic Carbon (DOC) analyses.

All quality control parameters were within the acceptance limits.

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TestAmerica Savannah

Sample Summary

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-76926-1	BSA-MW-4D-0212	Water	02/13/12 10:20	02/15/12 09:49
680-76926-2	BSA-MW-4D-F(0.2)-0212	Water	02/13/12 10:20	02/15/12 09:49
680-76926-3	CPA-MW-4D-0212	Water	02/13/12 13:35	02/15/12 09:49
680-76926-4	CPA-MW-4D-F(0.2)-0212	Water	02/13/12 13:35	02/15/12 09:49
680-76926-5	BSA-MW-5D-0212	Water	02/13/12 12:30	02/15/12 09:49
680-76926-6	BSA-MW-5D-F(0.2)-0212	Water	02/13/12 12:30	02/15/12 09:49
680-76926-7	1Q12 LTM Trip Blank #1	Water	02/13/12 00:00	02/15/12 09:49
680-76926-8	BSA-MW-2D-0212	Water	02/14/12 14:35	02/15/12 09:49
680-76926-9	BSA-MW-2D-F(0.2)-0212	Water	02/14/12 14:35	02/15/12 09:49
680-76926-10	CPA-MW-3D-0212	Water	02/14/12 15:00	02/15/12 09:49
680-76926-11	CPA-MW-3D-F(0.2)-0212	Water	02/14/12 15:00	02/15/12 09:49
680-76926-12	CPA-MW-5D-0212	Water	02/14/12 10:00	02/15/12 09:49
680-76926-13	CPA-MW-5D-F(0.2)-0212	Water	02/14/12 10:00	02/15/12 09:49
680-76926-14	BSA-MW-3D-0212	Water	02/14/12 11:30	02/15/12 09:49
680-76926-15	BSA-MW-3D-F(0.2)-0212	Water	02/14/12 11:30	02/15/12 09:49
680-76926-16	1Q12 LTM Trip Blank #2	Water	02/14/12 00:00	02/15/12 09:49
680-76957-1	BSA-MW-1S-0212	Water	02/15/12 10:40	02/16/12 09:21
680-76957-2	BSA-MW-1S-F(0.2)-0212	Water	02/15/12 10:40	02/16/12 09:21
680-76957-3	BSA-MW-1S-0212-EB	Water	02/15/12 08:50	02/16/12 09:21
680-76957-4	CPA-MW-1D-0212	Water	02/15/12 13:50	02/16/12 09:21
680-76957-5	CPA-MW-1D-F(0.2)-0212	Water	02/15/12 13:50	02/16/12 09:21
680-76957-6	CPA-MW-2D-0212	Water	02/15/12 14:00	02/16/12 09:21
680-76957-7	CPA-MW-2D-F(0.2)-0212	Water	02/15/12 14:00	02/16/12 09:21
680-76957-8	CPA-MW-2D-0212-AD	Water	02/15/12 14:00	02/16/12 09:21
680-76957-9	1Q12 LTM Trip Blank #3	Water	02/15/12 00:00	02/16/12 09:21

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Method Summary

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
RSK-175	Dissolved Gases (GC)	RSK	TAL SAV
6010B	Metals (ICP)	SW846	TAL SAV
310.1	Alkalinity	MCAWW	TAL SAV
325.2	Chloride	MCAWW	TAL SAV
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL SAV
375.4	Sulfate	MCAWW	TAL SAV
415.1	TOC	MCAWW	TAL SAV
415.1	DOC	MCAWW	TAL SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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

Laboratory References:

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

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TestAmerica Savannah

US EPA ARCHIVE DOCUMENT

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
E	Result exceeded calibration range.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
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.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

US EPA ARCHIVE DOCUMENT

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TestAmerica Savannah

Detection Summary

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

*Do not use this data. Use all other data.

Client Sample ID: BSA-MW-4D-0212 — Lab Sample ID: 680-76926-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	34		20		ug/L	20		8260B	Total/NA
Chlorobenzene	2300		20		ug/L	20		8260B	Total/NA
1,4-Dichlorobenzene	47		20		ug/L	20		8260B	Total/NA
2-Chlorophenol	10		9.5		ug/L	1		8270C	Total/NA
1,4-Dioxane	20		9.5		ug/L	1		8270C	Total/NA
Ethane	4.4		1.1		ug/L	1		RSK-175	Total/NA
Methane	170		0.58		ug/L	1		RSK-175	Total/NA
Iron	7.3		0.050		mg/L	1		6010B	Total Recovera
Manganese	0.58		0.010		mg/L	1		6010B	Total Recovera
Chloride	130		2.0		mg/L	2		325.2	Total/NA
Sulfate	85		25		mg/L	5		375.4	Total/NA
Total Organic Carbon	6.5		1.0		mg/L	1		415.1	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	580		5.0		mg/L	1		310.1	Total/NA
Carbon Dioxide, Free	32		5.0		mg/L	1		310.1	Total/NA

Client Sample ID: BSA-MW-4D-F(0.2)-0212 — Lab Sample ID: 680-76926-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron, Dissolved	7.3		0.050		mg/L	1		6010B	Dissolved
Manganese, Dissolved	0.58		0.010		mg/L	1		6010B	Dissolved
Dissolved Organic Carbon	5.8		1.0		mg/L	1		415.1	Dissolved

Client Sample ID: CPA-MW-4D-0212 — Lab Sample ID: 680-76926-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.1		2.0		ug/L	2		8260B	Total/NA
Chlorobenzene	390		2.0		ug/L	2		8260B	Total/NA
1,4-Dichlorobenzene	5.5		2.0		ug/L	2		8260B	Total/NA
* ~~4-Chloroaniline~~	~~310~~	~~E~~	~~19~~		~~ug/L~~	~~1~~		~~8270C~~	~~Total/NA~~
4-Chloroaniline - DL	450	D	190		ug/L	10		8270C	Total/NA
Ethane	24		1.1		ug/L	1		RSK-175	Total/NA
Methane	16000		0.58		ug/L	1		RSK-175	Total/NA
Iron	13		0.050		mg/L	1		6010B	Total Recovera
Manganese	0.27		0.010		mg/L	1		6010B	Total Recovera
Chloride	350		5.0		mg/L	5		325.2	Total/NA
Total Organic Carbon	6.9		1.0		mg/L	1		415.1	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	720		5.0		mg/L	1		310.1	Total/NA
Carbon Dioxide, Free	28		5.0		mg/L	1		310.1	Total/NA

Client Sample ID: CPA-MW-4D-F(0.2)-0212 — Lab Sample ID: 680-76926-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron, Dissolved	13		0.050		mg/L	1		6010B	Dissolved
Manganese, Dissolved	0.27		0.010		mg/L	1		6010B	Dissolved
Dissolved Organic Carbon	6.0		1.0		mg/L	1		415.1	Dissolved

Client Sample ID: BSA-MW-5D-0212 — Lab Sample ID: 680-76926-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	350		5.0		ug/L	5		8260B	Total/NA
1,4-Dichlorobenzene	6.1		5.0		ug/L	5		8260B	Total/NA

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Client Sample ID: BSA-MW-5D-0212 (Continued) — Lab Sample ID: 680-76926-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethane	15		1.1		ug/L	1		RSK-175	Total/NA
Methane	6900		0.58		ug/L	1		RSK-175	Total/NA
Iron	13		0.050		mg/L	1		6010B	Total Recovera
Manganese	0.37		0.010		mg/L	1		6010B	Total Recovera
Chloride	260		5.0		mg/L	5		325.2	Total/NA
Total Organic Carbon	5.6		1.0		mg/L	1		415.1	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	760		5.0		mg/L	1		310.1	Total/NA
Carbon Dioxide, Free	33		5.0		mg/L	1		310.1	Total/NA

Client Sample ID: BSA-MW-5D-F(0.2)-0212 — Lab Sample ID: 680-76926-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron, Dissolved	13		0.050		mg/L	1		6010B	Dissolved
Manganese, Dissolved	0.36		0.010		mg/L	1		6010B	Dissolved
Dissolved Organic Carbon	5.2		1.0		mg/L	1		415.1	Dissolved

Client Sample ID: 1Q12 LTM Trip Blank #1 — Lab Sample ID: 680-76926-7

No Detections

Client Sample ID: BSA-MW-2D-0212 — Lab Sample ID: 680-76926-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	200000		2000		ug/L	2000		8260B	Total/NA
Chlorobenzene	3500		2000		ug/L	2000		8260B	Total/NA
Ethane	18		1.1		ug/L	1		RSK-175	Total/NA
Methane	5100		0.58		ug/L	1		RSK-175	Total/NA
Iron	3.1		0.050		mg/L	1		6010B	Total Recovera
Manganese	0.49		0.010		mg/L	1		6010B	Total Recovera
Chloride	97		2.0		mg/L	2		325.2	Total/NA
Total Organic Carbon	6.6		1.0		mg/L	1		415.1	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	690		5.0		mg/L	1		310.1	Total/NA
Carbon Dioxide, Free	30		5.0		mg/L	1		310.1	Total/NA

Client Sample ID: BSA-MW-2D-F(0.2)-0212 — Lab Sample ID: 680-76926-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron, Dissolved	3.0		0.050		mg/L	1		6010B	Dissolved
Manganese, Dissolved	0.48		0.010		mg/L	1		6010B	Dissolved
Dissolved Organic Carbon	5.4		1.0		mg/L	1		415.1	Dissolved

Client Sample ID: CPA-MW-3D-0212 — Lab Sample ID: 680-76926-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	990		10		ug/L	10		8260B	Total/NA
1,4-Dichlorobenzene	27		10		ug/L	10		8260B	Total/NA
Ethane	4.2		1.1		ug/L	1		RSK-175	Total/NA
Methane	1300		0.58		ug/L	1		RSK-175	Total/NA
Iron	8.1		0.050		mg/L	1		6010B	Total Recovera
Manganese	0.50		0.010		mg/L	1		6010B	Total Recovera
Chloride	100		2.0		mg/L	2		325.2	Total/NA

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Client Sample ID: CPA-MW-3D-0212 (Continued) — Lab Sample ID: 680-76926-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	51		25		mg/L	5		375.4	Total/NA
Total Organic Carbon	8.6		1.0		mg/L	1		415.1	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	530		5.0		mg/L	1		310.1	Total/NA
Carbon Dioxide, Free	21		5.0		mg/L	1		310.1	Total/NA

Client Sample ID: CPA-MW-3D-F(0.2)-0212 — Lab Sample ID: 680-76926-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron, Dissolved	7.9		0.050		mg/L	1		6010B	Dissolved
Manganese, Dissolved	0.50		0.010		mg/L	1		6010B	Dissolved
Dissolved Organic Carbon	7.0		1.0		mg/L	1		415.1	Dissolved

Client Sample ID: CPA-MW-5D-0212 — Lab Sample ID: 680-76926-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	1700		20		ug/L	20		8260B	Total/NA
2-Chlorophenol	10		9.5		ug/L	1		8270C	Total/NA
Methane	11		0.58		ug/L	1		RSK-175	Total/NA
Iron	40		0.050		mg/L	1		6010B	Total Recovera
Manganese	1.4		0.010		mg/L	1		6010B	Total Recovera
Chloride	290		5.0		mg/L	5		325.2	Total/NA
Sulfate	590		100		mg/L	20		375.4	Total/NA
Total Organic Carbon	3.7		1.0		mg/L	1		415.1	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	430		5.0		mg/L	1		310.1	Total/NA
Carbon Dioxide, Free	71		5.0		mg/L	1		310.1	Total/NA

Client Sample ID: CPA-MW-5D-F(0.2)-0212 — Lab Sample ID: 680-76926-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron, Dissolved	41		0.050		mg/L	1		6010B	Dissolved
Manganese, Dissolved	1.4		0.010		mg/L	1		6010B	Dissolved
Dissolved Organic Carbon	3.5		1.0		mg/L	1		415.1	Dissolved

Client Sample ID: BSA-MW-3D-0212 — Lab Sample ID: 680-76926-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	37		20		ug/L	20		8260B	Total/NA
Chlorobenzene	2400		20		ug/L	20		8260B	Total/NA
1,2-Dichlorobenzene	26		20		ug/L	20		8260B	Total/NA
1,4-Dichlorobenzene	450		20		ug/L	20		8260B	Total/NA
2-Chlorophenol	12		9.5		ug/L	1		8270C	Total/NA
1,4-Dioxane	14		9.5		ug/L	1		8270C	Total/NA
Ethane	2.3		1.1		ug/L	1		RSK-175	Total/NA
Methane	2200		0.58		ug/L	1		RSK-175	Total/NA
Iron	13		0.050		mg/L	1		6010B	Total Recovera
Manganese	0.63		0.010		mg/L	1		6010B	Total Recovera
Chloride	130		2.0		mg/L	2		325.2	Total/NA
Sulfate	69		25		mg/L	5		375.4	Total/NA
Total Organic Carbon	3.9		1.0		mg/L	1		415.1	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	570		5.0		mg/L	1		310.1	Total/NA

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Detection Summary

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-3D-0212 (Continued) — Lab Sample ID: 680-76926-14

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon Dioxide, Free	35		5.0		mg/L	1		310.1	Total/NA

Client Sample ID: BSA-MW-3D-F(0.2)-0212 — Lab Sample ID: 680-76926-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron, Dissolved	13		0.050		mg/L	1		6010B	Dissolved
Manganese, Dissolved	0.63		0.010		mg/L	1		6010B	Dissolved
Dissolved Organic Carbon	3.7		1.0		mg/L	1		415.1	Dissolved

Client Sample ID: 1Q12 LTM Trip Blank #2 — Lab Sample ID: 680-76926-16

No Detections

Client Sample ID: BSA-MW-1S-0212 — Lab Sample ID: 680-76957-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	300000		5000		ug/L	5000		8260B	Total/NA
Methane	16000		0.58		ug/L	1		RSK-175	Total/NA
Iron	5.2		0.050		mg/L	1		6010B	Total Recovera
Manganese	0.71		0.010		mg/L	1		6010B	Total Recovera
Chloride	180		2.0		mg/L	2		325.2	Total/NA
Total Organic Carbon	5.4		1.0		mg/L	1		415.1	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	760		5.0		mg/L	1		310.1	Total/NA
Carbon Dioxide, Free	21		5.0		mg/L	1		310.1	Total/NA

Client Sample ID: BSA-MW-1S-F(0.2)-0212 — Lab Sample ID: 680-76957-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron, Dissolved	5.0		0.050		mg/L	1		6010B	Dissolved
Manganese, Dissolved	0.70		0.010		mg/L	1		6010B	Dissolved
Dissolved Organic Carbon	4.9		1.0		mg/L	1		415.1	Dissolved

Client Sample ID: BSA-MW-1S-0212-EB — Lab Sample ID: 680-76957-3

No Detections

Client Sample ID: CPA-MW-1D-0212 — Lab Sample ID: 680-76957-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	9300		250		ug/L	250		8260B	Total/NA
Chlorobenzene	23000		250		ug/L	250		8260B	Total/NA
1,2-Dichlorobenzene	18000		250		ug/L	250		8260B	Total/NA
1,3-Dichlorobenzene	1500		250		ug/L	250		8260B	Total/NA
1,4-Dichlorobenzene	13000		250		ug/L	250		8260B	Total/NA
1,2,4-Trichlorobenzene	870		95		ug/L	10		8270C	Total/NA
Ethane	36		1.1		ug/L	1		RSK-175	Total/NA
Methane	15000		0.58		ug/L	1		RSK-175	Total/NA
Iron	0.73		0.050		mg/L	1		6010B	Total Recovera
Manganese	0.074		0.010		mg/L	1		6010B	Total Recovera
Chloride	140		2.0		mg/L	2		325.2	Total/NA
Sulfate	6.6		5.0		mg/L	1		375.4	Total/NA
Total Organic Carbon	12		1.0		mg/L	1		415.1	Total/NA

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Detection Summary

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-1D-0212 (Continued) — Lab Sample ID: 680-76957-4

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	930		5.0		mg/L	1		310.1	Total/NA

Client Sample ID: CPA-MW-1D-F(0.2)-0212 — Lab Sample ID: 680-76957-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron, Dissolved	0.31		0.050		mg/L	1		6010B	Dissolved
Manganese, Dissolved	0.040		0.010		mg/L	1		6010B	Dissolved
Dissolved Organic Carbon	12		1.0		mg/L	1		415.1	Dissolved

Client Sample ID: CPA-MW-2D-0212 — Lab Sample ID: 680-76957-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	24000		500		ug/L	500		8260B	Total/NA
1,4-Dichlorobenzene	5400		500		ug/L	500		8260B	Total/NA
2-Chlorophenol	32		9.5		ug/L	1		8270C	Total/NA
Ethane	3.5		1.1		ug/L	1		RSK-175	Total/NA
Methane	1300		0.58		ug/L	1		RSK-175	Total/NA
Iron	6.5		0.050		mg/L	1		6010B	Total Recovera
Manganese	0.40		0.010		mg/L	1		6010B	Total Recovera
Chloride	51		1.0		mg/L	1		325.2	Total/NA
Sulfate	37		10		mg/L	2		375.4	Total/NA
Total Organic Carbon	11		1.0		mg/L	1		415.1	Total/NA
Analyte	**Result**	**Qualifier**	**RL**	**RL**	**Unit**	**Dil Fac**	**D**	**Method**	**Prep Type**
Alkalinity	550		5.0		mg/L	1		310.1	Total/NA
Carbon Dioxide, Free	35		5.0		mg/L	1		310.1	Total/NA

Client Sample ID: CPA-MW-2D-F(0.2)-0212 — Lab Sample ID: 680-76957-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron, Dissolved	6.4		0.050		mg/L	1		6010B	Dissolved
Manganese, Dissolved	0.42		0.010		mg/L	1		6010B	Dissolved
Dissolved Organic Carbon	9.1		1.0		mg/L	1		415.1	Dissolved

Client Sample ID: CPA-MW-2D-0212-AD — Lab Sample ID: 680-76957-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	24000		500		ug/L	500		8260B	Total/NA
1,4-Dichlorobenzene	5300		500		ug/L	500		8260B	Total/NA
2-Chlorophenol	33		9.5		ug/L	1		8270C	Total/NA

Client Sample ID: 1Q12 LTM Trip Blank #3 — Lab Sample ID: 680-76957-9

No Detections

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Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-4D-0212

Lab Sample ID: 680-76926-1

Date Collected: 02/13/12 10:20
Matrix: Water
Date Received: 02/15/12 09:49

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**34**		20		ug/L			02/17/12 20:58	20
Chlorobenzene	**2300**		20		ug/L			02/17/12 20:58	20
1,2-Dichlorobenzene	20	U	20		ug/L			02/17/12 20:58	20
1,3-Dichlorobenzene	20	U	20		ug/L			02/17/12 20:58	20
1,4-Dichlorobenzene	**47**		20		ug/L			02/17/12 20:58	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*		*70 - 130*		*02/17/12 20:58*	*20*
Dibromofluoromethane	*87*		*70 - 130*		*02/17/12 20:58*	*20*
Toluene-d8 (Surr)	*96*		*70 - 130*		*02/17/12 20:58*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	**10**		9.5		ug/L		02/20/12 14:45	02/24/12 04:51	1
1,4-Dioxane	**20**		9.5		ug/L		02/20/12 14:45	02/24/12 04:51	1
1,2,4-Trichlorobenzene	9.5	U	9.5		ug/L		02/20/12 14:45	02/24/12 04:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*72*		*25 - 130*	*02/20/12 14:45*	*02/24/12 04:51*	*1*
2-Fluorophenol	*71*		*25 - 130*	*02/20/12 14:45*	*02/24/12 04:51*	*1*
2,4,6-Tribromophenol	*82*		*31 - 141*	*02/20/12 14:45*	*02/24/12 04:51*	*1*
Nitrobenzene-d5	*76*		*39 - 130*	*02/20/12 14:45*	*02/24/12 04:51*	*1*
2-Fluorobiphenyl	*72*		*38 - 130*	*02/20/12 14:45*	*02/24/12 04:51*	*1*
Terphenyl-d14	*63*		*10 - 143*	*02/20/12 14:45*	*02/24/12 04:51*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**4.4**		1.1		ug/L			02/21/12 16:36	1
Ethylene	1.0	U	1.0		ug/L			02/21/12 16:36	1
Methane	**170**		0.58		ug/L			02/21/12 16:36	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**7.3**		0.050		mg/L		02/16/12 11:21	02/20/12 22:21	1
Manganese	**0.58**		0.010		mg/L		02/16/12 11:21	02/20/12 22:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**130**		2.0		mg/L			02/28/12 09:49	2
Nitrate as N	0.050	U H R	0.050		mg/L			02/15/12 15:40	1
Sulfate	**85**		25		mg/L			02/27/12 13:05	5
Total Organic Carbon	**6.5**		1.0		mg/L			02/22/12 10:56	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**580**		5.0		mg/L			02/21/12 16:48	1
Carbon Dioxide, Free	**32**		5.0		mg/L			02/21/12 16:48	1

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Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-4D-F(0.2)-0212

Lab Sample ID: 680-76926-2

Date Collected: 02/13/12 10:20
Date Received: 02/15/12 09:49

Matrix: Water

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	7.3		0.050		mg/L		02/16/12 11:21	02/20/12 22:52	1
Manganese, Dissolved	0.58		0.010		mg/L		02/16/12 11:21	02/20/12 22:52	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	5.8		1.0		mg/L			02/17/12 01:13	1

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Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-4D-0212
Date Collected: 02/13/12 13:35
Date Received: 02/15/12 09:49

Lab Sample ID: 680-76926-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.1**		2.0		ug/L			02/17/12 21:26	2
Chlorobenzene	**390**		2.0		ug/L			02/17/12 21:26	2
1,2-Dichlorobenzene	2.0	U	2.0		ug/L			02/17/12 21:26	2
1,3-Dichlorobenzene	2.0	U	2.0		ug/L			02/17/12 21:26	2
1,4-Dichlorobenzene	**5.5**		2.0		ug/L			02/17/12 21:26	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*113*		*70 - 130*		*02/17/12 21:26*	*2*
Dibromofluoromethane	*81*		*70 - 130*		*02/17/12 21:26*	*2*
Toluene-d8 (Surr)	*96*		*70 - 130*		*02/17/12 21:26*	*2*

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

*Do not use this data. Use all other data.

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
* ~~4-Chloroaniline~~	~~318~~	~~E~~	~~19~~		~~ug/L~~		~~02/20/12 14:45~~	~~02/25/12 16:24~~	1
2-Chlorophenol	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 16:24	1
1,2,4-Trichlorobenzene	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*59*		*25 - 130*	*02/20/12 14:45*	*02/25/12 16:24*	*1*
2-Fluorophenol	*57*		*25 - 130*	*02/20/12 14:45*	*02/25/12 16:24*	*1*
2,4,6-Tribromophenol	*75*		*31 - 141*	*02/20/12 14:45*	*02/25/12 16:24*	*1*
Nitrobenzene-d5	*65*		*39 - 130*	*02/20/12 14:45*	*02/25/12 16:24*	*1*
2-Fluorobiphenyl	*65*		*38 - 130*	*02/20/12 14:45*	*02/25/12 16:24*	*1*
Terphenyl-d14	*32*		*10 - 143*	*02/20/12 14:45*	*02/25/12 16:24*	*1*

*Use these results only. All other data was reported from the 1x dilution analysis.

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
* **4-Chloroaniline**	**450**	D	190		ug/L		02/20/12 14:45	03/14/12 06:04	10
2-Chlorophenol	95	U	95		ug/L		02/20/12 14:45	03/14/12 06:04	10
1,2,4-Trichlorobenzene	95	U	95		ug/L		02/20/12 14:45	03/14/12 06:04	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*0*	*D*	*25 - 130*	*02/20/12 14:45*	*03/14/12 06:04*	*10*
2-Fluorophenol	*0*	*D*	*25 - 130*	*02/20/12 14:45*	*03/14/12 06:04*	*10*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*	*02/20/12 14:45*	*03/14/12 06:04*	*10*
Nitrobenzene-d5	*0*	*D*	*39 - 130*	*02/20/12 14:45*	*03/14/12 06:04*	*10*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*	*02/20/12 14:45*	*03/14/12 06:04*	*10*
Terphenyl-d14	*0*	*D*	*10 - 143*	*02/20/12 14:45*	*03/14/12 06:04*	*10*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**24**		1.1		ug/L			02/21/12 16:49	1
Ethylene	1.0	U	1.0		ug/L			02/21/12 16:49	1
Methane	**16000**		0.58		ug/L			02/21/12 16:49	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	13		0.050		mg/L		02/16/12 11:21	02/20/12 22:57	1
Manganese	0.27		0.010		mg/L		02/16/12 11:21	02/20/12 22:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	350		5.0		mg/L			02/28/12 09:47	5

MAR 20 2012

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-4D-0212

Lab Sample ID: 680-76926-3

Date Collected: 02/13/12 13:35
Date Received: 02/15/12 09:49

Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U H R	0.050		mg/L			02/15/12 15:41	1
Sulfate	5.0	U	5.0		mg/L			02/27/12 12:28	1
Total Organic Carbon	**6.9**		1.0		mg/L			02/22/12 11:36	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**720**		5.0		mg/L			02/21/12 17:00	1
Carbon Dioxide, Free	**28**		5.0		mg/L			02/21/12 17:00	1

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-4D-F(0.2)-0212

Lab Sample ID: 680-76926-4

Date Collected: 02/13/12 13:35
Date Received: 02/15/12 09:49

Matrix: Water

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	13		0.050		mg/L		02/16/12 11:21	02/20/12 23:01	1
Manganese, Dissolved	0.27		0.010		mg/L		02/16/12 11:21	02/20/12 23:01	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	6.0		1.0		mg/L			02/17/12 01:13	1

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-5D-0212

Lab Sample ID: 680-76926-5

Date Collected: 02/13/12 12:30
Matrix: Water
Date Received: 02/15/12 09:49

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.0	U	5.0		ug/L			02/22/12 18:40	5
Chlorobenzene	**350**		5.0		ug/L			02/22/12 18:40	5
1,2-Dichlorobenzene	5.0	U	5.0		ug/L			02/22/12 18:40	5
1,3-Dichlorobenzene	5.0	U	5.0		ug/L			02/22/12 18:40	5
1,4-Dichlorobenzene	**6.1**		5.0		ug/L			02/22/12 18:40	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*		*70 - 130*		*02/22/12 18:40*	*5*
Dibromofluoromethane	*83*		*70 - 130*		*02/22/12 18:40*	*5*
Toluene-d8 (Surr)	*97*		*70 - 130*		*02/22/12 18:40*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 17:19	1
1,4-Dioxane	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 17:19	1
1,2,4-Trichlorobenzene	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*67*		*25 - 130*	*02/20/12 14:45*	*02/25/12 17:19*	*1*
2-Fluorophenol	*66*		*25 - 130*	*02/20/12 14:45*	*02/25/12 17:19*	*1*
2,4,6-Tribromophenol	*81*		*31 - 141*	*02/20/12 14:45*	*02/25/12 17:19*	*1*
Nitrobenzene-d5	*74*		*39 - 130*	*02/20/12 14:45*	*02/25/12 17:19*	*1*
2-Fluorobiphenyl	*74*		*38 - 130*	*02/20/12 14:45*	*02/25/12 17:19*	*1*
Terphenyl-d14	*54*		*10 - 143*	*02/20/12 14:45*	*02/25/12 17:19*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**15**		1.1		ug/L			02/21/12 17:02	1
Ethylene	1.0	U	1.0		ug/L			02/21/12 17:02	1
Methane	**6900**		0.58		ug/L			02/21/12 17:02	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**13**		0.050		mg/L		02/16/12 11:21	02/20/12 23:06	1
Manganese	**0.37**		0.010		mg/L		02/16/12 11:21	02/20/12 23:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**260**		5.0		mg/L			02/28/12 09:47	5
Nitrate as N	0.050	U H R	0.050		mg/L			02/15/12 15:42	1
Sulfate	5.0	U	5.0		mg/L			02/27/12 12:28	1
Total Organic Carbon	**5.6**		1.0		mg/L			02/22/12 11:51	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	760		5.0		mg/L			02/21/12 17:12	1
Carbon Dioxide, Free	33		5.0		mg/L			02/21/12 17:12	1

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-5D-F(0.2)-0212

Lab Sample ID: 680-76926-6

Date Collected: 02/13/12 12:30
Matrix: Water
Date Received: 02/15/12 09:49

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	13		0.050		mg/L		02/16/12 11:21	02/20/12 23:10	1
Manganese, Dissolved	0.36		0.010		mg/L		02/16/12 11:21	02/20/12 23:10	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	5.2		1.0		mg/L			02/17/12 01:13	1

MAR 20 2012
TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: 1Q12 LTM Trip Blank #1

Lab Sample ID: 680-76926-7

Date Collected: 02/13/12 00:00
Date Received: 02/15/12 09:49

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/17/12 17:30	1
Chlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:30	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:30	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:30	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*		*70 - 130*		*02/17/12 17:30*	*1*
Dibromofluoromethane	*93*		*70 - 130*		*02/17/12 17:30*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*02/17/12 17:30*	*1*

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-2D-0212

Lab Sample ID: 680-76926-8

Date Collected: 02/14/12 14:35
Date Received: 02/15/12 09:49

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**200000**		2000		ug/L			02/28/12 16:43	2000
Chlorobenzene	**3500**		2000		ug/L			02/28/12 16:43	2000
1,2-Dichlorobenzene	2000	U	2000		ug/L			02/28/12 16:43	2000
1,3-Dichlorobenzene	2000	U	2000		ug/L			02/28/12 16:43	2000
1,4-Dichlorobenzene	2000	U	2000		ug/L			02/28/12 16:43	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*110*		*70 - 130*		*02/28/12 16:43*	*2000*
Dibromofluoromethane	*93*		*70 - 130*		*02/28/12 16:43*	*2000*
Toluene-d8 (Surr)	*96*		*70 - 130*		*02/28/12 16:43*	*2000*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 15:29	1
1,4-Dioxane	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 15:29	1
1,2,4-Trichlorobenzene	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*62*		*25 - 130*	*02/20/12 14:45*	*02/25/12 15:29*	*1*
2-Fluorophenol	*59*		*25 - 130*	*02/20/12 14:45*	*02/25/12 15:29*	*1*
2,4,6-Tribromophenol	*76*		*31 - 141*	*02/20/12 14:45*	*02/25/12 15:29*	*1*
Nitrobenzene-d5	*69*		*39 - 130*	*02/20/12 14:45*	*02/25/12 15:29*	*1*
2-Fluorobiphenyl	*69*		*38 - 130*	*02/20/12 14:45*	*02/25/12 15:29*	*1*
Terphenyl-d14	*30*		*10 - 143*	*02/20/12 14:45*	*02/25/12 15:29*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**16**		1.1		ug/L			02/22/12 14:30	1
Ethylene	1.0	U	1.0		ug/L			02/22/12 14:30	1
Methane	**5100**		0.58		ug/L			02/22/12 14:30	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**3.1**		0.050		mg/L		02/16/12 11:21	02/20/12 23:15	1
Manganese	**0.49**		0.010		mg/L		02/16/12 11:21	02/20/12 23:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**97**		2.0		mg/L			02/28/12 09:49	2
Nitrate as N	0.050	U	0.050		mg/L			02/15/12 15:44	1
Sulfate	5.0	U	5.0		mg/L			02/27/12 12:28	1
Total Organic Carbon	**6.6**		1.0		mg/L			02/22/12 12:08	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**690**		5.0		mg/L			02/21/12 17:33	1
Carbon Dioxide, Free	**30**		5.0		mg/L			02/21/12 17:33	1

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-2D-F(0.2)-0212

Lab Sample ID: 680-76926-9

Date Collected: 02/14/12 14:35

Matrix: Water

Date Received: 02/15/12 09:49

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	3.0		0.050		mg/L		02/16/12 11:21	02/20/12 23:28	1
Manganese, Dissolved	0.48		0.010		mg/L		02/16/12 11:21	02/20/12 23:28	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	5.4		1.0		mg/L			02/17/12 01:13	1

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-3D-0212

Lab Sample ID: 680-76926-10

Date Collected: 02/14/12 15:00
Date Received: 02/15/12 09:49

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	10	U	10		ug/L			02/23/12 19:11	10
Chlorobenzene	**990**		10		ug/L			02/23/12 19:11	10
1,2-Dichlorobenzene	10	U	10		ug/L			02/23/12 19:11	10
1,3-Dichlorobenzene	10	U	10		ug/L			02/23/12 19:11	10
1,4-Dichlorobenzene	**27**		10		ug/L			02/23/12 19:11	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*		*70 - 130*		*02/23/12 19:11*	*10*
Dibromofluoromethane	*85*		*70 - 130*		*02/23/12 19:11*	*10*
Toluene-d8 (Surr)	*96*		*70 - 130*		*02/23/12 19:11*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	19	U	19		ug/L		02/20/12 14:45	02/25/12 15:56	1
2-Chlorophenol	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 15:56	1
1,2,4-Trichlorobenzene	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*69*		*25 - 130*	*02/20/12 14:45*	*02/25/12 15:56*	*1*
2-Fluorophenol	*67*		*25 - 130*	*02/20/12 14:45*	*02/25/12 15:56*	*1*
2,4,6-Tribromophenol	*79*		*31 - 141*	*02/20/12 14:45*	*02/25/12 15:56*	*1*
Nitrobenzene-d5	*73*		*39 - 130*	*02/20/12 14:45*	*02/25/12 15:56*	*1*
2-Fluorobiphenyl	*77*		*38 - 130*	*02/20/12 14:45*	*02/25/12 15:56*	*1*
Terphenyl-d14	*41*		*10 - 143*	*02/20/12 14:45*	*02/25/12 15:56*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**4.2**		1.1		ug/L			02/22/12 14:43	1
Ethylene	1.0	U	1.0		ug/L			02/22/12 14:43	1
Methane	**1300**		0.58		ug/L			02/22/12 14:43	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**8.1**		0.050		mg/L		02/16/12 11:21	02/20/12 23:33	1
Manganese	**0.50**		0.010		mg/L		02/16/12 11:21	02/20/12 23:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**100**		2.0		mg/L			02/28/12 09:49	2
Nitrate as N	0.050	U	0.050		mg/L			02/15/12 15:45	1
Sulfate	**51**		25		mg/L			02/27/12 13:35	5
Total Organic Carbon	**8.6**		1.0		mg/L			02/22/12 12:22	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**530**		5.0		mg/L			02/21/12 17:21	1
Carbon Dioxide, Free	**21**		5.0		mg/L			02/21/12 17:21	1

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-3D-F(0.2)-0212

Lab Sample ID: 680-76926-11

Date Collected: 02/14/12 15:00
Matrix: Water
Date Received: 02/15/12 09:49

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	7.9		0.050		mg/L		02/16/12 11:21	02/20/12 23:37	1
Manganese, Dissolved	0.50		0.010		mg/L		02/16/12 11:21	02/20/12 23:37	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	7.0		1.0		mg/L			02/17/12 01:13	1

MAR 20 2012
TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-5D-0212

Lab Sample ID: 680-76926-12

Date Collected: 02/14/12 10:00
Date Received: 02/15/12 09:49

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	20	U	20		ug/L			02/22/12 19:26	20
Chlorobenzene	**1700**		20		ug/L			02/22/12 19:26	20
1,2-Dichlorobenzene	20	U	20		ug/L			02/22/12 19:26	20
1,3-Dichlorobenzene	20	U	20		ug/L			02/22/12 19:26	20
1,4-Dichlorobenzene	20	U	20		ug/L			02/22/12 19:26	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*		*70 - 130*		*02/22/12 19:26*	*20*
Dibromofluoromethane	*84*		*70 - 130*		*02/22/12 19:26*	*20*
Toluene-d8 (Surr)	*96*		*70 - 130*		*02/22/12 19:26*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	19	U	19		ug/L		02/20/12 14:45	02/24/12 21:46	1
2-Chlorophenol	**10**		9.5		ug/L		02/20/12 14:45	02/24/12 21:46	1
1,2,4-Trichlorobenzene	9.5	U	9.5		ug/L		02/20/12 14:45	02/24/12 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*73*		*25 - 130*	*02/20/12 14:45*	*02/24/12 21:46*	*1*
2-Fluorophenol	*69*		*25 - 130*	*02/20/12 14:45*	*02/24/12 21:46*	*1*
2,4,6-Tribromophenol	*83*		*31 - 141*	*02/20/12 14:45*	*02/24/12 21:46*	*1*
Nitrobenzene-d5	*74*		*39 - 130*	*02/20/12 14:45*	*02/24/12 21:46*	*1*
2-Fluorobiphenyl	*72*		*38 - 130*	*02/20/12 14:45*	*02/24/12 21:46*	*1*
Terphenyl-d14	*77*		*10 - 143*	*02/20/12 14:45*	*02/24/12 21:46*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	1.1	U	1.1		ug/L			02/22/12 14:56	1
Ethylene	1.0	U	1.0		ug/L			02/22/12 14:56	1
Methane	**11**		0.58		ug/L			02/22/12 14:56	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**40**		0.050		mg/L		02/16/12 11:21	02/20/12 23:41	1
Manganese	**1.4**		0.010		mg/L		02/16/12 11:21	02/20/12 23:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**290**		5.0		mg/L			02/28/12 09:57	5
Nitrate as N	0.050	U	0.050		mg/L			02/15/12 15:47	1
Sulfate	**590**		100		mg/L			02/27/12 13:35	20
Total Organic Carbon	**3.7**		1.0		mg/L			02/22/12 12:36	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**430**		5.0		mg/L			02/21/12 17:56	1
Carbon Dioxide, Free	**71**		5.0		mg/L			02/21/12 17:56	1

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-5D-F(0.2)-0212

Lab Sample ID: 680-76926-13

Date Collected: 02/14/12 10:00
Date Received: 02/15/12 09:49

Matrix: Water

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	41		0.050		mg/L		02/16/12 11:21	02/20/12 23:46	1
Manganese, Dissolved	1.4		0.010		mg/L		02/16/12 11:21	02/20/12 23:46	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	3.5		1.0		mg/L			02/17/12 01:13	1

MAR 20 2012
TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-3D-0212

Lab Sample ID: 680-76926-14

Date Collected: 02/14/12 11:30
Date Received: 02/15/12 09:49

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	37		20		ug/L			02/23/12 19:39	20
Chlorobenzene	2400		20		ug/L			02/23/12 19:39	20
1,2-Dichlorobenzene	26		20		ug/L			02/23/12 19:39	20
1,3-Dichlorobenzene	20	U	20		ug/L			02/23/12 19:39	20
1,4-Dichlorobenzene	450		20		ug/L			02/23/12 19:39	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*110*		*70 - 130*		*02/23/12 19:39*	*20*
Dibromofluoromethane	*88*		*70 - 130*		*02/23/12 19:39*	*20*
Toluene-d8 (Surr)	*95*		*70 - 130*		*02/23/12 19:39*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	12		9.5		ug/L		02/20/12 14:45	02/25/12 16:51	1
1,4-Dioxane	14		9.5		ug/L		02/20/12 14:45	02/25/12 16:51	1
1,2,4-Trichlorobenzene	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 16:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*69*		*25 - 130*	*02/20/12 14:45*	*02/25/12 16:51*	*1*
2-Fluorophenol	*69*		*25 - 130*	*02/20/12 14:45*	*02/25/12 16:51*	*1*
2,4,6-Tribromophenol	*76*		*31 - 141*	*02/20/12 14:45*	*02/25/12 16:51*	*1*
Nitrobenzene-d5	*76*		*39 - 130*	*02/20/12 14:45*	*02/25/12 16:51*	*1*
2-Fluorobiphenyl	*75*		*38 - 130*	*02/20/12 14:45*	*02/25/12 16:51*	*1*
Terphenyl-d14	*29*		*10 - 143*	*02/20/12 14:45*	*02/25/12 16:51*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	2.3		1.1		ug/L			02/22/12 15:09	1
Ethylene	1.0	U	1.0		ug/L			02/22/12 15:09	1
Methane	2200		0.58		ug/L			02/22/12 15:09	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	13		0.050		mg/L		02/16/12 11:21	02/20/12 23:50	1
Manganese	0.63		0.010		mg/L		02/16/12 11:21	02/20/12 23:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		2.0		mg/L			02/28/12 09:57	2
Nitrate as N	0.050	U	0.050		mg/L			02/15/12 15:48	1
Sulfate	69		25		mg/L			02/27/12 13:35	5
Total Organic Carbon	3.9		1.0		mg/L			02/22/12 13:29	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	570		5.0		mg/L			02/21/12 18:07	1
Carbon Dioxide, Free	35		5.0		mg/L			02/21/12 18:07	1

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-3D-F(0.2)-0212

Lab Sample ID: 680-76926-15

Date Collected: 02/14/12 11:30
Date Received: 02/15/12 09:49

Matrix: Water

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	13		0.050		mg/L		02/16/12 11:21	02/20/12 23:55	1
Manganese, Dissolved	0.63		0.010		mg/L		02/16/12 11:21	02/20/12 23:55	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	3.7		1.0		mg/L			02/17/12 01:13	1

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Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: 1Q12 LTM Trip Blank #2

Lab Sample ID: 680-76926-16

Date Collected: 02/14/12 00:00
Date Received: 02/15/12 09:49

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/17/12 17:58	1
Chlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:58	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:58	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:58	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*		*70 - 130*		*02/17/12 17:58*	*1*
Dibromofluoromethane	*93*		*70 - 130*		*02/17/12 17:58*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*02/17/12 17:58*	*1*

MAR 20 2012
TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-1S-0212

Lab Sample ID: 680-76957-1

Date Collected: 02/15/12 10:40
Date Received: 02/16/12 09:21

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	300000		5000		ug/L			02/27/12 22:10	5000
Chlorobenzene	5000	U	5000		ug/L			02/27/12 22:10	5000
1,2-Dichlorobenzene	5000	U	5000		ug/L			02/27/12 22:10	5000
1,3-Dichlorobenzene	5000	U	5000		ug/L			02/27/12 22:10	5000
1,4-Dichlorobenzene	5000	U	5000		ug/L			02/27/12 22:10	5000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*110*		*70 - 130*		*02/27/12 22:10*	*5000*
Dibromofluoromethane	*91*		*70 - 130*		*02/27/12 22:10*	*5000*
Toluene-d8 (Surr)	*96*		*70 - 130*		*02/27/12 22:10*	*5000*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 15:01	1
1,2,4-Trichlorobenzene	9.5	U	9.5		ug/L		02/20/12 14:45	02/25/12 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*63*		*25 - 130*	*02/20/12 14:45*	*02/25/12 15:01*	*1*
2-Fluorophenol	*63*		*25 - 130*	*02/20/12 14:45*	*02/25/12 15:01*	*1*
2,4,6-Tribromophenol	*76*		*31 - 141*	*02/20/12 14:45*	*02/25/12 15:01*	*1*
Nitrobenzene-d5	*68*		*39 - 130*	*02/20/12 14:45*	*02/25/12 15:01*	*1*
2-Fluorobiphenyl	*67*		*38 - 130*	*02/20/12 14:45*	*02/25/12 15:01*	*1*
Terphenyl-d14	*27*		*10 - 143*	*02/20/12 14:45*	*02/25/12 15:01*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	1.1	U	1.1		ug/L			02/22/12 17:43	1
Ethylene	1.0	U	1.0		ug/L			02/22/12 17:43	1
Methane	16000		0.58		ug/L			02/22/12 17:43	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	5.2		0.050		mg/L		02/17/12 09:53	02/22/12 21:22	1
Manganese	0.71		0.010		mg/L		02/17/12 09:53	02/22/12 21:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	180		2.0		mg/L			02/28/12 09:57	2
Nitrate as N	0.050	U	0.050		mg/L			02/16/12 15:34	1
Sulfate	50	U	50		mg/L			03/01/12 12:07	10
Total Organic Carbon	5.4		1.0		mg/L			02/24/12 20:14	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	760		5.0		mg/L			02/22/12 18:48	1
Carbon Dioxide, Free	21		5.0		mg/L			02/22/12 18:48	1

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-1S-F(0.2)-0212

Lab Sample ID: 680-76957-2

Date Collected: 02/15/12 10:40
Date Received: 02/16/12 09:21

Matrix: Water

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	5.0		0.050		mg/L		02/17/12 09:53	02/22/12 21:27	1
Manganese, Dissolved	0.70		0.010		mg/L		02/17/12 09:53	02/22/12 21:27	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	4.9		1.0		mg/L			02/24/12 14:40	1

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-1S-0212-EB

Lab Sample ID: 680-76957-3

Date Collected: 02/15/12 08:50
Date Received: 02/16/12 09:21

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/24/12 14:30	1
Chlorobenzene	1.0	U	1.0		ug/L			02/24/12 14:30	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/24/12 14:30	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/24/12 14:30	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/24/12 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*		*70 - 130*		*02/24/12 14:30*	*1*
Dibromofluoromethane	*96*		*70 - 130*		*02/24/12 14:30*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/24/12 14:30*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	9.5	U	9.5		ug/L		02/20/12 14:45	02/24/12 19:28	1
1,2,4-Trichlorobenzene	9.5	U	9.5		ug/L		02/20/12 14:45	02/24/12 19:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*66*		*25 - 130*	*02/20/12 14:45*	*02/24/12 19:28*	*1*
2-Fluorophenol	*65*		*25 - 130*	*02/20/12 14:45*	*02/24/12 19:28*	*1*
2,4,6-Tribromophenol	*90*		*31 - 141*	*02/20/12 14:45*	*02/24/12 19:28*	*1*
Nitrobenzene-d5	*74*		*39 - 130*	*02/20/12 14:45*	*02/24/12 19:28*	*1*
2-Fluorobiphenyl	*87*		*38 - 130*	*02/20/12 14:45*	*02/24/12 19:28*	*1*
Terphenyl-d14	*75*		*10 - 143*	*02/20/12 14:45*	*02/24/12 19:28*	*1*

MAR 20 2012
TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-1D-0212

Date Collected: 02/15/12 13:50
Date Received: 02/16/12 09:21

Lab Sample ID: 680-76957-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**9300**		250		ug/L			02/28/12 14:10	250
Chlorobenzene	**23000**		250		ug/L			02/28/12 14:10	250
1,2-Dichlorobenzene	**18000**		250		ug/L			02/28/12 14:10	250
1,3-Dichlorobenzene	**1500**		250		ug/L			02/28/12 14:10	250
1,4-Dichlorobenzene	**13000**		250		ug/L			02/28/12 14:10	250

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*117*		*70 - 130*		*02/28/12 14:10*	*250*
Dibromofluoromethane	*91*		*70 - 130*		*02/28/12 14:10*	*250*
Toluene-d8 (Surr)	*99*		*70 - 130*		*02/28/12 14:10*	*250*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	95	U	95		ug/L		02/20/12 14:45	02/25/12 17:47	10
1,2,4-Trichlorobenzene	**870**		95		ug/L		02/20/12 14:45	02/25/12 17:47	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*0*	*D*	*25 - 130*	*02/20/12 14:45*	*02/25/12 17:47*	*10*
2-Fluorophenol	*0*	*D*	*25 - 130*	*02/20/12 14:45*	*02/25/12 17:47*	*10*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*	*02/20/12 14:45*	*02/25/12 17:47*	*10*
Nitrobenzene-d5	*0*	*D*	*39 - 130*	*02/20/12 14:45*	*02/25/12 17:47*	*10*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*	*02/20/12 14:45*	*02/25/12 17:47*	*10*
Terphenyl-d14	*0*	*D*	*10 - 143*	*02/20/12 14:45*	*02/25/12 17:47*	*10*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**36**		1.1		ug/L			02/22/12 18:08	1
Ethylene	1.0	U	1.0		ug/L			02/22/12 18:08	1
Methane	**15000**		0.58		ug/L			02/22/12 18:08	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.73**		0.050		mg/L		02/17/12 09:53	02/22/12 21:31	1
Manganese	**0.074**		0.010		mg/L		02/17/12 09:53	02/22/12 21:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**140**		2.0		mg/L			02/28/12 09:57	2
Nitrate as N	0.050	U	0.050		mg/L			02/16/12 15:38	1
Sulfate	**6.6**		5.0		mg/L			03/01/12 10:42	1
Total Organic Carbon	**12**		1.0		mg/L			02/24/12 21:12	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**930**		5.0		mg/L			02/22/12 19:02	1
Carbon Dioxide, Free	5.0	U	5.0		mg/L			02/22/12 19:02	1

MAR 20 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-1D-F(0.2)-0212

Lab Sample ID: 680-76957-5

Date Collected: 02/15/12 13:50
Date Received: 02/16/12 09:21

Matrix: Water

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	0.31		0.050		mg/L		02/17/12 09:53	02/22/12 21:36	1
Manganese, Dissolved	0.040		0.010		mg/L		02/17/12 09:53	02/22/12 21:36	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	12		1.0		mg/L			02/24/12 14:40	1

MAR 20 2012
TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-2D-0212

Lab Sample ID: 680-76957-6

Date Collected: 02/15/12 14:00
Date Received: 02/16/12 09:21

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	500	U	500		ug/L			02/27/12 21:26	500
Chlorobenzene	**24000**		500		ug/L			02/27/12 21:26	500
1,2-Dichlorobenzene	500	U	500		ug/L			02/27/12 21:26	500
1,3-Dichlorobenzene	500	U	500		ug/L			02/27/12 21:26	500
1,4-Dichlorobenzene	**5400**		500		ug/L			02/27/12 21:26	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*114*		*70 - 130*		*02/27/12 21:26*	*500*
Dibromofluoromethane	*91*		*70 - 130*		*02/27/12 21:26*	*500*
Toluene-d8 (Surr)	*99*		*70 - 130*		*02/27/12 21:26*	*500*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	**32**		9.5		ug/L		02/20/12 14:45	02/24/12 20:23	1
1,2,4-Trichlorobenzene	9.5	U	9.5		ug/L		02/20/12 14:45	02/24/12 20:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*85*		*25 - 130*	*02/20/12 14:45*	*02/24/12 20:23*	*1*
2-Fluorophenol	*87*		*25 - 130*	*02/20/12 14:45*	*02/24/12 20:23*	*1*
2,4,6-Tribromophenol	*76*		*31 - 141*	*02/20/12 14:45*	*02/24/12 20:23*	*1*
Nitrobenzene-d5	*64*		*39 - 130*	*02/20/12 14:45*	*02/24/12 20:23*	*1*
2-Fluorobiphenyl	*67*		*38 - 130*	*02/20/12 14:45*	*02/24/12 20:23*	*1*
Terphenyl-d14	*24*		*10 - 143*	*02/20/12 14:45*	*02/24/12 20:23*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**3.5**		1.1		ug/L			02/22/12 17:55	1
Ethylene	1.0	U	1.0		ug/L			02/22/12 17:55	1
Methane	**1300**		0.58		ug/L			02/22/12 17:55	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**6.5**		0.050		mg/L		02/17/12 09:53	02/22/12 21:40	1
Manganese	**0.40**		0.010		mg/L		02/17/12 09:53	02/22/12 21:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**51**		1.0		mg/L			02/28/12 09:37	1
Nitrate as N	0.050	U	0.050		mg/L			02/16/12 15:39	1
Sulfate	**37**		10		mg/L			03/01/12 12:09	2
Total Organic Carbon	**11**		1.0		mg/L			02/24/12 21:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**550**		5.0		mg/L			02/22/12 19:11	1
Carbon Dioxide, Free	**35**		5.0		mg/L			02/22/12 19:11	1

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Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-2D-F(0.2)-0212

Lab Sample ID: 680-76957-7

Date Collected: 02/15/12 14:00
Matrix: Water
Date Received: 02/16/12 09:21

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	6.4		0.050		mg/L		02/17/12 09:53	02/22/12 21:53	1
Manganese, Dissolved	0.42		0.010		mg/L		02/17/12 09:53	02/22/12 21:53	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	9.1		1.0		mg/L			02/24/12 14:40	1

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Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-2D-0212-AD

Lab Sample ID: 680-76957-8

Date Collected: 02/15/12 14:00
Date Received: 02/16/12 09:21

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	500	U	500		ug/L			02/27/12 21:48	500
Chlorobenzene	**24000**		500		ug/L			02/27/12 21:48	500
1,2-Dichlorobenzene	500	U	500		ug/L			02/27/12 21:48	500
1,3-Dichlorobenzene	500	U	500		ug/L			02/27/12 21:48	500
1,4-Dichlorobenzene	**5300**		500		ug/L			02/27/12 21:48	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*113*		*70 - 130*		*02/27/12 21:48*	*500*
Dibromofluoromethane	*89*		*70 - 130*		*02/27/12 21:48*	*500*
Toluene-d8 (Surr)	*98*		*70 - 130*		*02/27/12 21:48*	*500*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	**33**		9.5		ug/L		02/20/12 14:45	02/24/12 20:51	1
1,2,4-Trichlorobenzene	9.5	U	9.5		ug/L		02/20/12 14:45	02/24/12 20:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*82*		*25 - 130*	*02/20/12 14:45*	*02/24/12 20:51*	*1*
2-Fluorophenol	*81*		*25 - 130*	*02/20/12 14:45*	*02/24/12 20:51*	*1*
2,4,6-Tribromophenol	*76*		*31 - 141*	*02/20/12 14:45*	*02/24/12 20:51*	*1*
Nitrobenzene-d5	*64*		*39 - 130*	*02/20/12 14:45*	*02/24/12 20:51*	*1*
2-Fluorobiphenyl	*65*		*38 - 130*	*02/20/12 14:45*	*02/24/12 20:51*	*1*
Terphenyl-d14	*29*		*10 - 143*	*02/20/12 14:45*	*02/24/12 20:51*	*1*

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Client Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: 1Q12 LTM Trip Blank #3

Lab Sample ID: 680-76957-9

Date Collected: 02/15/12 00:00
Date Received: 02/16/12 09:21

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/24/12 13:33	1
Chlorobenzene	1.0	U	1.0		ug/L			02/24/12 13:33	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/24/12 13:33	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/24/12 13:33	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/24/12 13:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*106*		*70 - 130*		*02/24/12 13:33*	*1*
Dibromofluoromethane	*98*		*70 - 130*		*02/24/12 13:33*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*02/24/12 13:33*	*1*

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Surrogate Summary

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
680-76926-1	BSA-MW-4D-0212	107	87	96
680-76926-1 MS	BSA-MW-4D-0212	106	93	101
680-76926-1 MSD	BSA-MW-4D-0212	106	90	100
680-76926-3	CPA-MW-4D-0212	113	81	96
680-76926-5	BSA-MW-5D-0212	109	83	97
680-76926-7	1Q12 LTM Trip Blank #1	108	93	98
680-76926-8	BSA-MW-2D-0212	110	93	96
680-76926-10	CPA-MW-3D-0212	109	85	96
680-76926-12	CPA-MW-5D-0212	109	84	96
680-76926-14	BSA-MW-3D-0212	110	88	95
680-76926-16	1Q12 LTM Trip Blank #2	109	93	99
680-76957-1	BSA-MW-1S-0212	110	91	96
680-76957-3	BSA-MW-1S-0212-EB	107	96	100
680-76957-4	CPA-MW-1D-0212	117	91	99
680-76957-6	CPA-MW-2D-0212	114	91	99
680-76957-8	CPA-MW-2D-0212-AD	113	89	98
680-76957-9	1Q12 LTM Trip Blank #3	106	98	99
LCS 680-229424/3	Lab Control Sample	105	94	101
LCS 680-229425/3	Lab Control Sample	101	91	96
LCS 680-229802/3	Lab Control Sample	101	94	98
LCS 680-229916/3	Lab Control Sample	99	89	96
LCS 680-229917/3	Lab Control Sample	101	93	98
LCS 680-229981/3	Lab Control Sample	104	95	101
LCS 680-230154/3	Lab Control Sample	106	96	100
LCS 680-230231/3	Lab Control Sample	105	92	99
LCSD 680-229424/4	Lab Control Sample Dup	100	91	98
LCSD 680-229425/4	Lab Control Sample Dup	103	95	99
LCSD 680-229802/4	Lab Control Sample Dup	98	91	97
LCSD 680-229916/4	Lab Control Sample Dup	101	90	96
LCSD 680-229917/4	Lab Control Sample Dup	99	93	97
LCSD 680-229981/4	Lab Control Sample Dup	103	92	97
LCSD 680-230154/4	Lab Control Sample Dup	106	96	100
LCSD 680-230231/4	Lab Control Sample Dup	105	95	97
MB 680-229424/6	Method Blank	109	91	100
MB 680-229425/6	Method Blank	107	88	94
MB 680-229802/6	Method Blank	105	87	95
MB 680-229916/6	Method Blank	107	93	99
MB 680-229917/6	Method Blank	106	88	94
MB 680-229981/6	Method Blank	108	92	99
MB 680-230154/6	Method Blank	109	92	98
MB 680-230231/6	Method Blank	110	94	97

Surrogate Legend

BFB = 4-Bromofluorobenzene

DBFM = Dibromofluoromethane

TOL = Toluene-d8 (Surr)

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Surrogate Summary

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		PHL	2FP	TBP	NBZ	FBP	TPH
Lab Sample ID	Client Sample ID	(25-130)	(25-130)	(31-141)	(39-130)	(38-130)	(10-143)
680-76926-1	BSA-MW-4D-0212	72	71	82	76	72	63
680-76926-1 MS	BSA-MW-4D-0212	67	67	86	72	73	34
680-76926-1 MSD	BSA-MW-4D-0212	71	72	89	77	76	50
680-76926-3	CPA-MW-4D-0212	59	57	75	65	65	32
680-76926-3 - DL	CPA-MW-4D-0212	0 D	0 D	0 D	0 D	0 D	0 D
680-76926-5	BSA-MW-5D-0212	67	66	81	74	74	54
680-76926-8	BSA-MW-2D-0212	62	59	76	69	69	30
680-76926-10	CPA-MW-3D-0212	69	67	79	73	77	41
680-76926-12	CPA-MW-5D-0212	73	69	83	74	72	77
680-76926-14	BSA-MW-3D-0212	69	69	76	76	75	29
680-76957-1	BSA-MW-1S-0212	63	63	76	68	67	27
680-76957-3	BSA-MW-1S-0212-EB	66	65	90	74	87	75
680-76957-4	CPA-MW-1D-0212	0 D	0 D	0 D	0 D	0 D	0 D
680-76957-6	CPA-MW-2D-0212	85	87	76	64	67	24
680-76957-8	CPA-MW-2D-0212-AD	82	81	76	64	65	29
LCS 680-229467/20-A	Lab Control Sample	67	69	78	76	77	65
MB 680-229467/19-A	Method Blank	67	65	75	74	71	70

Surrogate Legend

PHL = Phenol-d5
2FP = 2-Fluorophenol
TBP = 2,4,6-Tribromophenol
NBZ = Nitrobenzene-d5
FBP = 2-Fluorobiphenyl
TPH = Terphenyl-d14

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

Lab Sample ID: MB 680-229424/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229424

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/17/12 16:59	1
Chlorobenzene	1.0	U	1.0		ug/L			02/17/12 16:59	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 16:59	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 16:59	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 16:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*		*70 - 130*		*02/17/12 16:59*	*1*
Dibromofluoromethane	*91*		*70 - 130*		*02/17/12 16:59*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/17/12 16:59*	*1*

Lab Sample ID: LCS 680-229424/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229424

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	49.7		ug/L		99	70 - 130
Chlorobenzene	50.0	52.8		ug/L		106	70 - 130
1,2-Dichlorobenzene	50.0	52.3		ug/L		105	70 - 130
1,3-Dichlorobenzene	50.0	55.0		ug/L		110	70 - 130
1,4-Dichlorobenzene	50.0	55.9		ug/L		112	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*94*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 680-229424/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229424

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	48.3		ug/L		97	70 - 130	3	30
Chlorobenzene	50.0	51.4		ug/L		103	70 - 130	3	30
1,2-Dichlorobenzene	50.0	50.3		ug/L		101	70 - 130	4	30
1,3-Dichlorobenzene	50.0	53.6		ug/L		107	70 - 130	2	30
1,4-Dichlorobenzene	50.0	53.9		ug/L		108	70 - 130	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*70 - 130*
Dibromofluoromethane	*91*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 680-229425/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/17/12 17:12	1

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

Lab Sample ID: MB 680-229425/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229425

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:12	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:12	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:12	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/17/12 17:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*		*70 - 130*		*02/17/12 17:12*	*1*
Dibromofluoromethane	*88*		*70 - 130*		*02/17/12 17:12*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*02/17/12 17:12*	*1*

Lab Sample ID: LCS 680-229425/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229425

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	48.0		ug/L		96	70 - 130
Chlorobenzene	50.0	51.3		ug/L		103	70 - 130
1,2-Dichlorobenzene	50.0	51.9		ug/L		104	70 - 130
1,3-Dichlorobenzene	50.0	52.4		ug/L		105	70 - 130
1,4-Dichlorobenzene	50.0	52.8		ug/L		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
Dibromofluoromethane	*91*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 680-229425/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229425

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	48.4		ug/L		97	70 - 130	1	30
Chlorobenzene	50.0	52.9		ug/L		106	70 - 130	3	30
1,2-Dichlorobenzene	50.0	53.9		ug/L		108	70 - 130	4	30
1,3-Dichlorobenzene	50.0	54.5		ug/L		109	70 - 130	4	30
1,4-Dichlorobenzene	50.0	55.2		ug/L		110	70 - 130	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*70 - 130*
Dibromofluoromethane	*95*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 680-229802/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229802

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/22/12 17:49	1
Chlorobenzene	1.0	U	1.0		ug/L			02/22/12 17:49	1

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

Lab Sample ID: MB 680-229802/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229802

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/22/12 17:49	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/22/12 17:49	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/22/12 17:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*105*		*70 - 130*		*02/22/12 17:49*	*1*
Dibromofluoromethane	*87*		*70 - 130*		*02/22/12 17:49*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*02/22/12 17:49*	*1*

Lab Sample ID: LCS 680-229802/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229802

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	47.9		ug/L		96	70 - 130
Chlorobenzene	50.0	51.6		ug/L		103	70 - 130
1,2-Dichlorobenzene	50.0	52.3		ug/L		105	70 - 130
1,3-Dichlorobenzene	50.0	52.5		ug/L		105	70 - 130
1,4-Dichlorobenzene	50.0	53.1		ug/L		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
Dibromofluoromethane	*94*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 680-229802/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229802

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	47.6		ug/L		95	70 - 130	1	30
Chlorobenzene	50.0	50.9		ug/L		102	70 - 130	1	30
1,2-Dichlorobenzene	50.0	51.7		ug/L		103	70 - 130	1	30
1,3-Dichlorobenzene	50.0	51.6		ug/L		103	70 - 130	2	30
1,4-Dichlorobenzene	50.0	53.0		ug/L		106	70 - 130	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*70 - 130*
Dibromofluoromethane	*91*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: MB 680-229916/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229916

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/23/12 16:45	1
Chlorobenzene	1.0	U	1.0		ug/L			02/23/12 16:45	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/23/12 16:45	1

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

Lab Sample ID: MB 680-229916/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229916

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/23/12 16:45	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/23/12 16:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*		*70 - 130*		*02/23/12 16:45*	*1*
Dibromofluoromethane	*93*		*70 - 130*		*02/23/12 16:45*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*02/23/12 16:45*	*1*

Lab Sample ID: LCS 680-229916/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229916

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	47.5		ug/L		95	70 - 130
Chlorobenzene	50.0	49.3		ug/L		99	70 - 130
1,2-Dichlorobenzene	50.0	49.2		ug/L		98	70 - 130
1,3-Dichlorobenzene	50.0	51.7		ug/L		103	70 - 130
1,4-Dichlorobenzene	50.0	52.2		ug/L		104	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*70 - 130*
Dibromofluoromethane	*89*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 680-229916/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229916

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	47.8		ug/L		96	70 - 130	1	30
Chlorobenzene	50.0	49.6		ug/L		99	70 - 130	1	30
1,2-Dichlorobenzene	50.0	49.4		ug/L		99	70 - 130	0	30
1,3-Dichlorobenzene	50.0	52.4		ug/L		105	70 - 130	1	30
1,4-Dichlorobenzene	50.0	52.2		ug/L		104	70 - 130	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
Dibromofluoromethane	*90*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: 680-76926-1 MS — **Client Sample ID: BSA-MW-4D-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229916

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	34		1000	1030		ug/L		100	70 - 130
Chlorobenzene	2300		1000	3160		ug/L		83	70 - 130
1,2-Dichlorobenzene	20	U	1000	1050		ug/L		104	70 - 130
1,3-Dichlorobenzene	20	U	1000	1100		ug/L		110	70 - 130

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

Lab Sample ID: 680-76926-1 MS — **Client Sample ID: BSA-MW-4D-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229916

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	47		1000	1150		ug/L		110	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*70 - 130*
Dibromofluoromethane	*93*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: 680-76926-1 MSD — **Client Sample ID: BSA-MW-4D-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229916

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	34		1000	1030		ug/L		99	70 - 130	1	30
Chlorobenzene	2300		1000	3320		ug/L		99	70 - 130	5	30
1,2-Dichlorobenzene	20	U	1000	1050		ug/L		104	70 - 130	0	30
1,3-Dichlorobenzene	20	U	1000	1080		ug/L		108	70 - 130	2	30
1,4-Dichlorobenzene	47		1000	1140		ug/L		110	70 - 130	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*70 - 130*
Dibromofluoromethane	*90*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: MB 680-229917/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229917

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/23/12 17:00	1
Chlorobenzene	1.0	U	1.0		ug/L			02/23/12 17:00	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/23/12 17:00	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/23/12 17:00	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/23/12 17:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*106*		*70 - 130*		*02/23/12 17:00*	*1*
Dibromofluoromethane	*88*		*70 - 130*		*02/23/12 17:00*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*02/23/12 17:00*	*1*

Lab Sample ID: LCS 680-229917/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229917

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	49.3		ug/L		99	70 - 130
Chlorobenzene	50.0	52.3		ug/L		105	70 - 130
1,2-Dichlorobenzene	50.0	52.4		ug/L		105	70 - 130
1,3-Dichlorobenzene	50.0	52.6		ug/L		105	70 - 130
1,4-Dichlorobenzene	50.0	53.3		ug/L		107	70 - 130

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

Lab Sample ID: LCS 680-229917/3
Matrix: Water
Analysis Batch: 229917

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	101		70 - 130
Dibromofluoromethane	93		70 - 130
Toluene-d8 (Surr)	98		70 - 130

Lab Sample ID: LCSD 680-229917/4
Matrix: Water
Analysis Batch: 229917

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	48.5		ug/L		97	70 - 130	2	30
Chlorobenzene	50.0	51.4		ug/L		103	70 - 130	2	30
1,2-Dichlorobenzene	50.0	52.1		ug/L		104	70 - 130	1	30
1,3-Dichlorobenzene	50.0	51.8		ug/L		104	70 - 130	1	30
1,4-Dichlorobenzene	50.0	53.0		ug/L		106	70 - 130	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	99		70 - 130
Dibromofluoromethane	93		70 - 130
Toluene-d8 (Surr)	97		70 - 130

Lab Sample ID: MB 680-229981/6
Matrix: Water
Analysis Batch: 229981

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/24/12 12:23	1
Chlorobenzene	1.0	U	1.0		ug/L			02/24/12 12:23	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/24/12 12:23	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/24/12 12:23	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/24/12 12:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	108		70 - 130		02/24/12 12:23	1
Dibromofluoromethane	92		70 - 130		02/24/12 12:23	1
Toluene-d8 (Surr)	99		70 - 130		02/24/12 12:23	1

Lab Sample ID: LCS 680-229981/3
Matrix: Water
Analysis Batch: 229981

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	50.1		ug/L		100	70 - 130
Chlorobenzene	50.0	51.5		ug/L		103	70 - 130
1,2-Dichlorobenzene	50.0	51.0		ug/L		102	70 - 130
1,3-Dichlorobenzene	50.0	55.1		ug/L		110	70 - 130
1,4-Dichlorobenzene	50.0	54.8		ug/L		110	70 - 130

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

Lab Sample ID: LCS 680-229981/3
Matrix: Water
Analysis Batch: 229981

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*70 - 130*
Dibromofluoromethane	*95*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 680-229981/4
Matrix: Water
Analysis Batch: 229981

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	47.7		ug/L		95	70 - 130	5	30
Chlorobenzene	50.0	51.1		ug/L		102	70 - 130	1	30
1,2-Dichlorobenzene	50 0	49.8		ug/L		100	70 - 130	2	30
1,3-Dichlorobenzene	50.0	53.2		ug/L		106	70 - 130	3	30
1,4-Dichlorobenzene	50.0	53.9		ug/L		108	70 - 130	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*70 - 130*
Dibromofluoromethane	*92*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: MB 680-230154/6
Matrix: Water
Analysis Batch: 230154

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/27/12 17:26	1
Chlorobenzene	1 0	U	1.0		ug/L			02/27/12 17:26	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/27/12 17:26	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/27/12 17:26	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/27/12 17:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*		*70 - 130*		*02/27/12 17:26*	*1*
Dibromofluoromethane	*92*		*70 - 130*		*02/27/12 17:26*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*02/27/12 17:26*	*1*

Lab Sample ID: LCS 680-230154/3
Matrix: Water
Analysis Batch: 230154

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	49.4		ug/L		99	70 - 130
Chlorobenzene	50.0	53.4		ug/L		107	70 - 130
1,2-Dichlorobenzene	50 0	53.9		ug/L		108	70 - 130
1,3-Dichlorobenzene	50.0	57.2		ug/L		114	70 - 130
1,4-Dichlorobenzene	50.0	58.2		ug/L		116	70 - 130

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

Lab Sample ID: LCS 680-230154/3
Matrix: Water
Analysis Batch: 230154

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	106		70 - 130
Dibromofluoromethane	96		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 680-230154/4
Matrix: Water
Analysis Batch: 230154

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	50.4		ug/L		101	70 - 130	2	30
Chlorobenzene	50.0	53.4		ug/L		107	70 - 130	0	30
1,2-Dichlorobenzene	50.0	54.5		ug/L		109	70 - 130	1	30
1,3-Dichlorobenzene	50.0	57.3		ug/L		115	70 - 130	0	30
1,4-Dichlorobenzene	50.0	58.1		ug/L		116	70 - 130	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	106		70 - 130
Dibromofluoromethane	96		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: MB 680-230231/6
Matrix: Water
Analysis Batch: 230231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0		ug/L			02/28/12 13:09	1
Chlorobenzene	1.0	U	1.0		ug/L			02/28/12 13:09	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			02/28/12 13:09	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			02/28/12 13:09	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			02/28/12 13:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	110		70 - 130		02/28/12 13:09	1
Dibromofluoromethane	94		70 - 130		02/28/12 13:09	1
Toluene-d8 (Surr)	97		70 - 130		02/28/12 13:09	1

Lab Sample ID: LCS 680-230231/3
Matrix: Water
Analysis Batch: 230231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	49.4		ug/L		99	70 - 130
Chlorobenzene	50.0	52.8		ug/L		106	70 - 130
1,2-Dichlorobenzene	50.0	54.7		ug/L		109	70 - 130
1,3-Dichlorobenzene	50.0	57.7		ug/L		115	70 - 130
1,4-Dichlorobenzene	50.0	58.5		ug/L		117	70 - 130

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

Lab Sample ID: LCS 680-230231/3
Matrix: Water
Analysis Batch: 230231

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*92*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 680-230231/4
Matrix: Water
Analysis Batch: 230231

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	48.9		ug/L		98	70 - 130	1	30
Chlorobenzene	50.0	52.7		ug/L		105	70 - 130	0	30
1,2-Dichlorobenzene	50.0	54.9		ug/L		110	70 - 130	0	30
1,3-Dichlorobenzene	50.0	57.7		ug/L		115	70 - 130	0	30
1,4-Dichlorobenzene	50.0	58.4		ug/L		117	70 - 130	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*95*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 680-229467/19-A
Matrix: Water
Analysis Batch: 229965

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 229467

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	20	U	20		ug/L		02/20/12 14:45	02/24/12 03:55	1
2-Chlorophenol	10	U	10		ug/L		02/20/12 14:45	02/24/12 03:55	1
1,4-Dioxane	10	U	10		ug/L		02/20/12 14:45	02/24/12 03:55	1
1,2,4-Trichlorobenzene	10	U	10		ug/L		02/20/12 14:45	02/24/12 03:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*67*		*25 - 130*	*02/20/12 14:45*	*02/24/12 03:55*	*1*
2-Fluorophenol	*65*		*25 - 130*	*02/20/12 14:45*	*02/24/12 03:55*	*1*
2,4,6-Tribromophenol	*75*		*31 - 141*	*02/20/12 14:45*	*02/24/12 03:55*	*1*
Nitrobenzene-d5	*74*		*39 - 130*	*02/20/12 14:45*	*02/24/12 03:55*	*1*
2-Fluorobiphenyl	*71*		*38 - 130*	*02/20/12 14:45*	*02/24/12 03:55*	*1*
Terphenyl-d14	*70*		*10 - 143*	*02/20/12 14:45*	*02/24/12 03:55*	*1*

Lab Sample ID: LCS 680-229467/20-A
Matrix: Water
Analysis Batch: 229965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 229467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	100	43.4		ug/L		43	42 - 130
2-Chlorophenol	100	75.3		ug/L		75	57 - 130
1,4-Dioxane	100	53.2		ug/L		53	35 - 130
1,2,4-Trichlorobenzene	100	69.1		ug/L		69	42 - 130

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

Lab Sample ID: LCS 680-229467/20-A
Matrix: Water
Analysis Batch: 229965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 229467

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Phenol-d5	*67*		*25 - 130*
2-Fluorophenol	*69*		*25 - 130*
2,4,6-Tribromophenol	*78*		*31 - 141*
Nitrobenzene-d5	*76*		*39 - 130*
2-Fluorobiphenyl	*77*		*38 - 130*
Terphenyl-d14	*65*		*10 - 143*

Lab Sample ID: 680-76926-1 MS
Matrix: Water
Analysis Batch: 229965

Client Sample ID: BSA-MW-4D-0212
Prep Type: Total/NA
Prep Batch: 229467

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	19		94.7	43.1		ug/L		46	42 - 130
2-Chlorophenol	10		94.7	81.2		ug/L		75	57 - 130
1,4-Dioxane	20		94.7	62.3		ug/L		45	35 - 130
1,2,4-Trichlorobenzene	9.5	U	94.7	65.1		ug/L		69	42 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Phenol-d5	*67*		*25 - 130*
2-Fluorophenol	*67*		*25 - 130*
2,4,6-Tribromophenol	*86*		*31 - 141*
Nitrobenzene-d5	*72*		*39 - 130*
2-Fluorobiphenyl	*73*		*38 - 130*
Terphenyl-d14	*34*		*10 - 143*

Lab Sample ID: 680-76926-1 MSD
Matrix: Water
Analysis Batch: 229965

Client Sample ID: BSA-MW-4D-0212
Prep Type: Total/NA
Prep Batch: 229467

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloroaniline	19		94.8	52.1		ug/L		55	42 - 130	19	50
2-Chlorophenol	10		94.8	86.1		ug/L		80	57 - 130	6	50
1,4-Dioxane	20		94.8	65.9		ug/L		49	35 - 130	6	50
1,2,4-Trichlorobenzene	9.5	U	94.8	68.0		ug/L		72	42 - 130	4	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Phenol-d5	*71*		*25 - 130*
2-Fluorophenol	*72*		*25 - 130*
2,4,6-Tribromophenol	*89*		*31 - 141*
Nitrobenzene-d5	*77*		*39 - 130*
2-Fluorobiphenyl	*76*		*38 - 130*
Terphenyl-d14	*50*		*10 - 143*

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Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-229639/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229639

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	1.1	U	1.1		ug/L			02/21/12 14:18	1
Ethylene	1.0	U	1.0		ug/L			02/21/12 14:18	1
Methane	0.58	U	0.58		ug/L			02/21/12 14:18	1

Lab Sample ID: LCS 680-229639/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229639

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	282	322		ug/L		114	75 - 125
Ethylene	271	324		ug/L		120	75 - 125
Methane	153	177		ug/L		116	75 - 125

Lab Sample ID: LCSD 680-229639/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229639

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	282	319		ug/L		113	75 - 125	1	30
Ethylene	271	316		ug/L		117	75 - 125	3	30
Methane	153	176		ug/L		115	75 - 125	1	30

Lab Sample ID: MB 680-229652/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229652

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58		ug/L			02/21/12 14:18	1

Lab Sample ID: LCS 680-229652/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	1910	1760		ug/L		92	75 - 125

Lab Sample ID: LCSD 680-229652/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229652

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	1910	2220		ug/L		116	75 - 125	23	30

Lab Sample ID: MB 680-229759/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229759

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	1.1	U	1.1		ug/L			02/22/12 11:57	1
Ethylene	1.0	U	1.0		ug/L			02/22/12 11:57	1
Methane	0.58	U	0.58		ug/L			02/22/12 11:57	1

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Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 680-229759/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	282	279		ug/L		99	75 - 125
Ethylene	271	276		ug/L		102	75 - 125
Methane	153	168		ug/L		110	75 - 125

Lab Sample ID: LCSD 680-229759/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229759

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	282	271		ug/L		96	75 - 125	3	30
Ethylene	271	257		ug/L		95	75 - 125	7	30
Methane	153	151		ug/L		99	75 - 125	11	30

Lab Sample ID: MB 680-229763/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229763

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.58	U	0.58		ug/L			02/22/12 11:57	1

Lab Sample ID: LCS 680-229763/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229763

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	1910	1620		ug/L		85	75 - 125

Lab Sample ID: LCSD 680-229763/14 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229763

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	1910	1650		ug/L		86	75 - 125	2	30

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 680-229248/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 229588 — **Prep Batch: 229248**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.050	U	0.050		mg/L		02/16/12 11:21	02/20/12 22:12	1
Iron, Dissolved	0.050	U	0.050		mg/L		02/16/12 11:21	02/20/12 22:12	1
Manganese	0.010	U	0.010		mg/L		02/16/12 11:21	02/20/12 22:12	1
Manganese, Dissolved	0.010	U	0.010		mg/L		02/16/12 11:21	02/20/12 22:12	1

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Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 680-229248/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 229588 — **Prep Batch: 229248**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	1.00	1.04		mg/L		104	75 - 125
Iron, Dissolved	1.00	1.04		mg/L		104	75 - 125
Manganese	0.500	0.512		mg/L		102	75 - 125
Manganese, Dissolved	0.500	0.512		mg/L		102	75 - 125

Lab Sample ID: 680-76926-1 MS — **Client Sample ID: BSA-MW-4D-0212**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 229588 — **Prep Batch: 229248**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	7.3		1.00	8.17	4	mg/L		83	75 - 125
Manganese	0.58		0.500	1.08		mg/L		101	75 - 125

Lab Sample ID: 680-76926-1 MSD — **Client Sample ID: BSA-MW-4D-0212**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 229588 — **Prep Batch: 229248**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	7.3		1.00	8.06	4	mg/L		72	75 - 125	1	20
Manganese	0.58		0.500	1.07		mg/L		98	75 - 125	1	20

Lab Sample ID: MB 680-229352/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 229863 — **Prep Batch: 229352**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.050	U	0.050		mg/L		02/17/12 09:53	02/22/12 21:09	1
Iron, Dissolved	0.050	U	0.050		mg/L		02/17/12 09:53	02/22/12 21:09	1
Manganese	0.010	U	0.010		mg/L		02/17/12 09:53	02/22/12 21:09	1
Manganese, Dissolved	0.010	U	0.010		mg/L		02/17/12 09:53	02/22/12 21:09	1

Lab Sample ID: LCS 680-229352/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 229863 — **Prep Batch: 229352**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	1.00	1.02		mg/L		102	75 - 125
Iron, Dissolved	1.00	1.02		mg/L		102	75 - 125
Manganese	0.500	0.514		mg/L		103	75 - 125
Manganese, Dissolved	0.500	0.514		mg/L		103	75 - 125

Method: 310.1 - Alkalinity

Lab Sample ID: MB 680-229701/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229701

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0		mg/L			02/21/12 15:01	1
Carbon Dioxide, Free	5.0	U	5.0		mg/L			02/21/12 15:01	1

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Method: 310.1 - Alkalinity (Continued)

Lab Sample ID: LCS 680-229701/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229701

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	250	244		mg/L		98	80 - 120

Lab Sample ID: LCSD 680-229701/32 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229701

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity	250	246		mg/L		98	80 - 120	1	30

Lab Sample ID: 680-76926-8 DU — **Client Sample ID: BSA-MW-2D-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229701

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	690		686		mg/L		0.2	30
Carbon Dioxide, Free	30		30.1		mg/L		0.3	30

Lab Sample ID: MB 680-229818/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229818

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0		mg/L			02/22/12 18:28	1
Carbon Dioxide, Free	5.0	U	5.0		mg/L			02/22/12 18:28	1

Lab Sample ID: LCS 680-229818/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229818

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	250	245		mg/L		98	80 - 120

Lab Sample ID: LCSD 680-229818/32 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229818

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity	250	246		mg/L		98	80 - 120	0	30

Method: 325.2 - Chloride

Lab Sample ID: MB 680-230187/27 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230187

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0		mg/L			02/28/12 09:58	1

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Method: 325.2 - Chloride (Continued)

Lab Sample ID: LCS 680-230187/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230187

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.0		mg/L		100	85 - 115

Lab Sample ID: 680-76926-14 DU — **Client Sample ID: BSA-MW-3D-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230187

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	130		131		mg/L		0.6	30

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-229199/14 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229199

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U	0.050		mg/L			02/15/12 15:25	1

Lab Sample ID: LCS 680-229199/15 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229199

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.497	0.503		mg/L		101	90 - 110
Nitrate Nitrite as N	0.998	1.02		mg/L		102	90 - 110
Nitrite as N	0.502	0.513		mg/L		102	90 - 110

Lab Sample ID: 680-76926-10 DU — **Client Sample ID: CPA-MW-3D-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229199

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	0.050	U	0.050	U	mg/L		NC	10

Lab Sample ID: MB 680-229392/14 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U	0.050		mg/L			02/16/12 15:32	1

Lab Sample ID: LCS 680-229392/15 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.497	0.504		mg/L		101	90 - 110
Nitrate Nitrite as N	0.998	1.00		mg/L		100	90 - 110
Nitrite as N	0.502	0.499		mg/L		99	90 - 110

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Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 680-76957-1 MS — **Client Sample ID: BSA-MW-1S-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.050	U	0.497	0.512		mg/L		103	90 - 110
Nitrate Nitrite as N	0.050		0.998	1.03		mg/L		101	90 - 110
Nitrite as N	0.050		0.502	0.518		mg/L		100	90 - 110

Lab Sample ID: 680-76957-1 MSD — **Client Sample ID: BSA-MW-1S-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229392

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.050	U	0.497	0.506		mg/L		102	90 - 110	1	10
Nitrate Nitrite as N	0.050		0.998	1.02		mg/L		101	90 - 110	1	10
Nitrite as N	0.050		0.502	0.519		mg/L		100	90 - 110	0	10

Method: 375.4 - Sulfate

Lab Sample ID: MB 680-230125/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230125

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	5.0	U	5.0		mg/L			02/27/12 12:28	1

Lab Sample ID: LCS 680-230125/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230125

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	19.0		mg/L		95	75 - 125

Lab Sample ID: MB 680-230428/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230428

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	5.0	U	5.0		mg/L			03/01/12 10:42	1

Lab Sample ID: LCS 680-230428/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230428

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	19.2		mg/L		96	75 - 125

Lab Sample ID: 680-76957-1 MS — **Client Sample ID: BSA-MW-1S-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230428

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50	U	200	196		mg/L		98	75 - 125

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Method: 375.4 - Sulfate (Continued)

Lab Sample ID: 680-76957-1 MSD — **Client Sample ID: BSA-MW-1S-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230428

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	50	U	200	193		mg/L		97	75 - 125	2	30

Method: 415.1 - DOC

Lab Sample ID: 680-76926-2 MS — **Client Sample ID: BSA-MW-4D-F(0.2)-0212**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 229371

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon	5.8		20.0	22.8		mg/L		85	80 - 120

Lab Sample ID: 680-76926-2 MSD — **Client Sample ID: BSA-MW-4D-F(0.2)-0212**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 229371

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dissolved Organic Carbon	5.8		20.0	22.6		mg/L		84	80 - 120	1	20

Lab Sample ID: MB 680-230090/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 230090

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.0		mg/L			02/24/12 14:40	1

Lab Sample ID: LCS 680-230090/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 230090

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon	20.0	18.1		mg/L		90	80 - 120

Lab Sample ID: 680-76957-2 MS — **Client Sample ID: BSA-MW-1S-F(0.2)-0212**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 230090

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon	4.9		20.0	22.7		mg/L		89	80 - 120

Lab Sample ID: 680-76957-2 MSD — **Client Sample ID: BSA-MW-1S-F(0.2)-0212**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 230090

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dissolved Organic Carbon	4.9		20.0	22.6		mg/L		88	80 - 120	1	20

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QC Sample Results

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Method: 415.1 - TOC

Lab Sample ID: MB 680-229786/65 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229786

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0		mg/L			02/22/12 10:03	1

Lab Sample ID: LCS 680-229786/67 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229786

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	20.0	20.3		mg/L		102	80 - 120

Lab Sample ID: 680-76926-1 MS — **Client Sample ID: BSA-MW-4D-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229786

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	6.5		20.0	25.2		mg/L		94	80 - 120

Lab Sample ID: 680-76926-1 MSD — **Client Sample ID: BSA-MW-4D-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 229786

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	6.5		20.0	25.2		mg/L		93	80 - 120	0	25

Lab Sample ID: MB 680-230075/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230075

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0		mg/L			02/24/12 14:50	1

Lab Sample ID: LCS 680-230075/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230075

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	20.0	20.1		mg/L		100	80 - 120

Lab Sample ID: 680-76957-1 DU — **Client Sample ID: BSA-MW-1S-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230075

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	5.4		5.21		mg/L		3	25

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QC Association Summary

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

GC/MS VOA

Analysis Batch: 229424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-7	1Q12 LTM Trip Blank #1	Total/NA	Water	8260B	
680-76926-16	1Q12 LTM Trip Blank #2	Total/NA	Water	8260B	
LCS 680-229424/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-229424/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-229424/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 229425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1	BSA-MW-4D-0212	Total/NA	Water	8260B	
680-76926-3	CPA-MW-4D-0212	Total/NA	Water	8260B	
LCS 680-229425/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-229425/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-229425/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 229802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-5	BSA-MW-5D-0212	Total/NA	Water	8260B	
680-76926-12	CPA-MW-5D-0212	Total/NA	Water	8260B	
LCS 680-229802/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-229802/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-229802/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 229916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1 MS	BSA-MW-4D-0212	Total/NA	Water	8260B	
680-76926-1 MSD	BSA-MW-4D-0212	Total/NA	Water	8260B	
LCS 680-229916/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-229916/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-229916/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 229917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-10	CPA-MW-3D-0212	Total/NA	Water	8260B	
680-76926-14	BSA-MW-3D-0212	Total/NA	Water	8260B	
LCS 680-229917/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-229917/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-229917/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 229981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76957-3	BSA-MW-1S-0212-EB	Total/NA	Water	8260B	
680-76957-9	1Q12 LTM Trip Blank #3	Total/NA	Water	8260B	
LCS 680-229981/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-229981/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-229981/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 230154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76957-1	BSA-MW-1S-0212	Total/NA	Water	8260B	
680-76957-6	CPA-MW-2D-0212	Total/NA	Water	8260B	
680-76957-8	CPA-MW-2D-0212-AD	Total/NA	Water	8260B	
LCS 680-230154/3	Lab Control Sample	Total/NA	Water	8260B	

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GC/MS VOA (Continued)

Analysis Batch: 230154 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 680-230154/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-230154/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 230231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-8	BSA-MW-2D-0212	Total/NA	Water	8260B	
680-76957-4	CPA-MW-1D-0212	Total/NA	Water	8260B	
LCS 680-230231/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-230231/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-230231/6	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 229467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1	BSA-MW-4D-0212	Total/NA	Water	3520C	
680-76926-1 MS	BSA-MW-4D-0212	Total/NA	Water	3520C	
680-76926-1 MSD	BSA-MW-4D-0212	Total/NA	Water	3520C	
680-76926-3	CPA-MW-4D-0212	Total/NA	Water	3520C	
680-76926-3 - DL	CPA-MW-4D-0212	Total/NA	Water	3520C	
680-76926-5	BSA-MW-5D-0212	Total/NA	Water	3520C	
680-76926-8	BSA-MW-2D-0212	Total/NA	Water	3520C	
680-76926-10	CPA-MW-3D-0212	Total/NA	Water	3520C	
680-76926-12	CPA-MW-5D-0212	Total/NA	Water	3520C	
680-76926-14	BSA-MW-3D-0212	Total/NA	Water	3520C	
680-76957-1	BSA-MW-1S-0212	Total/NA	Water	3520C	
680-76957-3	BSA-MW-1S-0212-EB	Total/NA	Water	3520C	
680-76957-4	CPA-MW-1D-0212	Total/NA	Water	3520C	
680-76957-6	CPA-MW-2D-0212	Total/NA	Water	3520C	
680-76957-8	CPA-MW-2D-0212-AD	Total/NA	Water	3520C	
LCS 680-229467/20-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-229467/19-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 229965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1	BSA-MW-4D-0212	Total/NA	Water	8270C	229467
680-76926-1 MS	BSA-MW-4D-0212	Total/NA	Water	8270C	229467
680-76926-1 MSD	BSA-MW-4D-0212	Total/NA	Water	8270C	229467
LCS 680-229467/20-A	Lab Control Sample	Total/NA	Water	8270C	229467
MB 680-229467/19-A	Method Blank	Total/NA	Water	8270C	229467

Analysis Batch: 230045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-12	CPA-MW-5D-0212	Total/NA	Water	8270C	229467
680-76957-3	BSA-MW-1S-0212-EB	Total/NA	Water	8270C	229467
680-76957-6	CPA-MW-2D-0212	Total/NA	Water	8270C	229467
680-76957-8	CPA-MW-2D-0212-AD	Total/NA	Water	8270C	229467

Analysis Batch: 230171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-3	CPA-MW-4D-0212	Total/NA	Water	8270C	229467
680-76926-5	BSA-MW-5D-0212	Total/NA	Water	8270C	229467

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GC/MS Semi VOA (Continued)

Analysis Batch: 230171 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-8	BSA-MW-2D-0212	Total/NA	Water	8270C	229467
680-76926-10	CPA-MW-3D-0212	Total/NA	Water	8270C	229467
680-76926-14	BSA-MW-3D-0212	Total/NA	Water	8270C	229467
680-76957-1	BSA-MW-1S-0212	Total/NA	Water	8270C	229467
680-76957-4	CPA-MW-1D-0212	Total/NA	Water	8270C	229467

Analysis Batch: 231520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-3 - DL	CPA-MW-4D-0212	Total/NA	Water	8270C	229467

GC VOA

Analysis Batch: 229639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1	BSA-MW-4D-0212	Total/NA	Water	RSK-175	
680-76926-3	CPA-MW-4D-0212	Total/NA	Water	RSK-175	
680-76926-5	BSA-MW-5D-0212	Total/NA	Water	RSK-175	
LCS 680-229639/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-229639/3	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-229639/4	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 229652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-3	CPA-MW-4D-0212	Total/NA	Water	RSK-175	
680-76926-5	BSA-MW-5D-0212	Total/NA	Water	RSK-175	
LCS 680-229652/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-229652/3	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-229652/4	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 229759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-8	BSA-MW-2D-0212	Total/NA	Water	RSK-175	
680-76926-10	CPA-MW-3D-0212	Total/NA	Water	RSK-175	
680-76926-12	CPA-MW-5D-0212	Total/NA	Water	RSK-175	
680-76926-14	BSA-MW-3D-0212	Total/NA	Water	RSK-175	
680-76957-1	BSA-MW-1S-0212	Total/NA	Water	RSK-175	
680-76957-4	CPA-MW-1D-0212	Total/NA	Water	RSK-175	
680-76957-6	CPA-MW-2D-0212	Total/NA	Water	RSK-175	
LCS 680-229759/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-229759/3	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 680-229759/4	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 229763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-8	BSA-MW-2D-0212	Total/NA	Water	RSK-175	
680-76926-10	CPA-MW-3D-0212	Total/NA	Water	RSK-175	
680-76926-14	BSA-MW-3D-0212	Total/NA	Water	RSK-175	
680-76957-1	BSA-MW-1S-0212	Total/NA	Water	RSK-175	
680-76957-4	CPA-MW-1D-0212	Total/NA	Water	RSK-175	
680-76957-6	CPA-MW-2D-0212	Total/NA	Water	RSK-175	
LCS 680-229763/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-229763/14	Lab Control Sample Dup	Total/NA	Water	RSK-175	

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GC VOA (Continued)

Analysis Batch: 229763 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-229763/3	Method Blank	Total/NA	Water	RSK-175	

Metals

Prep Batch: 229248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1	BSA-MW-4D-0212	Total Recoverable	Water	3005A	
680-76926-1 MS	BSA-MW-4D-0212	Total Recoverable	Water	3005A	
680-76926-1 MSD	BSA-MW-4D-0212	Total Recoverable	Water	3005A	
680-76926-2	BSA-MW-4D-F(0.2)-0212	Dissolved	Water	3005A	
680-76926-3	CPA-MW-4D-0212	Total Recoverable	Water	3005A	
680-76926-4	CPA-MW-4D-F(0.2)-0212	Dissolved	Water	3005A	
680-76926-5	BSA-MW-5D-0212	Total Recoverable	Water	3005A	
680-76926-6	BSA-MW-5D-F(0.2)-0212	Dissolved	Water	3005A	
680-76926-8	BSA-MW-2D-0212	Total Recoverable	Water	3005A	
680-76926-9	BSA-MW-2D-F(0.2)-0212	Dissolved	Water	3005A	
680-76926-10	CPA-MW-3D-0212	Total Recoverable	Water	3005A	
680-76926-11	CPA-MW-3D-F(0.2)-0212	Dissolved	Water	3005A	
680-76926-12	CPA-MW-5D-0212	Total Recoverable	Water	3005A	
680-76926-13	CPA-MW-5D-F(0.2)-0212	Dissolved	Water	3005A	
680-76926-14	BSA-MW-3D-0212	Total Recoverable	Water	3005A	
680-76926-15	BSA-MW-3D-F(0.2)-0212	Dissolved	Water	3005A	
LCS 680-229248/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-229248/1-A	Method Blank	Total Recoverable	Water	3005A	

Prep Batch: 229352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76957-1	BSA-MW-1S-0212	Total Recoverable	Water	3005A	
680-76957-2	BSA-MW-1S-F(0.2)-0212	Dissolved	Water	3005A	
680-76957-4	CPA-MW-1D-0212	Total Recoverable	Water	3005A	
680-76957-5	CPA-MW-1D-F(0.2)-0212	Dissolved	Water	3005A	
680-76957-6	CPA-MW-2D-0212	Total Recoverable	Water	3005A	
680-76957-7	CPA-MW-2D-F(0.2)-0212	Dissolved	Water	3005A	
LCS 680-229352/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 680-229352/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 229588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1	BSA-MW-4D-0212	Total Recoverable	Water	6010B	229248
680-76926-1 MS	BSA-MW-4D-0212	Total Recoverable	Water	6010B	229248
680-76926-1 MSD	BSA-MW-4D-0212	Total Recoverable	Water	6010B	229248
680-76926-2	BSA-MW-4D-F(0.2)-0212	Dissolved	Water	6010B	229248
680-76926-3	CPA-MW-4D-0212	Total Recoverable	Water	6010B	229248
680-76926-4	CPA-MW-4D-F(0.2)-0212	Dissolved	Water	6010B	229248
680-76926-5	BSA-MW-5D-0212	Total Recoverable	Water	6010B	229248
680-76926-6	BSA-MW-5D-F(0.2)-0212	Dissolved	Water	6010B	229248
680-76926-8	BSA-MW-2D-0212	Total Recoverable	Water	6010B	229248
680-76926-9	BSA-MW-2D-F(0.2)-0212	Dissolved	Water	6010B	229248
680-76926-10	CPA-MW-3D-0212	Total Recoverable	Water	6010B	229248
680-76926-11	CPA-MW-3D-F(0.2)-0212	Dissolved	Water	6010B	229248
680-76926-12	CPA-MW-5D-0212	Total Recoverable	Water	6010B	229248
680-76926-13	CPA-MW-5D-F(0.2)-0212	Dissolved	Water	6010B	229248

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Metals (Continued)

Analysis Batch: 229588 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-14	BSA-MW-3D-0212	Total Recoverable	Water	6010B	229248
680-76926-15	BSA-MW-3D-F(0.2)-0212	Dissolved	Water	6010B	229248
LCS 680-229248/2-A	Lab Control Sample	Total Recoverable	Water	6010B	229248
MB 680-229248/1-A	Method Blank	Total Recoverable	Water	6010B	229248

Analysis Batch: 229863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76957-1	BSA-MW-1S-0212	Total Recoverable	Water	6010B	229352
680-76957-2	BSA-MW-1S-F(0.2)-0212	Dissolved	Water	6010B	229352
680-76957-4	CPA-MW-1D-0212	Total Recoverable	Water	6010B	229352
680-76957-5	CPA-MW-1D-F(0.2)-0212	Dissolved	Water	6010B	229352
680-76957-6	CPA-MW-2D-0212	Total Recoverable	Water	6010B	229352
680-76957-7	CPA-MW-2D-F(0.2)-0212	Dissolved	Water	6010B	229352
LCS 680-229352/2-A	Lab Control Sample	Total Recoverable	Water	6010B	229352
MB 680-229352/1-A	Method Blank	Total Recoverable	Water	6010B	229352

General Chemistry

Analysis Batch: 229199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1	BSA-MW-4D-0212	Total/NA	Water	353.2	
680-76926-3	CPA-MW-4D-0212	Total/NA	Water	353.2	
680-76926-5	BSA-MW-5D-0212	Total/NA	Water	353.2	
680-76926-8	BSA-MW-2D-0212	Total/NA	Water	353.2	
680-76926-10	CPA-MW-3D-0212	Total/NA	Water	353.2	
680-76926-10 DU	CPA-MW-3D-0212	Total/NA	Water	353.2	
680-76926-12	CPA-MW-5D-0212	Total/NA	Water	353.2	
680-76926-14	BSA-MW-3D-0212	Total/NA	Water	353.2	
LCS 680-229199/15	Lab Control Sample	Total/NA	Water	353.2	
MB 680-229199/14	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 229371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-2	BSA-MW-4D-F(0.2)-0212	Dissolved	Water	415.1	
680-76926-2 MS	BSA-MW-4D-F(0.2)-0212	Dissolved	Water	415.1	
680-76926-2 MSD	BSA-MW-4D-F(0.2)-0212	Dissolved	Water	415.1	
680-76926-4	CPA-MW-4D-F(0.2)-0212	Dissolved	Water	415.1	
680-76926-6	BSA-MW-5D-F(0.2)-0212	Dissolved	Water	415.1	
680-76926-9	BSA-MW-2D-F(0.2)-0212	Dissolved	Water	415.1	
680-76926-11	CPA-MW-3D-F(0.2)-0212	Dissolved	Water	415.1	
680-76926-13	CPA-MW-5D-F(0.2)-0212	Dissolved	Water	415.1	
680-76926-15	BSA-MW-3D-F(0.2)-0212	Dissolved	Water	415.1	

Analysis Batch: 229392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76957-1	BSA-MW-1S-0212	Total/NA	Water	353.2	
680-76957-1 MS	BSA-MW-1S-0212	Total/NA	Water	353.2	
680-76957-1 MSD	BSA-MW-1S-0212	Total/NA	Water	353.2	
680-76957-4	CPA-MW-1D-0212	Total/NA	Water	353.2	
680-76957-6	CPA-MW-2D-0212	Total/NA	Water	353.2	
LCS 680-229392/15	Lab Control Sample	Total/NA	Water	353.2	
MB 680-229392/14	Method Blank	Total/NA	Water	353.2	

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General Chemistry (Continued)

Analysis Batch: 229701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1	BSA-MW-4D-0212	Total/NA	Water	310.1	
680-76926-3	CPA-MW-4D-0212	Total/NA	Water	310.1	
680-76926-5	BSA-MW-5D-0212	Total/NA	Water	310.1	
680-76926-8	BSA-MW-2D-0212	Total/NA	Water	310.1	
680-76926-8 DU	BSA-MW-2D-0212	Total/NA	Water	310.1	
680-76926-10	CPA-MW-3D-0212	Total/NA	Water	310.1	
680-76926-12	CPA-MW-5D-0212	Total/NA	Water	310.1	
680-76926-14	BSA-MW-3D-0212	Total/NA	Water	310.1	
LCS 680-229701/6	Lab Control Sample	Total/NA	Water	310.1	
LCSD 680-229701/32	Lab Control Sample Dup	Total/NA	Water	310.1	
MB 680-229701/5	Method Blank	Total/NA	Water	310.1	

Analysis Batch: 229786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1	BSA-MW-4D-0212	Total/NA	Water	415.1	
680-76926-1 MS	BSA-MW-4D-0212	Total/NA	Water	415.1	
680-76926-1 MSD	BSA-MW-4D-0212	Total/NA	Water	415.1	
680-76926-3	CPA-MW-4D-0212	Total/NA	Water	415.1	
680-76926-5	BSA-MW-5D-0212	Total/NA	Water	415.1	
680-76926-8	BSA-MW-2D-0212	Total/NA	Water	415.1	
680-76926-10	CPA-MW-3D-0212	Total/NA	Water	415.1	
680-76926-12	CPA-MW-5D-0212	Total/NA	Water	415.1	
680-76926-14	BSA-MW-3D-0212	Total/NA	Water	415.1	
LCS 680-229786/67	Lab Control Sample	Total/NA	Water	415.1	
MB 680-229786/65	Method Blank	Total/NA	Water	415.1	

Analysis Batch: 229818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76957-1	BSA-MW-1S-0212	Total/NA	Water	310.1	
680-76957-4	CPA-MW-1D-0212	Total/NA	Water	310.1	
680-76957-6	CPA-MW-2D-0212	Total/NA	Water	310.1	
LCS 680-229818/6	Lab Control Sample	Total/NA	Water	310.1	
LCSD 680-229818/32	Lab Control Sample Dup	Total/NA	Water	310.1	
MB 680-229818/5	Method Blank	Total/NA	Water	310.1	

Analysis Batch: 230075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76957-1	BSA-MW-1S-0212	Total/NA	Water	415.1	
680-76957-1 DU	BSA-MW-1S-0212	Total/NA	Water	415.1	
680-76957-4	CPA-MW-1D-0212	Total/NA	Water	415.1	
680-76957-6	CPA-MW-2D-0212	Total/NA	Water	415.1	
LCS 680-230075/4	Lab Control Sample	Total/NA	Water	415.1	
MB 680-230075/2	Method Blank	Total/NA	Water	415.1	

Analysis Batch: 230090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76957-2	BSA-MW-1S-F(0.2)-0212	Dissolved	Water	415.1	
680-76957-2 MS	BSA-MW-1S-F(0.2)-0212	Dissolved	Water	415.1	
680-76957-2 MSD	BSA-MW-1S-F(0.2)-0212	Dissolved	Water	415.1	
680-76957-5	CPA-MW-1D-F(0.2)-0212	Dissolved	Water	415.1	
680-76957-7	CPA-MW-2D-F(0.2)-0212	Dissolved	Water	415.1	
LCS 680-230090/2	Lab Control Sample	Dissolved	Water	415.1	

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General Chemistry (Continued)

Analysis Batch: 230090 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-230090/1	Method Blank	Dissolved	Water	415.1	

Analysis Batch: 230125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1	BSA-MW-4D-0212	Total/NA	Water	375.4	
680-76926-3	CPA-MW-4D-0212	Total/NA	Water	375.4	
680-76926-5	BSA-MW-5D-0212	Total/NA	Water	375.4	
680-76926-8	BSA-MW-2D-0212	Total/NA	Water	375.4	
680-76926-10	CPA-MW-3D-0212	Total/NA	Water	375.4	
680-76926-12	CPA-MW-5D-0212	Total/NA	Water	375.4	
680-76926-14	BSA-MW-3D-0212	Total/NA	Water	375.4	
LCS 680-230125/2	Lab Control Sample	Total/NA	Water	375.4	
MB 680-230125/1	Method Blank	Total/NA	Water	375.4	

Analysis Batch: 230187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76926-1	BSA-MW-4D-0212	Total/NA	Water	325.2	
680-76926-3	CPA-MW-4D-0212	Total/NA	Water	325.2	
680-76926-5	BSA-MW-5D-0212	Total/NA	Water	325.2	
680-76926-8	BSA-MW-2D-0212	Total/NA	Water	325.2	
680-76926-10	CPA-MW-3D-0212	Total/NA	Water	325.2	
680-76926-12	CPA-MW-5D-0212	Total/NA	Water	325.2	
680-76926-14	BSA-MW-3D-0212	Total/NA	Water	325.2	
680-76926-14 DU	BSA-MW-3D-0212	Total/NA	Water	325.2	
680-76957-1	BSA-MW-1S-0212	Total/NA	Water	325.2	
680-76957-4	CPA-MW-1D-0212	Total/NA	Water	325.2	
680-76957-6	CPA-MW-2D-0212	Total/NA	Water	325.2	
LCS 680-230187/2	Lab Control Sample	Total/NA	Water	325.2	
MB 680-230187/27	Method Blank	Total/NA	Water	325.2	

Analysis Batch: 230428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-76957-1	BSA-MW-1S-0212	Total/NA	Water	375.4	
680-76957-1 MS	BSA-MW-1S-0212	Total/NA	Water	375.4	
680-76957-1 MSD	BSA-MW-1S-0212	Total/NA	Water	375.4	
680-76957-4	CPA-MW-1D-0212	Total/NA	Water	375.4	
680-76957-6	CPA-MW-2D-0212	Total/NA	Water	375.4	
LCS 680-230428/2	Lab Control Sample	Total/NA	Water	375.4	
MB 680-230428/1	Method Blank	Total/NA	Water	375.4	

US EPA ARCHIVE DOCUMENT

MAR 20 2012
TestAmerica Savannah

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-4D-0212

Lab Sample ID: 680-76926-1

Date Collected: 02/13/12 10:20
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	229425	02/17/12 20:58	WJC	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		1	229965	02/24/12 04:51	MES	TAL SAV
Total/NA	Analysis	RSK-175		1	229639	02/21/12 16:36	SMC	TAL SAV
Total Recoverable	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Total Recoverable	Analysis	6010B		1	229588	02/20/12 22:21	BCB	TAL SAV
Total/NA	Analysis	353.2		1	229199	02/15/12 15:40	JNC	TAL SAV
Total/NA	Analysis	310.1		1	229701	02/21/12 16:48	TH	TAL SAV
Total/NA	Analysis	415.1		1	229786	02/22/12 10:56	JR	TAL SAV
Total/NA	Analysis	375.4		5	230125	02/27/12 13:05	JR	TAL SAV
Total/NA	Analysis	325.2		2	230187	02/28/12 09:49	JR	TAL SAV

Client Sample ID: BSA-MW-4D-F(0.2)-0212

Lab Sample ID: 680-76926-2

Date Collected: 02/13/12 10:20
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Dissolved	Analysis	6010B		1	229588	02/20/12 22:52	BCB	TAL SAV
Dissolved	Analysis	415.1		1	229371	02/17/12 01:13	JR	TAL SAV

Client Sample ID: CPA-MW-4D-0212

Lab Sample ID: 680-76926-3

Date Collected: 02/13/12 13:35
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	229425	02/17/12 21:26	WJC	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		1	230171	02/25/12 16:24	MES	TAL SAV
Total/NA	Prep	3520C	DL		229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C	DL	10	231520	03/14/12 06:04	WHP	TAL SAV
Total/NA	Analysis	RSK-175		1	229639	02/21/12 16:49	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	229652	02/21/12 16:49	SMC	TAL SAV
Total Recoverable	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Total Recoverable	Analysis	6010B		1	229588	02/20/12 22:57	BCB	TAL SAV
Total/NA	Analysis	353.2		1	229199	02/15/12 15:41	JNC	TAL SAV
Total/NA	Analysis	310.1		1	229701	02/21/12 17:00	TH	TAL SAV
Total/NA	Analysis	415.1		1	229786	02/22/12 11:36	JR	TAL SAV
Total/NA	Analysis	375.4		1	230125	02/27/12 12:28	JR	TAL SAV
Total/NA	Analysis	325.2		5	230187	02/28/12 09:47	JR	TAL SAV

MAR 20 2012

TestAmerica Savannah

US EPA ARCHIVE DOCUMENT

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-4D-F(0.2)-0212

Lab Sample ID: 680-76926-4

Date Collected: 02/13/12 13:35
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Dissolved	Analysis	6010B		1	229588	02/20/12 23:01	BCB	TAL SAV
Dissolved	Analysis	415.1		1	229371	02/17/12 01:13	JR	TAL SAV

Client Sample ID: BSA-MW-5D-0212

Lab Sample ID: 680-76926-5

Date Collected: 02/13/12 12:30
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	229802	02/22/12 18:40	JG	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		1	230171	02/25/12 17:19	MES	TAL SAV
Total/NA	Analysis	RSK-175		1	229639	02/21/12 17:02	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	229652	02/21/12 17:02	SMC	TAL SAV
Total Recoverable	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Total Recoverable	Analysis	6010B		1	229588	02/20/12 23:06	BCB	TAL SAV
Total/NA	Analysis	353.2		1	229199	02/15/12 15:42	JNC	TAL SAV
Total/NA	Analysis	310.1		1	229701	02/21/12 17:12	TH	TAL SAV
Total/NA	Analysis	415.1		1	229786	02/22/12 11:51	JR	TAL SAV
Total/NA	Analysis	375.4		1	230125	02/27/12 12:28	JR	TAL SAV
Total/NA	Analysis	325.2		5	230187	02/28/12 09:47	JR	TAL SAV

Client Sample ID: BSA-MW-5D-F(0.2)-0212

Lab Sample ID: 680-76926-6

Date Collected: 02/13/12 12:30
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Dissolved	Analysis	6010B		1	229588	02/20/12 23:10	BCB	TAL SAV
Dissolved	Analysis	415.1		1	229371	02/17/12 01:13	JR	TAL SAV

Client Sample ID: 1Q12 LTM Trip Blank #1

Lab Sample ID: 680-76926-7

Date Collected: 02/13/12 00:00
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	229424	02/17/12 17:30	WJC	TAL SAV

MAR 20 2012

TestAmerica Savannah

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-2D-0212

Lab Sample ID: 680-76926-8

Date Collected: 02/14/12 14:35
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	230231	02/28/12 16:43	JG	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		1	230171	02/25/12 15:29	MES	TAL SAV
Total/NA	Analysis	RSK-175		1	229759	02/22/12 14:30	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	229763	02/22/12 14:30	SMC	TAL SAV
Total Recoverable	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Total Recoverable	Analysis	6010B		1	229588	02/20/12 23:15	BCB	TAL SAV
Total/NA	Analysis	353.2		1	229199	02/15/12 15:44	JNC	TAL SAV
Total/NA	Analysis	310.1		1	229701	02/21/12 17:33	TH	TAL SAV
Total/NA	Analysis	415.1		1	229786	02/22/12 12:08	JR	TAL SAV
Total/NA	Analysis	375.4		1	230125	02/27/12 12:28	JR	TAL SAV
Total/NA	Analysis	325.2		2	230187	02/28/12 09:49	JR	TAL SAV

Client Sample ID: BSA-MW-2D-F(0.2)-0212

Lab Sample ID: 680-76926-9

Date Collected: 02/14/12 14:35
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Dissolved	Analysis	6010B		1	229588	02/20/12 23:28	BCB	TAL SAV
Dissolved	Analysis	415.1		1	229371	02/17/12 01:13	JR	TAL SAV

Client Sample ID: CPA-MW-3D-0212

Lab Sample ID: 680-76926-10

Date Collected: 02/14/12 15:00
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	229917	02/23/12 19:11	WJC	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		1	230171	02/25/12 15:56	MES	TAL SAV
Total/NA	Analysis	RSK-175		1	229759	02/22/12 14:43	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	229763	02/22/12 14:43	SMC	TAL SAV
Total Recoverable	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Total Recoverable	Analysis	6010B		1	229588	02/20/12 23:33	BCB	TAL SAV
Total/NA	Analysis	353.2		1	229199	02/15/12 15:45	JNC	TAL SAV
Total/NA	Analysis	310.1		1	229701	02/21/12 17:21	TH	TAL SAV
Total/NA	Analysis	415.1		1	229786	02/22/12 12:22	JR	TAL SAV
Total/NA	Analysis	375.4		5	230125	02/27/12 13:35	JR	TAL SAV
Total/NA	Analysis	325.2		2	230187	02/28/12 09:49	JR	TAL SAV

MAR 20 2012
TestAmerica Savannah

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-3D-F(0.2)-0212

Lab Sample ID: 680-76926-11

Date Collected: 02/14/12 15:00
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Dissolved	Analysis	6010B		1	229588	02/20/12 23:37	BCB	TAL SAV
Dissolved	Analysis	415.1		1	229371	02/17/12 01:13	JR	TAL SAV

Client Sample ID: CPA-MW-5D-0212

Lab Sample ID: 680-76926-12

Date Collected: 02/14/12 10:00
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	229802	02/22/12 19:26	JG	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		1	230045	02/24/12 21:46	MES	TAL SAV
Total/NA	Analysis	RSK-175		1	229759	02/22/12 14:56	SMC	TAL SAV
Total Recoverable	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Total Recoverable	Analysis	6010B		1	229588	02/20/12 23:41	BCB	TAL SAV
Total/NA	Analysis	353.2		1	229199	02/15/12 15:47	JNC	TAL SAV
Total/NA	Analysis	310.1		1	229701	02/21/12 17:56	TH	TAL SAV
Total/NA	Analysis	415.1		1	229786	02/22/12 12:36	JR	TAL SAV
Total/NA	Analysis	375.4		20	230125	02/27/12 13:35	JR	TAL SAV
Total/NA	Analysis	325.2		5	230187	02/28/12 09:57	JR	TAL SAV

Client Sample ID: CPA-MW-5D-F(0.2)-0212

Lab Sample ID: 680-76926-13

Date Collected: 02/14/12 10:00
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Dissolved	Analysis	6010B		1	229588	02/20/12 23:46	BCB	TAL SAV
Dissolved	Analysis	415.1		1	229371	02/17/12 01:13	JR	TAL SAV

Client Sample ID: BSA-MW-3D-0212

Lab Sample ID: 680-76926-14

Date Collected: 02/14/12 11:30
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	229917	02/23/12 19:39	WJC	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		1	230171	02/25/12 16:51	MES	TAL SAV
Total/NA	Analysis	RSK-175		1	229759	02/22/12 15:09	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	229763	02/22/12 15:09	SMC	TAL SAV
Total Recoverable	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Total Recoverable	Analysis	6010B		1	229588	02/20/12 23:50	BCB	TAL SAV
Total/NA	Analysis	353.2		1	229199	02/15/12 15:48	JNC	TAL SAV

MAR 20 2012 TestAmerica Savanna

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-3D-0212

Lab Sample ID: 680-76926-14

Date Collected: 02/14/12 11:30
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	310.1		1	229701	02/21/12 18:07	TH	TAL SAV
Total/NA	Analysis	415.1		1	229786	02/22/12 13:29	JR	TAL SAV
Total/NA	Analysis	375.4		5	230125	02/27/12 13:35	JR	TAL SAV
Total/NA	Analysis	325.2		2	230187	02/28/12 09:57	JR	TAL SAV

Client Sample ID: BSA-MW-3D-F(0.2)-0212

Lab Sample ID: 680-76926-15

Date Collected: 02/14/12 11:30
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			229248	02/16/12 11:21	RAM	TAL SAV
Dissolved	Analysis	6010B		1	229588	02/20/12 23:55	BCB	TAL SAV
Dissolved	Analysis	415.1		1	229371	02/17/12 01:13	JR	TAL SAV

Client Sample ID: 1Q12 LTM Trip Blank #2

Lab Sample ID: 680-76926-16

Date Collected: 02/14/12 00:00
Matrix: Water
Date Received: 02/15/12 09:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	229424	02/17/12 17:58	WJC	TAL SAV

Client Sample ID: BSA-MW-1S-0212

Lab Sample ID: 680-76957-1

Date Collected: 02/15/12 10:40
Matrix: Water
Date Received: 02/16/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5000	230154	02/27/12 22:10	WJC	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		1	230171	02/25/12 15:01	MES	TAL SAV
Total/NA	Analysis	RSK-175		1	229759	02/22/12 17:43	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	229763	02/22/12 17:43	SMC	TAL SAV
Total Recoverable	Prep	3005A			229352	02/17/12 09:53	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	229863	02/22/12 21:22	RAM	TAL SAV
Total/NA	Analysis	353.2		1	229392	02/16/12 15:34	JNC	TAL SAV
Total/NA	Analysis	310.1		1	229818	02/22/12 18:48	TH	TAL SAV
Total/NA	Analysis	415.1		1	230075	02/24/12 20:14	JR	TAL SAV
Total/NA	Analysis	325.2		2	230187	02/28/12 09:57	JR	TAL SAV
Total/NA	Analysis	375.4		10	230428	03/01/12 12:07	JR	TAL SAV

MAR 20 2012
TestAmerica Savannah

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: BSA-MW-1S-F(0.2)-0212

Lab Sample ID: 680-76957-2

Date Collected: 02/15/12 10:40
Matrix: Water
Date Received: 02/16/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			229352	02/17/12 09:53	CDJ	TAL SAV
Dissolved	Analysis	6010B		1	229863	02/22/12 21:27	RAM	TAL SAV
Dissolved	Analysis	415.1		1	230090	02/24/12 14:40	JR	TAL SAV

Client Sample ID: BSA-MW-1S-0212-EB

Lab Sample ID: 680-76957-3

Date Collected: 02/15/12 08:50
Matrix: Water
Date Received: 02/16/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	229981	02/24/12 14:30	WJC	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		1	230045	02/24/12 19:28	MES	TAL SAV

Client Sample ID: CPA-MW-1D-0212

Lab Sample ID: 680-76957-4

Date Collected: 02/15/12 13:50
Matrix: Water
Date Received: 02/16/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		250	230231	02/28/12 14:10	JG	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		10	230171	02/25/12 17:47	MES	TAL SAV
Total/NA	Analysis	RSK-175		1	229759	02/22/12 18:08	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	229763	02/22/12 18:08	SMC	TAL SAV
Total Recoverable	Prep	3005A			229352	02/17/12 09:53	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	229863	02/22/12 21:31	RAM	TAL SAV
Total/NA	Analysis	353.2		1	229392	02/16/12 15:38	JNC	TAL SAV
Total/NA	Analysis	310.1		1	229818	02/22/12 19:02	TH	TAL SAV
Total/NA	Analysis	415.1		1	230075	02/24/12 21:12	JR	TAL SAV
Total/NA	Analysis	325.2		2	230187	02/28/12 09:57	JR	TAL SAV
Total/NA	Analysis	375.4		1	230428	03/01/12 10:42	JR	TAL SAV

Client Sample ID: CPA-MW-1D-F(0.2)-0212

Lab Sample ID: 680-76957-5

Date Collected: 02/15/12 13:50
Matrix: Water
Date Received: 02/16/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			229352	02/17/12 09:53	CDJ	TAL SAV
Dissolved	Analysis	6010B		1	229863	02/22/12 21:36	RAM	TAL SAV
Dissolved	Analysis	415.1		1	230090	02/24/12 14:40	JR	TAL SAV

MAR 20 2012

TestAmerica Savannah

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Client Sample ID: CPA-MW-2D-0212

Lab Sample ID: 680-76957-6

Date Collected: 02/15/12 14:00
Matrix: Water
Date Received: 02/16/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		500	230154	02/27/12 21:26	WJC	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		1	230045	02/24/12 20:23	MES	TAL SAV
Total/NA	Analysis	RSK-175		1	229759	02/22/12 17:55	SMC	TAL SAV
Total/NA	Analysis	RSK-175		1	229763	02/22/12 17:55	SMC	TAL SAV
Total Recoverable	Prep	3005A			229352	02/17/12 09:53	CDJ	TAL SAV
Total Recoverable	Analysis	6010B		1	229863	02/22/12 21:40	RAM	TAL SAV
Total/NA	Analysis	353.2		1	229392	02/16/12 15:39	JNC	TAL SAV
Total/NA	Analysis	310.1		1	229818	02/22/12 19:11	TH	TAL SAV
Total/NA	Analysis	415.1		1	230075	02/24/12 21:27	JR	TAL SAV
Total/NA	Analysis	325.2		1	230187	02/28/12 09:37	JR	TAL SAV
Total/NA	Analysis	375.4		2	230428	03/01/12 12:09	JR	TAL SAV

Client Sample ID: CPA-MW-2D-F(0.2)-0212

Lab Sample ID: 680-76957-7

Date Collected: 02/15/12 14:00
Matrix: Water
Date Received: 02/16/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			229352	02/17/12 09:53	CDJ	TAL SAV
Dissolved	Analysis	6010B		1	229863	02/22/12 21:53	RAM	TAL SAV
Dissolved	Analysis	415.1		1	230090	02/24/12 14:40	JR	TAL SAV

Client Sample ID: CPA-MW-2D-0212-AD

Lab Sample ID: 680-76957-8

Date Collected: 02/15/12 14:00
Matrix: Water
Date Received: 02/16/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		500	230154	02/27/12 21:48	WJC	TAL SAV
Total/NA	Prep	3520C			229467	02/20/12 14:45	RBS	TAL SAV
Total/NA	Analysis	8270C		1	230045	02/24/12 20:51	MES	TAL SAV

Client Sample ID: 1Q12 LTM Trip Blank #3

Lab Sample ID: 680-76957-9

Date Collected: 02/15/12 00:00
Matrix: Water
Date Received: 02/16/12 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	229981	02/24/12 13:33	WJC	TAL SAV

Laboratory References:

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

MAR 20 2012

TestAmerica Savannah

US EPA ARCHIVE DOCUMENT

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Michael Corbett	Date: 2/14/12	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) _____			21562682.00006
(314) 429-0100 Phone	TAT if different from Below _____			
(314) 429-0462 FAX	☒ 2 weeks			SDG No.
Project Name: 1Q12 LTM GW Sampling	☐ 1 week			
Site: Solutia WG Krummrich Facility	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs by 8260	SVOCs by 8270C*	Total Fe/Mn by 6010B	Alk/CO2 by 310.1	Chloride by 325.2/Sulfate by 375.4	Methane 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-2D-0212	2/14/12	1435	G	Water	14		3	2	1	1	1	3	2	1			*SVOCs per semi-annual list
BSA-MW-2D-F(0.2)-0212		1435	G	Water	2	X									1	1	
CPA-MW-3D-0212		1500	G	Water	14		3	2	1	1	1	3	2	1			
CPA-MW-3D-F(0.2)-0212		1500	G	Water	2	X									1	1	
CPA-MW-5D-0212		1000	G	Water	14		3	2	1	1	1	3	2	1			
CPA-MW-5D-F(0.2)-0212		1000	G	Water	2	X									1	1	
BSA-MW-3D-0212		1130	G	Water	14		3	2	1	1	1	3	2	1			
BSA-MW-3D-F(0.2)-0212	✓	1130	G	Water	2	X									1	1	
1Q12 LTM Trip Blank # 2	2/14/12	—	—	Water	2		2										
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____							2	1	4	1	1	1	3,1	2	4	2	

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

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

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

2 4 3.3°C 60-71926

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	2/14/12 1545	[signature]	TA	2/14/12 1545
Relinquished by: [signature]	Company: TA	Date/Time: 2/14/12 1615	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by: [signature]	Company: TAS	Date/Time: 2/15/12 0944

MAR 20 2012

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Michael Corbett	Date: 2/13/12	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) C			21562682.00006
(314) 429-0100 Phone	TAT if different from Below			
(314) 429-0462 FAX	☒ 2 weeks			SDG No.
Project Name: 1Q12 LTM GW Sampling	☐ 1 week			
Site: Solutia WG Krummrich Facility	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs by 8260	SVOCs by 8270C*	Total Fe/Mn by 6010B	Alk/CO2 by 310.1	Chloride by 325.2/Sulfate by 375.4	Methane 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-0212	2/13/12	1020	G	Water	14		3	2	1	1	1	3	2	1			*SVOCs per semi-annual list
BSA-MW-4D-F(0.2)-0212	2/13/12	1020	G	Water	2	X									1	1	
CPA-MW-4D-0212	2/13/12	1335	G	Water	14		3	2	1	1	1	3	2	1			
CPA-MW-4D-F(0.2)-0212	2/13/12	1335	G	Water	2	X									1	1	
BSA-MW-5D-0212	2/13/12	1230	G	Water	14		3	2	1	1	1	3	2	1			
BSA-MW-5D-F(0.2)-0212	2/13/12	1230	G	Water	2	X									1	1	
BSA-MW-4D-0212-MS	2/13/12	1020	G	Water	5		3	2									
BSA-MW-4D-0212-MSD	2/13/12	1020	G	Water	5		3	2									
1Q12 LTM Trip Blank # 1	2/13/12	—	—	Water	2		2										
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other							2	1	4	1	1	1	3,1	2	4	2	

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

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

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

2.6/3.1°C

680-76926

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
McClat	URS	2/13/12 1630			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
			Mongeh	TAS	2/15/12 0949

MAR 20 2012

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: Michael Corbett	Date: 2/15/12	COC No:
URS Corporation	Tel/Fax: (314) 743-4754	Lab Contact: Lidya Galkin	Carrier: FedEx	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 680-76957 21562682.00008
St. Louis, MO 63110	Calendar (C) or Work Days (W)			
(314) 429-0100 Phone	TAT if different from Below			
(314) 429-0462 FAX	☒ 2 weeks			SDG No.
Project Name: 1Q12 LTM GW Sampling	☐ 1 week			
Site: Solutia WG Krummrich Facility	☐ 2 days			
P.O.#	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N)	VOCs by 8260	SVOCs by 8270C*	Total Fe/Mn by 6010B	Alk/CO2 by 310.1	Chloride by 325.2/Sulfate by 375.4	Methane by RSK 175	Nitrate by 353.2	TOC by 415.1	Dissolved Fe/Mn by 6010B	DOC by 415.1	Sample Specific Notes:
BSA-MW-1S-0212	2/15/12	1040	G	Water	14		3	2	1	1	1	3	2	1			*SVOCs per semi-annual list
BSA-MW-1S-F(0.2)-0212	2/15/12	1040	G	Water	2	X									1	1	
BSA-MW-1S-0212-EB	2/15/12	0850	G	Water	5		3	2									
CPA-MW-1D-0212	2/15/12	1350	G	Water	14		3	2	1	1	1	3	2	1			
CPA-MW-1D-F(0.2)-0212	2/15/12	1350	G	Water	2	X									1	1	
CPA-MW-2D-0212	2/15/12	1400	G	Water	14		3	2	1	1	1	3	2	1			
CPA-MW-2D-F(0.2)-0212	2/15/12	1410	G	Water	2	X									1	1	
CPA-MW-2D-0212-AD	2/15/12	1400	G	Water	5		3	2									
1Q12 LTM Trip Blank # 3	2/15/12	—	—	Water	2		2										
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5=NaOH, 6= Other							2	1	4	1	1	1	3,1	2	4	2	

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

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

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

Temp 2.0°C, 1.6°C

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	2/15/12 1600	[signature]	TA	2-15-12 / 1600
Relinquished by: [signature]	Company: TA	Date/Time: 2/15/12 1710	Received by: [signature]	Company: TA SAV	Date/Time: 02.16.12 0921
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

MAR 20 2012

Login Sample Receipt Checklist

Client: Solutia Inc.

Job Number: 680-76926-1
SDG Number: KPS071

Login Number: 76926
List Number: 1
Creator: Conner, Keaton

List Source: TestAmerica Savannah

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	2/13 samples @ 2.6/3.1 C; 2/14 samples 2.4/3.3 C
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	2/13 samples rec'd 2 days post collection (NO3 HT).
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

MAR 20 2012

Login Sample Receipt Checklist

Client: Solutia Inc.

Job Number: 680-76926-1
SDG Number: KPS071

Login Number: 76957
List Number: 1
Creator: Daughtry, Beth

List Source: TestAmerica Savannah

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0 and 1.6 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

MAR 20 2012

Certification Summary

Client: Solutia Inc.
Project/Site: WGK LTM - 1Q12 - FEB 2012

TestAmerica Job ID: 680-76926-1
SDG: KPS071

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Savannah	A2LA	DoD ELAP		0399-01
TestAmerica Savannah	A2LA	ISO/IEC 17025		399.01
TestAmerica Savannah	Alabama	State Program	4	41450
TestAmerica Savannah	Arkansas	State Program	6	N/A
TestAmerica Savannah	Arkansas DEQ	State Program	6	88-0692
TestAmerica Savannah	California	NELAC	9	3217CA
TestAmerica Savannah	Colorado	State Program	8	N/A
TestAmerica Savannah	Connecticut	State Program	1	PH-0161
TestAmerica Savannah	Florida	NELAC	4	E87052
TestAmerica Savannah	GA Dept. of Agriculture	State Program	4	N/A
TestAmerica Savannah	Georgia	State Program	4	803
TestAmerica Savannah	Georgia	State Program	4	N/A
TestAmerica Savannah	Guam	State Program	9	09-005r
TestAmerica Savannah	Hawaii	State Program	9	N/A
TestAmerica Savannah	Illinois	NELAC	5	200022
TestAmerica Savannah	Indiana	State Program	5	N/A
TestAmerica Savannah	Iowa	State Program	7	353
TestAmerica Savannah	Kentucky	State Program	4	90084
TestAmerica Savannah	Kentucky (UST)	State Program	4	18
TestAmerica Savannah	Louisiana	NELAC	6	30690
TestAmerica Savannah	Louisiana	NELAC	6	LA100015
TestAmerica Savannah	Maine	State Program	1	GA00006
TestAmerica Savannah	Maryland	State Program	3	250
TestAmerica Savannah	Massachusetts	State Program	1	M-GA006
TestAmerica Savannah	Michigan	State Program	5	9925
TestAmerica Savannah	Mississippi	State Program	4	N/A
TestAmerica Savannah	Montana	State Program	8	CERT0081
TestAmerica Savannah	Nebraska	State Program	7	TestAmerica-Savannah
TestAmerica Savannah	New Jersey	NELAC	2	GA769
TestAmerica Savannah	New Mexico	State Program	6	N/A
TestAmerica Savannah	New York	NELAC	2	10842
TestAmerica Savannah	North Carolina DENR	State Program	4	269
TestAmerica Savannah	North Carolina DHHS	State Program	4	13701
TestAmerica Savannah	Oklahoma	State Program	6	9984
TestAmerica Savannah	Pennsylvania	NELAC	3	68-00474
TestAmerica Savannah	Puerto Rico	State Program	2	GA00006
TestAmerica Savannah	Rhode Island	State Program	1	LAO00244
TestAmerica Savannah	South Carolina	State Program	4	98001
TestAmerica Savannah	Tennessee	State Program	4	TN02961
TestAmerica Savannah	Texas	NELAC	6	T104704185-08-TX
TestAmerica Savannah	USDA	Federal		SAV 3-04
TestAmerica Savannah	Vermont	State Program	1	87052
TestAmerica Savannah	Virginia	NELAC	3	460161
TestAmerica Savannah	Washington	State Program	10	C1794
TestAmerica Savannah	West Virginia	State Program	3	9950C
TestAmerica Savannah	West Virginia DEP	State Program	3	94
TestAmerica Savannah	Wisconsin	State Program	5	999819810
TestAmerica Savannah	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

MAR 20 2012
TestAmerica Savannah

US EPA ARCHIVE DOCUMENT

Appendix F

Surface Water and Sediment Analytical Results

(with Data Review Reports)

US EPA ARCHIVE DOCUMENT

Solutia Krummrich Data Review
WGK LTM 1Q12

Laboratory SDG: KRS011

Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 3/23/2012

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

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

Sample Identification	
SW-R2007-3-0212	SW-R2007-2-0212
SW-R2007-1-0212	SW-R2007-1-0212-AD
SED-R2007-1-0212-EB	TB021612

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 SVOC MS/MSD recoveries were outside evaluation criteria. This issue is addressed further in the appropriate section below.

No problems were indicated in the cooler receipt form.

3.0 Holding Times

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

Yes

4.0 Blank Contamination

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

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

Yes

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

US EPA ARCHIVE DOCUMENT

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, sample SW-R2007-3-0212 was spiked and analyzed for VOCs and SVOCs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/ RPD Criteria
SW-R2007-3-0212	SVOCs	4-Chloroaniline	**30/39**	26	42-130/50
SW-R2007-3-0212	SVOCs	1,4-Dioxane	**34**/37	9	35-130/50

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone and LCS recoveries were within evaluation criteria for the compounds listed above. No qualification of data was required.

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-R2007-1-0212	SW-R2007-1-0212-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

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

SDG KRS011

Results of Surface Water Samples from Sampling Points:

R2007-1
R2007-2
R2007-3

US EPA ARCHIVE DOCUMENT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-77018-1
TestAmerica Sample Delivery Group: KRS011
Client Project/Site: WGK River Sampling SA - SW FEB 2012

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

Attn: Mr. Jerry Rinaldi

Lidya Gulizia

Authorized for release by:
3/20/2012 3:45:04 PM

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

cc: Bob Billman

Reviewed on 3/23/2012 MM

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Certification Summary 24

MAR 23 2012

Job ID: 680-77018-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Solutia Inc.

Project: WGK River Sampling SA - SW FEB 2012

Report Number: 680-77018-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 02/17/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.6, 5.2, 5.0 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples SW-R2007-3-0212 (680-77018-1), SW-R2007-2-0212 (680-77018-3), SW-R2007-1-0212 (680-77018-5), SW-R2007-1-0212-AD (680-77018-7), SED-R2007-1-0212-EB (680-77018-9) and TB021612 (680-77018-10) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 02/28/2012.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples SW-R2007-3-0212 (680-77018-1), SW-R2007-2-0212 (680-77018-3), SW-R2007-1-0212 (680-77018-5), SW-R2007-1-0212-AD (680-77018-7) and SED-R2007-1-0212-EB (680-77018-9) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 02/22/2012 and analyzed on 02/26/2012 and 02/28/2012.

1,4-Dioxane and 4-Chloroaniline exceeded the recovery criteria low for the MS of sample SW-R2007-3-0212MS (680-77018-1) in batch 680-230277. 4-Chloroaniline exceeded the recovery criteria low for the MSD of sample SW-R2007-3-0212MSD (680-77018-1) in batch 680-230277. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Refer to the QC report for details.

No other difficulties were encountered during the semivolatiles analyses.

All other quality control parameters were within the acceptance limits.

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Sample Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-77018-1	SW-R2007-3-0212	Water	02/16/12 10:15	02/17/12 09:24
680-77018-3	SW-R2007-2-0212	Water	02/16/12 11:10	02/17/12 09:24
680-77018-5	SW-R2007-1-0212	Water	02/16/12 12:05	02/17/12 09:24
680-77018-7	SW-R2007-1-0212-AD	Water	02/16/12 12:05	02/17/12 09:24
680-77018-9	SED-R2007-1-0212-EB	Water	02/16/12 12:20	02/17/12 09:24
680-77018-10	TB021612	Water	02/16/12 10:15	02/17/12 09:24

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US EPA ARCHIVE DOCUMENT

Method Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV

Protocol References:

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

Laboratory References:

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

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Definitions/Glossary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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Detection Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Client Sample ID: SW-R2007-3-0212 — **Lab Sample ID: 680-77018-1**

No Detections

Client Sample ID: SW-R2007-2-0212 — **Lab Sample ID: 680-77018-3**

No Detections

Client Sample ID: SW-R2007-1-0212 — **Lab Sample ID: 680-77018-5**

No Detections

Client Sample ID: SW-R2007-1-0212-AD — **Lab Sample ID: 680-77018-7**

No Detections

Client Sample ID: SED-R2007-1-0212-EB — **Lab Sample ID: 680-77018-9**

No Detections

Client Sample ID: TB021612 — **Lab Sample ID: 680-77018-10**

No Detections

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Client Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Client Sample ID: SW-R2007-3-0212
Date Collected: 02/16/12 10:16
Date Received: 02/17/12 09:24

Lab Sample ID: 680-77018-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.25	ug/L			02/28/12 14:32	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 14:32	1
1,2-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			02/28/12 14:32	1
1,3-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 14:32	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			02/28/12 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*110*		*70 - 130*		*02/28/12 14:32*	*1*
Dibromofluoromethane	*95*		*70 - 130*		*02/28/12 14:32*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*02/28/12 14:32*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	19	U	19	2.1	ug/L		02/22/12 14:50	02/26/12 01:42	1
2-Chlorophenol	9.5	U	9.5	0.82	ug/L		02/22/12 14:50	02/26/12 01:42	1
1,4-Dioxane	9.5	U	9.5	3.2	ug/L		02/22/12 14:50	02/26/12 01:42	1
1,2,4-Trichlorobenzene	9.5	U	9.5	0.53	ug/L		02/22/12 14:50	02/26/12 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*51*		*38 - 130*	*02/22/12 14:50*	*02/26/12 01:42*	*1*
2-Fluorophenol	*49*		*25 - 130*	*02/22/12 14:50*	*02/26/12 01:42*	*1*
Nitrobenzene-d5	*54*		*39 - 130*	*02/22/12 14:50*	*02/26/12 01:42*	*1*
Phenol-d5	*49*		*25 - 130*	*02/22/12 14:50*	*02/26/12 01:42*	*1*
Terphenyl-d14	*30*		*10 - 143*	*02/22/12 14:50*	*02/26/12 01:42*	*1*
2,4,6-Tribromophenol	*51*		*31 - 141*	*02/22/12 14:50*	*02/26/12 01:42*	*1*

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US EPA ARCHIVE DOCUMENT

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Client Sample ID: SW-R2007-2-0212
Date Collected: 02/16/12 11:10
Date Received: 02/17/12 09:24

Lab Sample ID: 680-77018-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.25	ug/L			02/28/12 14:53	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 14:53	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			02/28/12 14:53	1
1,3-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 14:53	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			02/28/12 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*110*		*70 - 130*		*02/28/12 14:53*	*1*
Dibromofluoromethane	*95*		*70 - 130*		*02/28/12 14:53*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*02/28/12 14:53*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	19	U	19	2.1	ug/L		02/22/12 14:50	02/28/12 21:11	1
2-Chlorophenol	9.6	U	9.6	0.83	ug/L		02/22/12 14:50	02/28/12 21:11	1
1,4-Dioxane	9.6	U	9.6	3.2	ug/L		02/22/12 14:50	02/28/12 21:11	1
1,2,4-Trichlorobenzene	9.6	U	9.6	0.54	ug/L		02/22/12 14:50	02/28/12 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*52*		*38 - 130*	*02/22/12 14:50*	*02/28/12 21:11*	*1*
2-Fluorophenol	*53*		*25 - 130*	*02/22/12 14:50*	*02/28/12 21:11*	*1*
Nitrobenzene-d5	*57*		*39 - 130*	*02/22/12 14:50*	*02/28/12 21:11*	*1*
Phenol-d5	*52*		*25 - 130*	*02/22/12 14:50*	*02/28/12 21:11*	*1*
Terphenyl-d14	*30*		*10 - 143*	*02/22/12 14:50*	*02/28/12 21:11*	*1*
2,4,6-Tribromophenol	*54*		*31 - 141*	*02/22/12 14:50*	*02/28/12 21:11*	*1*

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Client Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Client Sample ID: SW-R2007-1-0212
Date Collected: 02/16/12 12:06
Date Received: 02/17/12 09:24

Lab Sample ID: 680-77018-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.25	ug/L			02/28/12 15:15	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 15:15	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			02/28/12 15:15	1
1,3-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 15:15	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			02/28/12 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*111*		*70 - 130*		*02/28/12 15:15*	*1*
Dibromofluoromethane	*97*		*70 - 130*		*02/28/12 15:15*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*02/28/12 15:15*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	19	U	19	2.1	ug/L		02/22/12 14:50	02/28/12 22:27	1
2-Chlorophenol	9.5	U	9.5	0.83	ug/L		02/22/12 14:50	02/28/12 22:27	1
1,4-Dioxane	9.5	U	9.5	3.2	ug/L		02/22/12 14:50	02/28/12 22:27	1
1,2,4-Trichlorobenzene	9.5	U	9.5	0.53	ug/L		02/22/12 14:50	02/28/12 22:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*51*		*38 - 130*	*02/22/12 14:50*	*02/28/12 22:27*	*1*
2-Fluorophenol	*41*		*25 - 130*	*02/22/12 14:50*	*02/28/12 22:27*	*1*
Nitrobenzene-d5	*48*		*39 - 130*	*02/22/12 14:50*	*02/28/12 22:27*	*1*
Phenol-d5	*42*		*25 - 130*	*02/22/12 14:50*	*02/28/12 22:27*	*1*
Terphenyl-d14	*25*		*10 - 143*	*02/22/12 14:50*	*02/28/12 22:27*	*1*
2,4,6-Tribromophenol	*50*		*31 - 141*	*02/22/12 14:50*	*02/28/12 22:27*	*1*

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US EPA ARCHIVE DOCUMENT

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Client Sample ID: SW-R2007-1-0212-AD

Lab Sample ID: 680-77018-7

Date Collected: 02/16/12 12:05
Date Received: 02/17/12 09:24

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.25	ug/L			02/28/12 15:37	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 15:37	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			02/28/12 15:37	1
1,3-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 15:37	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			02/28/12 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*		*70 - 130*		*02/28/12 15:37*	*1*
Dibromofluoromethane	*99*		*70 - 130*		*02/28/12 15:37*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*02/28/12 15:37*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	19	U	19	2.1	ug/L		02/22/12 14:50	02/28/12 21:58	1
2-Chlorophenol	9.5	U	9.5	0.83	ug/L		02/22/12 14:50	02/28/12 21:58	1
1,4-Dioxane	9.5	U	9.5	3.2	ug/L		02/22/12 14:50	02/28/12 21:58	1
1,2,4-Trichlorobenzene	9.5	U	9.5	0.53	ug/L		02/22/12 14:50	02/28/12 21:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*64*		*38 - 130*	*02/22/12 14:50*	*02/28/12 21:58*	*1*
2-Fluorophenol	*52*		*25 - 130*	*02/22/12 14:50*	*02/28/12 21:58*	*1*
Nitrobenzene-d5	*59*		*39 - 130*	*02/22/12 14:50*	*02/28/12 21:58*	*1*
Phenol-d5	*50*		*25 - 130*	*02/22/12 14:50*	*02/28/12 21:58*	*1*
Terphenyl-d14	*24*		*10 - 143*	*02/22/12 14:50*	*02/28/12 21:58*	*1*
2,4,6-Tribromophenol	*63*		*31 - 141*	*02/22/12 14:50*	*02/28/12 21:58*	*1*

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TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Client Sample ID: SED-R2007-1-0212-EB

Lab Sample ID: 680-77018-9

Date Collected: 02/16/12 12:20
Date Received: 02/17/12 09:24

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.25	ug/L			02/28/12 15:59	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 15:59	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			02/28/12 15:59	1
1,3-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 15:59	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			02/28/12 15:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*111*		*70 - 130*		*02/28/12 15:59*	*1*
Dibromofluoromethane	*94*		*70 - 130*		*02/28/12 15:59*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*02/28/12 15:59*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	21	U	21	2.3	ug/L		02/22/12 14:50	02/28/12 21:29	1
2-Chlorophenol	10	U	10	0.91	ug/L		02/22/12 14:50	02/28/12 21:29	1
1,4-Dioxane	10	U	10	3.5	ug/L		02/22/12 14:50	02/28/12 21:29	1
1,2,4-Trichlorobenzene	10	U	10	0.58	ug/L		02/22/12 14:50	02/28/12 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*38 - 130*	*02/22/12 14:50*	*02/28/12 21:29*	*1*
2-Fluorophenol	*54*		*25 - 130*	*02/22/12 14:50*	*02/28/12 21:29*	*1*
Nitrobenzene-d5	*63*		*39 - 130*	*02/22/12 14:50*	*02/28/12 21:29*	*1*
Phenol-d5	*57*		*25 - 130*	*02/22/12 14:50*	*02/28/12 21:29*	*1*
Terphenyl-d14	*69*		*10 - 143*	*02/22/12 14:50*	*02/28/12 21:29*	*1*
2,4,6-Tribromophenol	*73*		*31 - 141*	*02/22/12 14:50*	*02/28/12 21:29*	*1*

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TestAmerica Savannah

US EPA ARCHIVE DOCUMENT

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Client Sample ID: TB021612

Lab Sample ID: 680-77018-10

Date Collected: 02/16/12 10:15
Date Received: 02/17/12 09:24

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.25	ug/L			02/28/12 13:48	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 13:48	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			02/28/12 13:48	1
1,3-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 13:48	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			02/28/12 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*111*		*70 - 130*		*02/28/12 13:48*	*1*
Dibromofluoromethane	*97*		*70 - 130*		*02/28/12 13:48*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*02/28/12 13:48*	*1*

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TestAmerica Savannah

US EPA ARCHIVE DOCUMENT

Surrogate Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
680-77018-1	SW-R2007-3-0212	110	95	97
680-77018-1 MS	SW-R2007-3-0212	91	120	111
680-77018-1 MSD	SW-R2007-3-0212	87	112	104
680-77018-3	SW-R2007-2-0212	110	95	98
680-77018-5	SW-R2007-1-0212	111	97	98
680-77018-7	SW-R2007-1-0212-AD	108	99	97
680-77018-9	SED-R2007-1-0212-EB	111	94	98
680-77018-10	TB021612	111	97	96
LCS 680-230231/3	Lab Control Sample	105	92	99
LCSD 680-230231/4	Lab Control Sample Dup	105	95	97
MB 680-230231/6	Method Blank	110	94	97

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(38-130)	(25-130)	(39-130)	(25-130)	(10-143)	(31-141)
680-77018-1	SW-R2007-3-0212	51	49	54	49	30	51
680-77018-1 MS	SW-R2007-3-0212	65	58	64	59	58	74
680-77018-1 MSD	SW-R2007-3-0212	73	68	73	71	52	84
680-77018-3	SW-R2007-2-0212	52	53	57	52	30	54
680-77018-5	SW-R2007-1-0212	51	41	48	42	25	50
680-77018-7	SW-R2007-1-0212-AD	64	52	59	50	24	63
680-77018-9	SED-R2007-1-0212-EB	67	54	63	57	69	73
LCS 680-229695/11-A	Lab Control Sample	72	65	71	70	82	80
MB 680-229695/10-A	Method Blank	69	64	71	67	82	71

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPH = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

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TestAmerica Savannah

QC Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

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

Lab Sample ID: MB 680-230231/6
Matrix: Water
Analysis Batch: 230231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	1.0	0.25	ug/L			02/28/12 13:09	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 13:09	1
1,2-Dichlorobenzene	1.0	U	1.0	0.21	ug/L			02/28/12 13:09	1
1,3-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			02/28/12 13:09	1
1,4-Dichlorobenzene	1.0	U	1.0	0.28	ug/L			02/28/12 13:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*110*		*70 - 130*		*02/28/12 13:09*	*1*
Dibromofluoromethane	*94*		*70 - 130*		*02/28/12 13:09*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*02/28/12 13:09*	*1*

Lab Sample ID: LCS 680-230231/3
Matrix: Water
Analysis Batch: 230231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	49.4		ug/L		99	70 - 130
Chlorobenzene	50.0	52.8		ug/L		106	70 - 130
1,2-Dichlorobenzene	50.0	54.7		ug/L		109	70 - 130
1,3-Dichlorobenzene	50.0	57.7		ug/L		115	70 - 130
1,4-Dichlorobenzene	50.0	58.5		ug/L		117	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*92*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 680-230231/4
Matrix: Water
Analysis Batch: 230231

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	48.9		ug/L		98	70 - 130	1	30
Chlorobenzene	50.0	52.7		ug/L		105	70 - 130	0	30
1,2-Dichlorobenzene	50.0	54.9		ug/L		110	70 - 130	0	30
1,3-Dichlorobenzene	50.0	57.7		ug/L		115	70 - 130	0	30
1,4-Dichlorobenzene	50.0	58.4		ug/L		117	70 - 130	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*95*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: 680-77018-1 MS
Matrix: Water
Analysis Batch: 230231

Client Sample ID: SW-R2007-3-0212
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	1.0	U	50.0	54.9		ug/L		110	70 - 130

MAR 23 2012 TestAmerica Savannah

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

Lab Sample ID: 680-77018-1 MS — **Client Sample ID: SW-R2007-3-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230231

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	1.0	U	50.0	45.7		ug/L		91	70 - 130
1,2-Dichlorobenzene	1.0	U	50.0	44.7		ug/L		89	70 - 130
1,3-Dichlorobenzene	1.0	U	50.0	47.4		ug/L		95	70 - 130
1,4-Dichlorobenzene	1.0	U	50.0	48.2		ug/L		96	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*91*		*70 - 130*
Dibromofluoromethane	*120*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*

Lab Sample ID: 680-77018-1 MSD — **Client Sample ID: SW-R2007-3-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230231

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	1.0	U	50.0	50.2		ug/L		100	70 - 130	9	30
Chlorobenzene	1.0	U	50.0	43.3		ug/L		87	70 - 130	5	30
1,2-Dichlorobenzene	1.0	U	50.0	42.5		ug/L		85	70 - 130	5	30
1,3-Dichlorobenzene	1.0	U	50.0	45.3		ug/L		91	70 - 130	4	30
1,4-Dichlorobenzene	1.0	U	50.0	46.0		ug/L		92	70 - 130	5	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*87*		*70 - 130*
Dibromofluoromethane	*112*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

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

Lab Sample ID: MB 680-229695/10-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230277 — **Prep Batch: 229695**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	20	U	20	2.2	ug/L		02/22/12 14:50	02/25/12 21:09	1
2-Chlorophenol	10	U	10	0.87	ug/L		02/22/12 14:50	02/25/12 21:09	1
1,4-Dioxane	10	U	10	3.4	ug/L		02/22/12 14:50	02/25/12 21:09	1
1,2,4-Trichlorobenzene	10	U	10	0.56	ug/L		02/22/12 14:50	02/25/12 21:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*69*		*38 - 130*	*02/22/12 14:50*	*02/25/12 21:09*	*1*
2-Fluorophenol	*64*		*25 - 130*	*02/22/12 14:50*	*02/25/12 21:09*	*1*
Nitrobenzene-d5	*71*		*39 - 130*	*02/22/12 14:50*	*02/25/12 21:09*	*1*
Phenol-d5	*67*		*25 - 130*	*02/22/12 14:50*	*02/25/12 21:09*	*1*
Terphenyl-d14	*82*		*10 - 143*	*02/22/12 14:50*	*02/25/12 21:09*	*1*
2,4,6-Tribromophenol	*71*		*31 - 141*	*02/22/12 14:50*	*02/25/12 21:09*	*1*

MAR 23 2012

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

Lab Sample ID: LCS 680-229695/11-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230277 — **Prep Batch: 229695**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	100	63.3		ug/L		63	42 - 130
2-Chlorophenol	100	68.5		ug/L		69	57 - 130
1,4-Dioxane	100	44.6		ug/L		45	35 - 130
1,2,4-Trichlorobenzene	100	63.2		ug/L		63	42 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*72*		*38 - 130*
2-Fluorophenol	*65*		*25 - 130*
Nitrobenzene-d5	*71*		*39 - 130*
Phenol-d5	*70*		*25 - 130*
Terphenyl-d14	*82*		*10 - 143*
2,4,6-Tribromophenol	*80*		*31 - 141*

Lab Sample ID: 680-77018-1 MS — **Client Sample ID: SW-R2007-3-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230277 — **Prep Batch: 229695**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	19	U	95.5	28.8	F	ug/L		30	42 - 130
2-Chlorophenol	9.5	U	95.5	58.4		ug/L		61	57 - 130
1,4-Dioxane	9.5	U	95.5	32.1	F	ug/L		34	35 - 130
1,2,4-Trichlorobenzene	9.5	U	95.5	53.8		ug/L		56	42 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*65*		*38 - 130*
2-Fluorophenol	*58*		*25 - 130*
Nitrobenzene-d5	*64*		*39 - 130*
Phenol-d5	*59*		*25 - 130*
Terphenyl-d14	*58*		*10 - 143*
2,4,6-Tribromophenol	*74*		*31 - 141*

Lab Sample ID: 680-77018-1 MSD — **Client Sample ID: SW-R2007-3-0212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 230277 — **Prep Batch: 229695**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloroaniline	19	U	94.8	37.3	F	ug/L		39	42 - 130	26	50
2-Chlorophenol	9.5	U	94.8	69.6		ug/L		73	57 - 130	18	50
1,4-Dioxane	9.5	U	94.8	35.1		ug/L		37	35 - 130	9	50
1,2,4-Trichlorobenzene	9.5	U	94.8	60.9		ug/L		64	42 - 130	12	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*73*		*38 - 130*
2-Fluorophenol	*68*		*25 - 130*
Nitrobenzene-d5	*73*		*39 - 130*
Phenol-d5	*71*		*25 - 130*
Terphenyl-d14	*52*		*10 - 143*
2,4,6-Tribromophenol	*84*		*31 - 141*

MAR 23 2012
TestAmerica Savannah

US EPA ARCHIVE DOCUMENT

QC Association Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

GC/MS VOA

Analysis Batch: 230231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-1	SW-R2007-3-0212	Total/NA	Water	8260B	
680-77018-1 MS	SW-R2007-3-0212	Total/NA	Water	8260B	
680-77018-1 MSD	SW-R2007-3-0212	Total/NA	Water	8260B	
680-77018-3	SW-R2007-2-0212	Total/NA	Water	8260B	
680-77018-5	SW-R2007-1-0212	Total/NA	Water	8260B	
680-77018-7	SW-R2007-1-0212-AD	Total/NA	Water	8260B	
680-77018-9	SED-R2007-1-0212-EB	Total/NA	Water	8260B	
680-77018-10	TB021612	Total/NA	Water	8260B	
LCS 680-230231/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-230231/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-230231/6	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 229695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-1	SW-R2007-3-0212	Total/NA	Water	3520C	
680-77018-1 MS	SW-R2007-3-0212	Total/NA	Water	3520C	
680-77018-1 MSD	SW-R2007-3-0212	Total/NA	Water	3520C	
680-77018-3	SW-R2007-2-0212	Total/NA	Water	3520C	
680-77018-5	SW-R2007-1-0212	Total/NA	Water	3520C	
680-77018-7	SW-R2007-1-0212-AD	Total/NA	Water	3520C	
680-77018-9	SED-R2007-1-0212-EB	Total/NA	Water	3520C	
LCS 680-229695/11-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-229695/10-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 230277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-1	SW-R2007-3-0212	Total/NA	Water	8270C	229695
680-77018-1 MS	SW-R2007-3-0212	Total/NA	Water	8270C	229695
680-77018-1 MSD	SW-R2007-3-0212	Total/NA	Water	8270C	229695
LCS 680-229695/11-A	Lab Control Sample	Total/NA	Water	8270C	229695
MB 680-229695/10-A	Method Blank	Total/NA	Water	8270C	229695

Analysis Batch: 230304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-3	SW-R2007-2-0212	Total/NA	Water	8270C	229695

Analysis Batch: 230344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-5	SW-R2007-1-0212	Total/NA	Water	8270C	229695
680-77018-7	SW-R2007-1-0212-AD	Total/NA	Water	8270C	229695
680-77018-9	SED-R2007-1-0212-EB	Total/NA	Water	8270C	229695

MAR 23 2012

TestAmerica Savannah

US EPA ARCHIVE DOCUMENT

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Client Sample ID: SW-R2007-3-0212 — Lab Sample ID: 680-77018-1

Date Collected: 02/16/12 10:15 — **Matrix: Water**
Date Received: 02/17/12 09:24

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	230231	02/28/12 14:32	JG	TAL SAV
Total/NA	Prep	3520C			1057.9 mL	1 mL	229695	02/22/12 14:50	RBS	TAL SAV
Total/NA	Analysis	8270C		1			230277	02/26/12 01:42	MES	TAL SAV

Client Sample ID: SW-R2007-2-0212 — Lab Sample ID: 680-77018-3

Date Collected: 02/16/12 11:10 — **Matrix: Water**
Date Received: 02/17/12 09:24

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	230231	02/28/12 14:53	JG	TAL SAV
Total/NA	Prep	3520C			1046.7 mL	1 mL	229695	02/22/12 14:50	RBS	TAL SAV
Total/NA	Analysis	8270C		1			230304	02/28/12 21:11	MES	TAL SAV

Client Sample ID: SW-R2007-1-0212 — Lab Sample ID: 680-77018-5

Date Collected: 02/16/12 12:05 — **Matrix: Water**
Date Received: 02/17/12 09:24

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	230231	02/28/12 15:15	JG	TAL SAV
Total/NA	Prep	3520C			1050.7 mL	1 mL	229695	02/22/12 14:50	RBS	TAL SAV
Total/NA	Analysis	8270C		1			230344	02/28/12 22:27	MES	TAL SAV

Client Sample ID: SW-R2007-1-0212-AD — Lab Sample ID: 680-77018-7

Date Collected: 02/16/12 12:05 — **Matrix: Water**
Date Received: 02/17/12 09:24

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	230231	02/28/12 15:37	JG	TAL SAV
Total/NA	Prep	3520C			1047.4 mL	1 mL	229695	02/22/12 14:50	RBS	TAL SAV
Total/NA	Analysis	8270C		1			230344	02/28/12 21:58	MES	TAL SAV

Client Sample ID: SED-R2007-1-0212-EB — Lab Sample ID: 680-77018-9

Date Collected: 02/16/12 12:20 — **Matrix: Water**
Date Received: 02/17/12 09:24

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	230231	02/28/12 15:59	JG	TAL SAV
Total/NA	Prep	3520C			960.8 mL	1 mL	229695	02/22/12 14:50	RBS	TAL SAV
Total/NA	Analysis	8270C		1			230344	02/28/12 21:29	MES	TAL SAV

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TestAmerica Savannah

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Client Sample ID: TB021612
Date Collected: 02/16/12 10:15
Date Received: 02/17/12 09:24

Lab Sample ID: 680-77018-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	230231	02/28/12 13:48	JG	TAL SAV

Laboratory References:

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

MAR 23 2012

TestAmerica Savannah

Serial Number 49718

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: Sauget WGK River	PROJECT NO.: 21562852.0000	PROJECT LOCATION (STATE): IL
TAL (LAB) PROJECT MANAGER: Lidya Gulizia	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Dave Palmer	CLIENT PHONE: 314 429 0400	CLIENT FAX: 314 429 0412
CLIENT NAME: URS Corporation	CLIENT E-MAIL: dave.palmer@urscorp.com	
CLIENT ADDRESS: 1001 Highlands Plaza Dr W Ste 300 St. Louis MO 63110		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 2

STANDARD REPORT DELIVERY ☒

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	8260 (Acetone, 2-Butanone, Methylene Chloride, Toluene)	8260 (Methylene Chloride, 1,2-Dichloroethane)	8270 (Naphthalene, 2-Methylnaphthalene)	8270 (Naphthalene, 2-Methylnaphthalene, Benzo(a)pyrene, Dibenzofuran)						REMARKS
								HCL	NaOH								
2/16/12	1015	SW-R2007-3-0212	G	X				3	2								
	1030	SED-R2007-3-0212	G		X						4	1					
	1015	SW-R2007-3-0212-MS	G	X				3	2								
	1015	SW-R2007-3-0212-MSD	G	X				3	2								
	1030	SED-R2007-3-0212-MS	G		X						4	1					
	1030	SED-R2007-3-0212-MSD	G		X						4	1					
	1110	SW-R2007-2-0212	G	X				3	2								
	1125	SED-R2007-2-0212	G		X						4	1					
	1200	SW-R2007-1-0212	G	X				3	2								
	1215	SED-R2007-1-0212	G		X						4	1					
	1205	SW-R2007-1-0212-AD	G	X				3	2								
	1215	SED-R2007-1-0212-AD	G		X						4	1					

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/16/12	1700						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
Fed Ex	2/16/12	1700						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY (INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	02/17/12	0924	YES ○ NO ○		670-77018	3.6°C / 5.2°C / 5.0°C

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MAR 23 2012

Serial Number 42311

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: South Work River	PROJECT NO.: 21562182.00008	PROJECT LOCATION (STATE): FL	PAGE 2 OF 2
TAL (LAB) PROJECT MANAGER: Linda Gunter	P.O. NUMBER	CONTRACT NO.	STANDARD REPORT DELIVERY ☒
CLIENT (SITE) PM: Dave Palmer	CLIENT PHONE: 314 429 0100	CLIENT FAX: 314 429 0462	DATE DUE
CLIENT NAME: URS Corporation	CLIENT E-MAIL: dave.palmer@urs.com		EXPEDITED REPORT DELIVERY (SURCHARGE) ○
CLIENT ADDRESS: 1001 Highlands Plaza Dr W Ste 300 St Louis MO 63146			DATE DUE
COMPANY CONTRACTING THIS WORK (if applicable)			NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	Benzene (8260B)	Total Lead (6010B)	Dissolved Lead (6010B)							REMARKS
								HCl	HNO3	NO PRESERVATIVE							
2/16/12	1220	SED-R2007-1-0212-EB	G	X				3	2								
"	1015	TB021612	G	X				2									

NUMBER OF CONTAINERS SUBMITTED

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/16/12	1700						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
Fed Ex	2/16/12	1700						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	02/17/12	0924	YES ○ NO ○		680-77018	3.6°C / 5.2°C / 5.0°C

MAR 23 2012

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TAL 8240-680 (1008)

Login Sample Receipt Checklist

Client: Solutia Inc.

Job Number: 680-77018-1
SDG Number: KRS011

Login Number: 77018
List Number: 1
Creator: Barnett, Eddie T

List Source: TestAmerica Savannah

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.6, 5.2, 5.0 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	-9 is a water but sample ID has the prefix "SED"
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	1 liter received broken for sample -5
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	VOA vial preserved with Sodium Thio and HCl
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

MAR 23 2012

Certification Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SW FEB 2012

TestAmerica Job ID: 680-77018-1
SDG: KRS011

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Savannah	A2LA	DoD ELAP		0399-01
TestAmerica Savannah	A2LA	ISO/IEC 17025		399.01
TestAmerica Savannah	Alabama	State Program	4	41450
TestAmerica Savannah	Arkansas	State Program	6	N/A
TestAmerica Savannah	Arkansas DEQ	State Program	6	88-0692
TestAmerica Savannah	California	NELAC	9	3217CA
TestAmerica Savannah	Colorado	State Program	8	N/A
TestAmerica Savannah	Connecticut	State Program	1	PH-0161
TestAmerica Savannah	Florida	NELAC	4	E87052
TestAmerica Savannah	GA Dept. of Agriculture	State Program	4	N/A
TestAmerica Savannah	Georgia	State Program	4	803
TestAmerica Savannah	Georgia	State Program	4	N/A
TestAmerica Savannah	Guam	State Program	9	09-005r
TestAmerica Savannah	Hawaii	State Program	9	N/A
TestAmerica Savannah	Illinois	NELAC	5	200022
TestAmerica Savannah	Indiana	State Program	5	N/A
TestAmerica Savannah	Iowa	State Program	7	353
TestAmerica Savannah	Kentucky	State Program	4	90084
TestAmerica Savannah	Kentucky (UST)	State Program	4	18
TestAmerica Savannah	Louisiana	NELAC	6	30690
TestAmerica Savannah	Louisiana	NELAC	6	LA100015
TestAmerica Savannah	Maine	State Program	1	GA00006
TestAmerica Savannah	Maryland	State Program	3	250
TestAmerica Savannah	Massachusetts	State Program	1	M-GA006
TestAmerica Savannah	Michigan	State Program	5	9925
TestAmerica Savannah	Mississippi	State Program	4	N/A
TestAmerica Savannah	Montana	State Program	8	CERT0081
TestAmerica Savannah	Nebraska	State Program	7	TestAmerica-Savannah
TestAmerica Savannah	New Jersey	NELAC	2	GA769
TestAmerica Savannah	New Mexico	State Program	6	N/A
TestAmerica Savannah	New York	NELAC	2	10842
TestAmerica Savannah	North Carolina DENR	State Program	4	269
TestAmerica Savannah	North Carolina DHHS	State Program	4	13701
TestAmerica Savannah	Oklahoma	State Program	6	9984
TestAmerica Savannah	Pennsylvania	NELAC	3	68-00474
TestAmerica Savannah	Puerto Rico	State Program	2	GA00006
TestAmerica Savannah	Rhode Island	State Program	1	LAO00244
TestAmerica Savannah	South Carolina	State Program	4	98001
TestAmerica Savannah	Tennessee	State Program	4	TN02961
TestAmerica Savannah	Texas	NELAC	6	T104704185-08-TX
TestAmerica Savannah	USDA	Federal		SAV 3-04
TestAmerica Savannah	Vermont	State Program	1	87052
TestAmerica Savannah	Virginia	NELAC	3	460161
TestAmerica Savannah	Washington	State Program	10	C1794
TestAmerica Savannah	West Virginia	State Program	3	9950C
TestAmerica Savannah	West Virginia DEP	State Program	3	94
TestAmerica Savannah	Wisconsin	State Program	5	999819810
TestAmerica Savannah	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

MAR 23 2012

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SDG KRS012

Results of Sediment Samples from Sampling Points:

R2007-1
R2007-2
R2007-3

Solutia Krummrich Data Review
WGK LTM 1Q12

Laboratory SDG: KRS012

Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 3/23/2012

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

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

Sample Identification	
SED-R2007-3-0212	SED-R2007-2-0212
SED-R2007-1-0212	SED-R2007-1-0212-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?

No problems were indicated in the laboratory case narrative.

No problems were indicated in the cooler receipt form.

3.0 Holding Times

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

Yes

4.0 Blank Contamination

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

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

Yes

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

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7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, sample SED-R2007-3-0212 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-R2007-1-0212	SED-R2007-1-0212-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

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-77018-2
TestAmerica Sample Delivery Group: KRS012
Client Project/Site: WGK River Sampling SA - SED FEB 2012

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

Attn: Mr. Jerry Rinaldi

Lidya Gulizia

Authorized for release by:
3/21/2012 4:45:43 PM

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

cc: Bob Billman

Renewed on 3/23/2012 MM

LINKS

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Have a Question? Ask The Expert

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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MAR 23 2012

Job ID: 680-77018-2

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Solutia Inc.

Project: WGK River Sampling SA - SED FEB 2012

Report Number: 680-77018-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 02/17/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.6, 5.2, 5.0 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples SED-R2007-3-0212 (680-77018-2), SED-R2007-2-0212 (680-77018-4), SED-R2007-1-0212 (680-77018-6) and SED-R2007-1-0212-AD (680-77018-8) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were prepared on 02/18/2012 and analyzed on 02/27/2012.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples SED-R2007-3-0212 (680-77018-2), SED-R2007-2-0212 (680-77018-4), SED-R2007-1-0212 (680-77018-6) and SED-R2007-1-0212-AD (680-77018-8) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 02/21/2012 and analyzed on 02/25/2012 and 02/28/2012.

No difficulties were encountered during the SVOC analyses.

All quality control parameters were within the acceptance limits.

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TestAmerica Savannah

Sample Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-77018-2	SED-R2007-3-0212	Solid	02/16/12 10:30	02/17/12 09:24
680-77018-4	SED-R2007-2-0212	Solid	02/16/12 11:25	02/17/12 09:24
680-77018-6	SED-R2007-1-0212	Solid	02/16/12 12:15	02/17/12 09:24
680-77018-8	SED-R2007-1-0212-AD	Solid	02/16/12 12:15	02/17/12 09:24

MAR 23 2012

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Method Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
Moisture	Percent Moisture	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

MAR 23 2012

TestAmerica Savannah

Detection Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

Client Sample ID: SED-R2007-3-0212 — Lab Sample ID: 680-77018-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	9.8		4.3	0.83	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: SED-R2007-2-0212 — Lab Sample ID: 680-77018-4

No Detections

Client Sample ID: SED-R2007-1-0212 — Lab Sample ID: 680-77018-6

No Detections

Client Sample ID: SED-R2007-1-0212-AD — Lab Sample ID: 680-77018-8

No Detections

MAR 23 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

Client Sample ID: SED-R2007-3-0212
Date Collected: 02/16/12 10:30
Date Received: 02/17/12 09:24

Lab Sample ID: 680-77018-2
Matrix: Solid
Percent Solids: 85.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.3	U	4.3	0.63	ug/Kg	☼	02/18/12 13:47	02/27/12 16:33	1
Chlorobenzene	**9.8**		4.3	0.83	ug/Kg	☼	02/18/12 13:47	02/27/12 16:33	1
1,2-Dichlorobenzene	4.3	U	4.3	1.1	ug/Kg	☼	02/18/12 13:47	02/27/12 16:33	1
1,3-Dichlorobenzene	4.3	U	4.3	1.4	ug/Kg	☼	02/18/12 13:47	02/27/12 16:33	1
1,4-Dichlorobenzene	4.3	U	4.3	0.64	ug/Kg	☼	02/18/12 13:47	02/27/12 16:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*115*		*65 - 130*	*02/18/12 13:47*	*02/27/12 16:33*	*1*
Dibromofluoromethane	*88*		*65 - 130*	*02/18/12 13:47*	*02/27/12 16:33*	*1*
Toluene-d8 (Surr)	*105*		*65 - 130*	*02/18/12 13:47*	*02/27/12 16:33*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	770	U	770	61	ug/Kg	☼	02/21/12 20:00	02/25/12 21:27	1
2-Chlorophenol	390	U	390	47	ug/Kg	☼	02/21/12 20:00	02/25/12 21:27	1
1,4-Dioxane	390	U	390	140	ug/Kg	☼	02/21/12 20:00	02/25/12 21:27	1
1,2,4-Trichlorobenzene	390	U	390	36	ug/Kg	☼	02/21/12 20:00	02/25/12 21:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*81*		*58 - 130*	*02/21/12 20:00*	*02/25/12 21:27*	*1*
2-Fluorophenol	*72*		*40 - 130*	*02/21/12 20:00*	*02/25/12 21:27*	*1*
Nitrobenzene-d5	*71*		*46 - 130*	*02/21/12 20:00*	*02/25/12 21:27*	*1*
Phenol-d5	*73*		*49 - 130*	*02/21/12 20:00*	*02/25/12 21:27*	*1*
Terphenyl-d14	*93*		*60 - 130*	*02/21/12 20:00*	*02/25/12 21:27*	*1*
2,4,6-Tribromophenol	*83*		*58 - 130*	*02/21/12 20:00*	*02/25/12 21:27*	*1*

MAR 23 2012

TestAmerica Savannah

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Client Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

Client Sample ID: SED-R2007-2-0212

Date Collected: 02/16/12 11:25
Date Received: 02/17/12 09:24

Lab Sample ID: 680-77018-4

Matrix: Solid
Percent Solids: 83.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.6	U	4.6	0.67	ug/Kg	☼	02/18/12 13:47	02/27/12 17:00	1
Chlorobenzene	4.6	U	4.6	0.89	ug/Kg	☼	02/18/12 13:47	02/27/12 17:00	1
1,2-Dichlorobenzene	4.6	U	4.6	1.2	ug/Kg	☼	02/18/12 13:47	02/27/12 17:00	1
1,3-Dichlorobenzene	4.6	U	4.6	1.5	ug/Kg	☼	02/18/12 13:47	02/27/12 17:00	1
1,4-Dichlorobenzene	4.6	U	4.6	0.68	ug/Kg	☼	02/18/12 13:47	02/27/12 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*111*		*65 - 130*	*02/18/12 13:47*	*02/27/12 17:00*	*1*
Dibromofluoromethane	*98*		*65 - 130*	*02/18/12 13:47*	*02/27/12 17:00*	*1*
Toluene-d8 (Surr)	*104*		*65 - 130*	*02/18/12 13:47*	*02/27/12 17:00*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	780	U	780	62	ug/Kg	☼	02/21/12 20:00	02/25/12 21:55	1
2-Chlorophenol	390	U	390	48	ug/Kg	☼	02/21/12 20:00	02/25/12 21:55	1
1,4-Dioxane	390	U	390	140	ug/Kg	☼	02/21/12 20:00	02/25/12 21:55	1
1,2,4-Trichlorobenzene	390	U	390	37	ug/Kg	☼	02/21/12 20:00	02/25/12 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*82*		*58 - 130*	*02/21/12 20:00*	*02/25/12 21:55*	*1*
2-Fluorophenol	*73*		*40 - 130*	*02/21/12 20:00*	*02/25/12 21:55*	*1*
Nitrobenzene-d5	*73*		*46 - 130*	*02/21/12 20:00*	*02/25/12 21:55*	*1*
Phenol-d5	*73*		*49 - 130*	*02/21/12 20:00*	*02/25/12 21:55*	*1*
Terphenyl-d14	*92*		*60 - 130*	*02/21/12 20:00*	*02/25/12 21:55*	*1*
2,4,6-Tribromophenol	*81*		*58 - 130*	*02/21/12 20:00*	*02/25/12 21:55*	*1*

MAR 23 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

Client Sample ID: SED-R2007-1-0212
Date Collected: 02/16/12 12:15
Date Received: 02/17/12 09:24

Lab Sample ID: 680-77018-6
Matrix: Solid
Percent Solids: 79.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	7.0	U	7.0	1.0	ug/Kg	☼	02/18/12 13:47	02/27/12 17:22	1
Chlorobenzene	7.0	U	7.0	1.4	ug/Kg	☼	02/18/12 13:47	02/27/12 17:22	1
1,2-Dichlorobenzene	7.0	U	7.0	1.8	ug/Kg	☼	02/18/12 13:47	02/27/12 17:22	1
1,3-Dichlorobenzene	7.0	U	7.0	2.3	ug/Kg	☼	02/18/12 13:47	02/27/12 17:22	1
1,4-Dichlorobenzene	7.0	U	7.0	1.0	ug/Kg	☼	02/18/12 13:47	02/27/12 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*		*65 - 130*	*02/18/12 13:47*	*02/27/12 17:22*	*1*
Dibromofluoromethane	*108*		*65 - 130*	*02/18/12 13:47*	*02/27/12 17:22*	*1*
Toluene-d8 (Surr)	*104*		*65 - 130*	*02/18/12 13:47*	*02/27/12 17:22*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	830	U	830	65	ug/Kg	☼	02/21/12 20:00	02/25/12 22:22	1
2-Chlorophenol	410	U	410	50	ug/Kg	☼	02/21/12 20:00	02/25/12 22:22	1
1,4-Dioxane	410	U	410	150	ug/Kg	☼	02/21/12 20:00	02/25/12 22:22	1
1,2,4-Trichlorobenzene	410	U	410	39	ug/Kg	☼	02/21/12 20:00	02/25/12 22:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*58 - 130*	*02/21/12 20:00*	*02/25/12 22:22*	*1*
2-Fluorophenol	*67*		*40 - 130*	*02/21/12 20:00*	*02/25/12 22:22*	*1*
Nitrobenzene-d5	*60*		*46 - 130*	*02/21/12 20:00*	*02/25/12 22:22*	*1*
Phenol-d5	*67*		*49 - 130*	*02/21/12 20:00*	*02/25/12 22:22*	*1*
Terphenyl-d14	*73*		*60 - 130*	*02/21/12 20:00*	*02/25/12 22:22*	*1*
2,4,6-Tribromophenol	*74*		*58 - 130*	*02/21/12 20:00*	*02/25/12 22:22*	*1*

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MAR 23 2012

TestAmerica Savannah

Client Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

Client Sample ID: SED-R2007-1-0212-AD

Lab Sample ID: 680-77018-8

Date Collected: 02/16/12 12:15
Date Received: 02/17/12 09:24

Matrix: Solid
Percent Solids: 77.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.3	U	5.3	0.78	ug/Kg	☼	02/18/12 13:47	02/27/12 17:45	1
Chlorobenzene	5.3	U	5.3	1.0	ug/Kg	☼	02/18/12 13:47	02/27/12 17:45	1
1,2-Dichlorobenzene	5.3	U	5.3	1.4	ug/Kg	☼	02/18/12 13:47	02/27/12 17:45	1
1,3-Dichlorobenzene	5.3	U	5.3	1.7	ug/Kg	☼	02/18/12 13:47	02/27/12 17:45	1
1,4-Dichlorobenzene	5.3	U	5.3	0.79	ug/Kg	☼	02/18/12 13:47	02/27/12 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*65 - 130*	*02/18/12 13:47*	*02/27/12 17:45*	*1*
Dibromofluoromethane	*108*		*65 - 130*	*02/18/12 13:47*	*02/27/12 17:45*	*1*
Toluene-d8 (Surr)	*104*		*65 - 130*	*02/18/12 13:47*	*02/27/12 17:45*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	840	U	840	67	ug/Kg	☼	02/21/12 20:00	02/28/12 19:33	1
2-Chlorophenol	420	U	420	51	ug/Kg	☼	02/21/12 20:00	02/28/12 19:33	1
1,4-Dioxane	420	U	420	150	ug/Kg	☼	02/21/12 20:00	02/28/12 19:33	1
1,2,4-Trichlorobenzene	420	U	420	40	ug/Kg	☼	02/21/12 20:00	02/28/12 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*58 - 130*	*02/21/12 20:00*	*02/28/12 19:33*	*1*
2-Fluorophenol	*58*		*40 - 130*	*02/21/12 20:00*	*02/28/12 19:33*	*1*
Nitrobenzene-d5	*51*		*46 - 130*	*02/21/12 20:00*	*02/28/12 19:33*	*1*
Phenol-d5	*60*		*49 - 130*	*02/21/12 20:00*	*02/28/12 19:33*	*1*
Terphenyl-d14	*67*		*60 - 130*	*02/21/12 20:00*	*02/28/12 19:33*	*1*
2,4,6-Tribromophenol	*72*		*58 - 130*	*02/21/12 20:00*	*02/28/12 19:33*	*1*

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Surrogate Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(65-130)	(65-130)	(65-130)
680-77018-2	SED-R2007-3-0212	115	88	105
680-77018-2 MS	SED-R2007-3-0212	96	102	97
680-77018-2 MSD	SED-R2007-3-0212	104	109	109
680-77018-4	SED-R2007-2-0212	111	98	104
680-77018-6	SED-R2007-1-0212	108	108	104
680-77018-8	SED-R2007-1-0212-AD	104	108	104
LCS 680-230222/4	Lab Control Sample	99	110	103
LCSD 680-230222/5	Lab Control Sample Dup	102	110	104
MB 680-230222/7	Method Blank	108	105	103

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(58-130)	(40-130)	(46-130)	(49-130)	(60-130)	(58-130)
680-77018-2	SED-R2007-3-0212	81	72	71	73	93	83
680-77018-2 MS	SED-R2007-3-0212	76	66	65	70	88	87
680-77018-2 MSD	SED-R2007-3-0212	76	67	67	69	86	87
680-77018-4	SED-R2007-2-0212	82	73	73	73	92	81
680-77018-6	SED-R2007-1-0212	73	67	60	67	73	74
680-77018-8	SED-R2007-1-0212-AD	67	58	51	60	67	72
LCS 680-229666/9-A	Lab Control Sample	72	66	65	67	82	76
MB 680-229666/8-A	Method Blank	77	69	67	70	87	76

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPH = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

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QC Sample Results

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

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

Lab Sample ID: 680-77018-2 MS — **Client Sample ID: SED-R2007-3-0212**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 230222 — **Prep Batch: 229441**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	4.3	U	42.0	40.7		ug/Kg	☼	97	70 - 130
Chlorobenzene	9.8		42.0	40.1		ug/Kg	☼	72	70 - 130
1,2-Dichlorobenzene	4.3	U	42.0	39.7		ug/Kg	☼	94	70 - 130
1,3-Dichlorobenzene	4.3	U	42.0	40.3		ug/Kg	☼	96	70 - 130
1,4-Dichlorobenzene	4.3	U	42.0	39.2		ug/Kg	☼	93	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*65 - 130*
Dibromofluoromethane	*102*		*65 - 130*
Toluene-d8 (Surr)	*97*		*65 - 130*

Lab Sample ID: 680-77018-2 MSD — **Client Sample ID: SED-R2007-3-0212**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 230222 — **Prep Batch: 229441**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	4.3	U	51.1	53.2		ug/Kg	☼	104	70 - 130	27	50
Chlorobenzene	9.8		51.1	54.0		ug/Kg	☼	87	70 - 130	30	50
1,2-Dichlorobenzene	4.3	U	51.1	53.7		ug/Kg	☼	105	70 - 130	30	50
1,3-Dichlorobenzene	4.3	U	51.1	53.9		ug/Kg	☼	106	70 - 130	29	50
1,4-Dichlorobenzene	4.3	U	51.1	54.5		ug/Kg	☼	107	70 - 130	33	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*65 - 130*
Dibromofluoromethane	*109*		*65 - 130*
Toluene-d8 (Surr)	*109*		*65 - 130*

Lab Sample ID: MB 680-230222/7 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 230222

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.0	U	5.0	0.73	ug/Kg			02/27/12 12:44	1
Chlorobenzene	5.0	U	5.0	0.96	ug/Kg			02/27/12 12:44	1
1,2-Dichlorobenzene	5.0	U	5.0	1.3	ug/Kg			02/27/12 12:44	1
1,3-Dichlorobenzene	5.0	U	5.0	1.6	ug/Kg			02/27/12 12:44	1
1,4-Dichlorobenzene	5.0	U	5.0	0.74	ug/Kg			02/27/12 12:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*		*65 - 130*		*02/27/12 12:44*	*1*
Dibromofluoromethane	*105*		*65 - 130*		*02/27/12 12:44*	*1*
Toluene-d8 (Surr)	*103*		*65 - 130*		*02/27/12 12:44*	*1*

Lab Sample ID: LCS 680-230222/4 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 230222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	51.1		ug/Kg		102	70 - 130

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

Lab Sample ID: LCS 680-230222/4
Matrix: Solid
Analysis Batch: 230222

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	50.0	49.2		ug/Kg		98	70 - 130
1,2-Dichlorobenzene	50.0	49.2		ug/Kg		98	70 - 130
1,3-Dichlorobenzene	50.0	51.3		ug/Kg		103	70 - 130
1,4-Dichlorobenzene	50.0	50.1		ug/Kg		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*65 - 130*
Dibromofluoromethane	*110*		*65 - 130*
Toluene-d8 (Surr)	*103*		*65 - 130*

Lab Sample ID: LCSD 680-230222/5
Matrix: Solid
Analysis Batch: 230222

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	52.1		ug/Kg		104	70 - 130	2	50
Chlorobenzene	50.0	51.3		ug/Kg		103	70 - 130	4	50
1,2-Dichlorobenzene	50.0	50.0		ug/Kg		100	70 - 130	1	50
1,3-Dichlorobenzene	50.0	51.9		ug/Kg		104	70 - 130	1	50
1,4-Dichlorobenzene	50.0	50.2		ug/Kg		100	70 - 130	0	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*65 - 130*
Dibromofluoromethane	*110*		*65 - 130*
Toluene-d8 (Surr)	*104*		*65 - 130*

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

Lab Sample ID: MB 680-229666/8-A
Matrix: Solid
Analysis Batch: 230171

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 229666

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	660	U	660	52	ug/Kg		02/21/12 20:00	02/25/12 20:32	1
2-Chlorophenol	330	U	330	40	ug/Kg		02/21/12 20:00	02/25/12 20:32	1
1,4-Dioxane	330	U	330	120	ug/Kg		02/21/12 20:00	02/25/12 20:32	1
1,2,4-Trichlorobenzene	330	U	330	31	ug/Kg		02/21/12 20:00	02/25/12 20:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*58 - 130*	*02/21/12 20:00*	*02/25/12 20:32*	*1*
2-Fluorophenol	*69*		*40 - 130*	*02/21/12 20:00*	*02/25/12 20:32*	*1*
Nitrobenzene-d5	*67*		*46 - 130*	*02/21/12 20:00*	*02/25/12 20:32*	*1*
Phenol-d5	*70*		*49 - 130*	*02/21/12 20:00*	*02/25/12 20:32*	*1*
Terphenyl-d14	*87*		*60 - 130*	*02/21/12 20:00*	*02/25/12 20:32*	*1*
2,4,6-Tribromophenol	*76*		*58 - 130*	*02/21/12 20:00*	*02/25/12 20:32*	*1*

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

Lab Sample ID: LCS 680-229666/9-A
Matrix: Solid
Analysis Batch: 230171

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 229666

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	3330	1470		ug/Kg		44	36 - 130
2-Chlorophenol	3330	2230		ug/Kg		67	51 - 130
1,4-Dioxane	3330	975		ug/Kg		29	10 - 130
1,2,4-Trichlorobenzene	3330	2240		ug/Kg		67	51 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*72*		*58 - 130*
2-Fluorophenol	*66*		*40 - 130*
Nitrobenzene-d5	*65*		*46 - 130*
Phenol-d5	*67*		*49 - 130*
Terphenyl-d14	*82*		*60 - 130*
2,4,6-Tribromophenol	*76*		*58 - 130*

Lab Sample ID: 680-77018-2 MS
Matrix: Solid
Analysis Batch: 230344

Client Sample ID: SED-R2007-3-0212
Prep Type: Total/NA
Prep Batch: 229666

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	770	U	3740	2500		ug/Kg	☼	67	36 - 130
2-Chlorophenol	390	U	3740	2630		ug/Kg	☼	70	51 - 130
1,4-Dioxane	390	U	3740	1130		ug/Kg	☼	30	10 - 130
1,2,4-Trichlorobenzene	390	U	3740	2730		ug/Kg	☼	73	51 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*76*		*58 - 130*
2-Fluorophenol	*66*		*40 - 130*
Nitrobenzene-d5	*65*		*46 - 130*
Phenol-d5	*70*		*49 - 130*
Terphenyl-d14	*88*		*60 - 130*
2,4,6-Tribromophenol	*87*		*58 - 130*

Lab Sample ID: 680-77018-2 MSD
Matrix: Solid
Analysis Batch: 230344

Client Sample ID: SED-R2007-3-0212
Prep Type: Total/NA
Prep Batch: 229666

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloroaniline	770	U	3780	2510		ug/Kg	☼	67	36 - 130	1	50
2-Chlorophenol	390	U	3780	2710		ug/Kg	☼	72	51 - 130	3	50
1,4-Dioxane	390	U	3780	1250		ug/Kg	☼	33	10 - 130	11	50
1,2,4-Trichlorobenzene	390	U	3780	2930		ug/Kg	☼	77	51 - 130	7	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*76*		*58 - 130*
2-Fluorophenol	*67*		*40 - 130*
Nitrobenzene-d5	*67*		*46 - 130*
Phenol-d5	*69*		*49 - 130*
Terphenyl-d14	*86*		*60 - 130*
2,4,6-Tribromophenol	*87*		*58 - 130*

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QC Association Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

GC/MS VOA

Prep Batch: 229441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-2	SED-R2007-3-0212	Total/NA	Solid	5035	
680-77018-2 MS	SED-R2007-3-0212	Total/NA	Solid	5035	
680-77018-2 MSD	SED-R2007-3-0212	Total/NA	Solid	5035	
680-77018-4	SED-R2007-2-0212	Total/NA	Solid	5035	
680-77018-6	SED-R2007-1-0212	Total/NA	Solid	5035	
680-77018-8	SED-R2007-1-0212-AD	Total/NA	Solid	5035	

Analysis Batch: 230222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-2	SED-R2007-3-0212	Total/NA	Solid	8260B	229441
680-77018-2 MS	SED-R2007-3-0212	Total/NA	Solid	8260B	229441
680-77018-2 MSD	SED-R2007-3-0212	Total/NA	Solid	8260B	229441
680-77018-4	SED-R2007-2-0212	Total/NA	Solid	8260B	229441
680-77018-6	SED-R2007-1-0212	Total/NA	Solid	8260B	229441
680-77018-8	SED-R2007-1-0212-AD	Total/NA	Solid	8260B	229441
LCS 680-230222/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 680-230222/5	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 680-230222/7	Method Blank	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 229666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-2	SED-R2007-3-0212	Total/NA	Solid	3546	
680-77018-2 MS	SED-R2007-3-0212	Total/NA	Solid	3546	
680-77018-2 MSD	SED-R2007-3-0212	Total/NA	Solid	3546	
680-77018-4	SED-R2007-2-0212	Total/NA	Solid	3546	
680-77018-6	SED-R2007-1-0212	Total/NA	Solid	3546	
680-77018-8	SED-R2007-1-0212-AD	Total/NA	Solid	3546	
LCS 680-229666/9-A	Lab Control Sample	Total/NA	Solid	3546	
MB 680-229666/8-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 230171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-2	SED-R2007-3-0212	Total/NA	Solid	8270C	229666
680-77018-4	SED-R2007-2-0212	Total/NA	Solid	8270C	229666
680-77018-6	SED-R2007-1-0212	Total/NA	Solid	8270C	229666
LCS 680-229666/9-A	Lab Control Sample	Total/NA	Solid	8270C	229666
MB 680-229666/8-A	Method Blank	Total/NA	Solid	8270C	229666

Analysis Batch: 230344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-2 MS	SED-R2007-3-0212	Total/NA	Solid	8270C	229666
680-77018-2 MSD	SED-R2007-3-0212	Total/NA	Solid	8270C	229666
680-77018-8	SED-R2007-1-0212-AD	Total/NA	Solid	8270C	229666

General Chemistry

Analysis Batch: 229397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-2	SED-R2007-3-0212	Total/NA	Solid	Moisture	
680-77018-2 MS	SED-R2007-3-0212	Total/NA	Solid	Moisture	

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General Chemistry (Continued)

Analysis Batch: 229397 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-77018-2 MSD	SED-R2007-3-0212	Total/NA	Solid	Moisture	
680-77018-4	SED-R2007-2-0212	Total/NA	Solid	Moisture	
680-77018-6	SED-R2007-1-0212	Total/NA	Solid	Moisture	
680-77018-8	SED-R2007-1-0212-AD	Total/NA	Solid	Moisture	

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TestAmerica Savannah

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

Client Sample ID: SED-R2007-3-0212 — Lab Sample ID: 680-77018-2

Date Collected: 02/16/12 10:30 — **Matrix: Solid**
Date Received: 02/17/12 09:24 — **Percent Solids: 85.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.772 g	5 g	229441	02/18/12 13:47	FS	TAL SAV
Total/NA	Analysis	8260B		1			230222	02/27/12 16:33	ES	TAL SAV
Total/NA	Prep	3546			30.10 g	1 mL	229666	02/21/12 20:00	JW	TAL SAV
Total/NA	Analysis	8270C		1			230171	02/25/12 21:27	MES	TAL SAV
Total/NA	Analysis	Moisture		1			229397	02/17/12 16:21	FS	TAL SAV

Client Sample ID: SED-R2007-2-0212 — Lab Sample ID: 680-77018-4

Date Collected: 02/16/12 11:25 — **Matrix: Solid**
Date Received: 02/17/12 09:24 — **Percent Solids: 83.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.461 g	5 g	229441	02/18/12 13:47	FS	TAL SAV
Total/NA	Analysis	8260B		1			230222	02/27/12 17:00	ES	TAL SAV
Total/NA	Prep	3546			30.08 g	1 mL	229666	02/21/12 20:00	JW	TAL SAV
Total/NA	Analysis	8270C		1			230171	02/25/12 21:55	MES	TAL SAV
Total/NA	Analysis	Moisture		1			229397	02/17/12 16:21	FS	TAL SAV

Client Sample ID: SED-R2007-1-0212 — Lab Sample ID: 680-77018-6

Date Collected: 02/16/12 12:15 — **Matrix: Solid**
Date Received: 02/17/12 09:24 — **Percent Solids: 79.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.456 g	5 g	229441	02/18/12 13:47	FS	TAL SAV
Total/NA	Analysis	8260B		1			230222	02/27/12 17:22	ES	TAL SAV
Total/NA	Prep	3546			30.14 g	1 mL	229666	02/21/12 20:00	JW	TAL SAV
Total/NA	Analysis	8270C		1			230171	02/25/12 22:22	MES	TAL SAV
Total/NA	Analysis	Moisture		1			229397	02/17/12 16:21	FS	TAL SAV

Client Sample ID: SED-R2007-1-0212-AD — Lab Sample ID: 680-77018-8

Date Collected: 02/16/12 12:15 — **Matrix: Solid**
Date Received: 02/17/12 09:24 — **Percent Solids: 77.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.056 g	5 g	229441	02/18/12 13:47	FS	TAL SAV
Total/NA	Analysis	8260B		1			230222	02/27/12 17:45	ES	TAL SAV
Total/NA	Prep	3546			30.18 g	1 mL	229666	02/21/12 20:00	JW	TAL SAV
Total/NA	Analysis	8270C		1			230344	02/28/12 19:33	MES	TAL SAV
Total/NA	Analysis	Moisture		1			229397	02/17/12 16:21	FS	TAL SAV

Laboratory References:

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

MAR 23 2012
TestAmerica Savannah

Serial Number 49713

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: Solutia WGR River	PROJECT NO.: 21562682.0001	PROJECT LOCATION (STATE): IL	PAGE 1 OF 2
TAL (LAB) PROJECT MANAGER: Lidia Guglia	P.O. NUMBER:	CONTRACT NO.:	STANDARD REPORT DELIVERY ☒ DATE DUE
CLIENT (SITE) PM: Dave Palmer	CLIENT PHONE: 314 429 0100	CLIENT FAX: 314 429 0462	EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE
CLIENT NAME: URS Corporation	CLIENT E-MAIL: dave.palmer@urs.com		
CLIENT ADDRESS: 1001 Highlands Plaza Dr W Ste 300 St. Louis MO 63110			
COMPANY CONTRACTING THIS WORK (if applicable)			NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS: Benzene, Ethylbenzene, Total Chlorobenzenes; 1,4-Dichlorobenzene, 1,2-Dichlorobenzene; Benzene, Ethylbenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene

PRESERVATIVE: HCl, HCl

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID	NUMBER OF CONTAINERS SUBMITTED									REMARKS
2/16/12	1015	SW-R2007-3-0212	G	X				3	2								
	1030	SED-R2007-3-0212	G		X						4	1					
	1015	SW-R2007-3-0212-MS	G	X				3	2								
	1015	SW-R2007-3-0212-MSD	G	X				3	2								
	1030	SED-R2007-3-0212-MS	G		X						4	1					
	1030	SED-R2007-3-0212-MSD	G		X						4	1					
	1110	SW-R2007-2-0212	G	X				3	2								
	1125	SED-R2007-2-0212	G		X						4	1					
	1205	SW-R2007-1-0212	G	X				3	2								
	1215	SED-R2007-1-0212	G		X						4	1					
	1205	SW-R2007-1-0212-AD	G	X				3	2								
	1215	SED-R2007-1-0212-AD	G		X						4	1					

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/16/12	1700						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
Fed Ex	2/16/12	1700						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	02/17/12	0924	YES ○ NO ○		6 70 77018	3.6 °C / 5.2 °C / 5.0 °C

MAR 23 2012

Serial Number 49311

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: Sonata Work River	PROJECT NO.: 21562682.00008	PROJECT LOCATION (STATE): FL
TAL (LAB) PROJECT MANAGER: Linda Gunzel	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Dave Palmer	CLIENT PHONE: 314 429 0100	CLIENT FAX: 314 429 0462
CLIENT NAME: URS Corporation	CLIENT E-MAIL: dave.palmer@urs.com	
CLIENT ADDRESS: 1001 Highlands Plaza Dr W Ste 300 St Louis MO 63146		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 2 OF 2

STANDARD REPORT DELIVERY (X)

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ( )

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSIS: Benzene (EPA 8260B) (X); 1,4-Dioxane (EPA 8260B-SIM) (X)

PRESERVATIVE: HCl; HCl

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	Benzene (EPA 8260B)	1,4-Dioxane (EPA 8260B-SIM)	REMARKS
2/16/12	1220	SED-R2007-1-0212-EB	G	X				3	2	
↓	1615	TB021612	G	X				2		

NUMBER OF CONTAINERS SUBMITTED

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/16/12	1700						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
[signature]	2/16/12	1700						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	02/17/12	0924	YES ( ) NO ( )		77018	3.6°C / 5.2°C / 5.0°C

TAL 8240-680 (1008)

Page 20 of 22

MAR 23 2012

Login Sample Receipt Checklist

Client: Solutia Inc.

Job Number: 680-77018-2
SDG Number: KRS012

Login Number: 77018
List Number: 1
Creator: Barnett, Eddie T

List Source: TestAmerica Savannah

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.6, 5.2, 5.0 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	-9 is a water but sample ID has the prefix "SED"
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	1 liter received broken for sample -5
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	VOA vial preserved with Sodium Thio and HCl
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

MAR 23 2012

Certification Summary

Client: Solutia Inc.
Project/Site: WGK River Sampling SA - SED FEB 2012

TestAmerica Job ID: 680-77018-2
SDG: KRS012

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Savannah	A2LA	DoD ELAP		0399-01
TestAmerica Savannah	A2LA	ISO/IEC 17025		399.01
TestAmerica Savannah	Alabama	State Program	4	41450
TestAmerica Savannah	Arkansas	State Program	6	N/A
TestAmerica Savannah	Arkansas DEQ	State Program	6	88-0692
TestAmerica Savannah	California	NELAC	9	3217CA
TestAmerica Savannah	Colorado	State Program	8	N/A
TestAmerica Savannah	Connecticut	State Program	1	PH-0161
TestAmerica Savannah	Florida	NELAC	4	E87052
TestAmerica Savannah	GA Dept. of Agriculture	State Program	4	N/A
TestAmerica Savannah	Georgia	State Program	4	803
TestAmerica Savannah	Georgia	State Program	4	N/A
TestAmerica Savannah	Guam	State Program	9	09-005r
TestAmerica Savannah	Hawaii	State Program	9	N/A
TestAmerica Savannah	Illinois	NELAC	5	200022
TestAmerica Savannah	Indiana	State Program	5	N/A
TestAmerica Savannah	Iowa	State Program	7	353
TestAmerica Savannah	Kentucky	State Program	4	90084
TestAmerica Savannah	Kentucky (UST)	State Program	4	18
TestAmerica Savannah	Louisiana	NELAC	6	30690
TestAmerica Savannah	Louisiana	NELAC	6	LA100015
TestAmerica Savannah	Maine	State Program	1	GA00006
TestAmerica Savannah	Maryland	State Program	3	250
TestAmerica Savannah	Massachusetts	State Program	1	M-GA006
TestAmerica Savannah	Michigan	State Program	5	9925
TestAmerica Savannah	Mississippi	State Program	4	N/A
TestAmerica Savannah	Montana	State Program	8	CERT0081
TestAmerica Savannah	Nebraska	State Program	7	TestAmerica-Savannah
TestAmerica Savannah	New Jersey	NELAC	2	GA769
TestAmerica Savannah	New Mexico	State Program	6	N/A
TestAmerica Savannah	New York	NELAC	2	10842
TestAmerica Savannah	North Carolina DENR	State Program	4	269
TestAmerica Savannah	North Carolina DHHS	State Program	4	13701
TestAmerica Savannah	Oklahoma	State Program	6	9984
TestAmerica Savannah	Pennsylvania	NELAC	3	68-00474
TestAmerica Savannah	Puerto Rico	State Program	2	GA00006
TestAmerica Savannah	Rhode Island	State Program	1	LAO00244
TestAmerica Savannah	South Carolina	State Program	4	98001
TestAmerica Savannah	Tennessee	State Program	4	TN02961
TestAmerica Savannah	Texas	NELAC	6	T104704185-08-TX
TestAmerica Savannah	USDA	Federal		SAV 3-04
TestAmerica Savannah	Vermont	State Program	1	87052
TestAmerica Savannah	Virginia	NELAC	3	460161
TestAmerica Savannah	Washington	State Program	10	C1794
TestAmerica Savannah	West Virginia	State Program	3	9950C
TestAmerica Savannah	West Virginia DEP	State Program	3	94
TestAmerica Savannah	Wisconsin	State Program	5	999819810
TestAmerica Savannah	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

MAR 23 2012

TestAmerica Savannah

US EPA ARCHIVE DOCUMENT

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: 041JB **Date Rec:** 02/10/2012 **Report Date:** 03/22/2012

Client Project #: 21562682.00006 **Client Project Name:** Solutia WG Krummrich Long Term Monit

Purchase Order #: 21562682

Analysis Requested: PLFA, Stable Isotope Probing, Standard Bio-Trap

Reviewed By:

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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 1Q

MI Project Number: **041JB**
Date Received: 02/10/2012

Sample Information

Sample Name:	**BSA-MW-1S**	**BSA-MW-2D**	**BSA-MW-2D Benzene**	**BSA-MW-3D**	**BSA-MW-4D**
Sample Date:	02/09/2012	02/09/2012	02/09/2012	02/09/2012	02/09/2012
Sample Matrix:	Std. Bio-Trap	Std. Bio-Trap	Adv. Bio-Trap	Std. Bio-Trap	Std. Bio-Trap
Analyst:	BJ	BJ	BJ	BJ	BJ

Biomass Concentrations

Total Biomass (cells/bead)	**1.07E+05**	**3.30E+05**	**4.17E+05**	**8.94E+04**	**8.06E+04**

Community Structure (% total PLFA)

Firmicutes (TerBrSats)	**15.06**	**4.10**	**7.03**	**2.50**	**2.96**
Proteobacteria (Monos)	**50.48**	**78.15**	**67.06**	**59.77**	**72.86**
Anaerobic metal reducers (BrMonos)	**0.00**	**0.44**	**0.00**	**0.00**	**0.00**
SRB/Actinomycetes (MidBrSats)	**0.00**	**1.00**	**0.00**	**1.97**	**3.17**
General (Nsats)	**34.47**	**15.96**	**18.91**	**31.16**	**19.52**
Eukaryotes (polyenoics)	**0.00**	**0.34**	**6.97**	**4.62**	**1.47**

Physiological Status (Proteobacteria only)

Slowed Growth	**0.15**	**0.14**	**0.33**	**0.10**	**0.22**
Decreased Permeability	**0.03**	**0.19**	**0.12**	**0.17**	**0.22**

Legend:
NA = Not Analyzed NS = Not Sampled

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

PLFA

Client: **URS Corp**
Project: Solutia WG Krummrich Long Term Monitoring 1Q

MI Project Number: **041JB**
Date Received: 02/10/2012

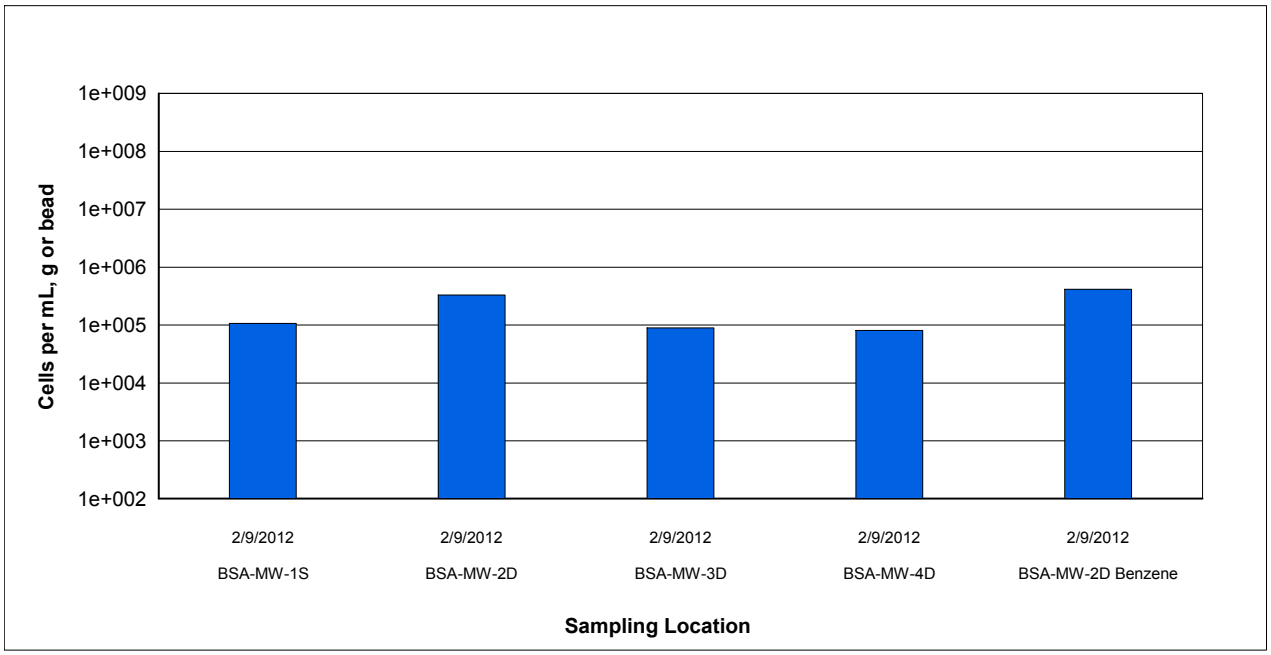

Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

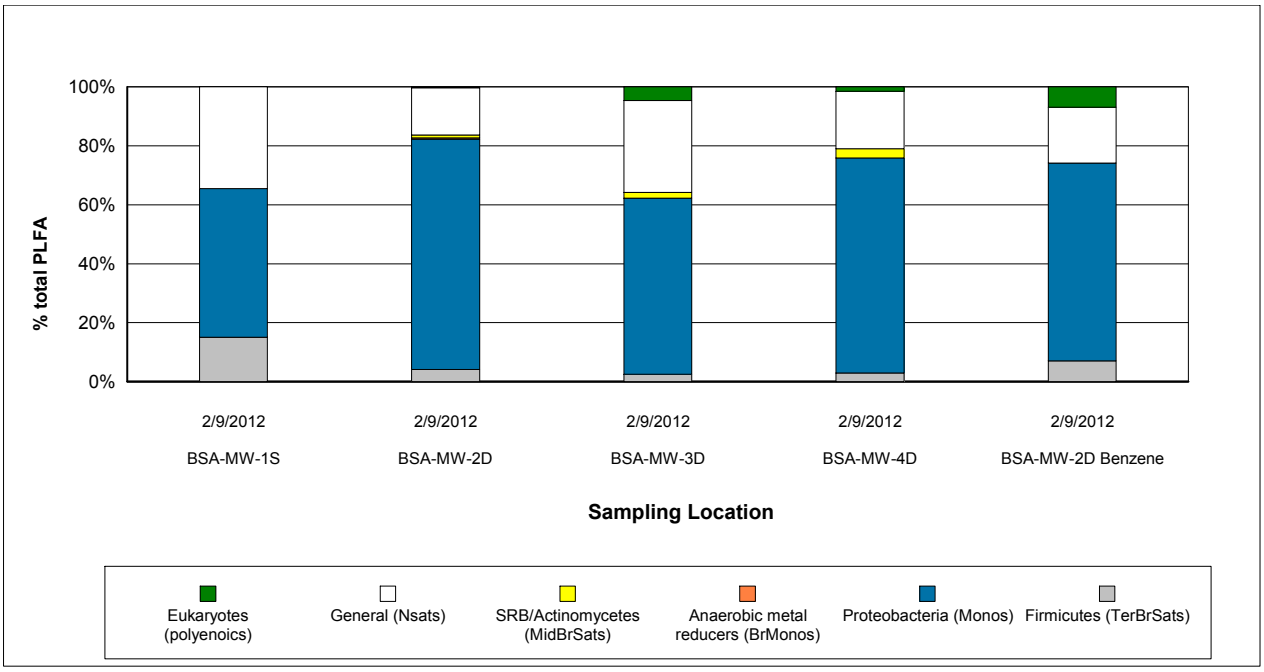

Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

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PLFA

Client: **URS Corp**
Project: Solutia WG Krummrich Long Term Monitoring 1Q

MI Project Number: **041JB**
Date Received: 02/10/2012

Sample Information

Sample Name:	**BSA-MW-5D**	**CPA-MW-1D**	**CPA-MW-2D**	**CPA-MW-3D**	**CPA-MW-3D Chlorobenzene**
Sample Date:	02/09/2012	02/09/2012	02/09/2012	02/09/2012	02/09/2012
Sample Matrix:	Std. Bio-Trap	Std. Bio-Trap	Std. Bio-Trap	Std. Bio-Trap	Adv. Bio-Trap
Analyst:	BJ	BJ	BJ	BJ	BJ

Biomass Concentrations

Total Biomass (cells/bead)	**1.29E+05**	**4.47E+04**	**4.57E+04**	**4.94E+04**	**5.86E+04**

Community Structure (% total PLFA)

Firmicutes (TerBrSats)	**1.84**	**0.00**	**0.00**	**0.00**	**6.81**
Proteobacteria (Monos)	**79.21**	**74.40**	**75.49**	**75.31**	**64.80**
Anaerobic metal reducers (BrMonos)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
SRB/Actinomycetes (MidBrSats)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
General (Nsats)	**18.07**	**25.61**	**24.50**	**24.70**	**28.40**
Eukaryotes (polyenoics)	**0.89**	**0.00**	**0.00**	**0.00**	**0.00**

Physiological Status (Proteobacteria only)

Slowed Growth	**0.08**	**0.19**	**0.34**	**0.21**	**0.00**
Decreased Permeability	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**

Legend:
NA = Not Analyzed NS = Not Sampled

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

PLFA

Client: **URS Corp**
Project: Solutia WG Krummrich Long Term Monitoring 1Q

MI Project Number: **041JB**
Date Received: 02/10/2012

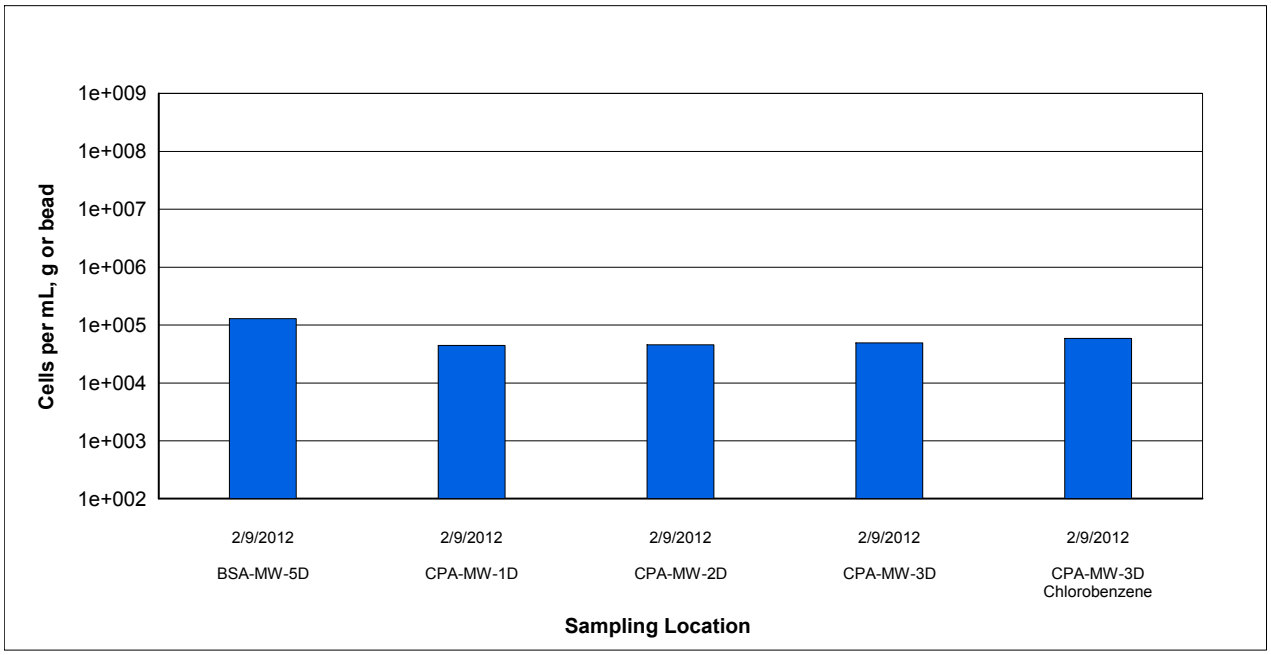

Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

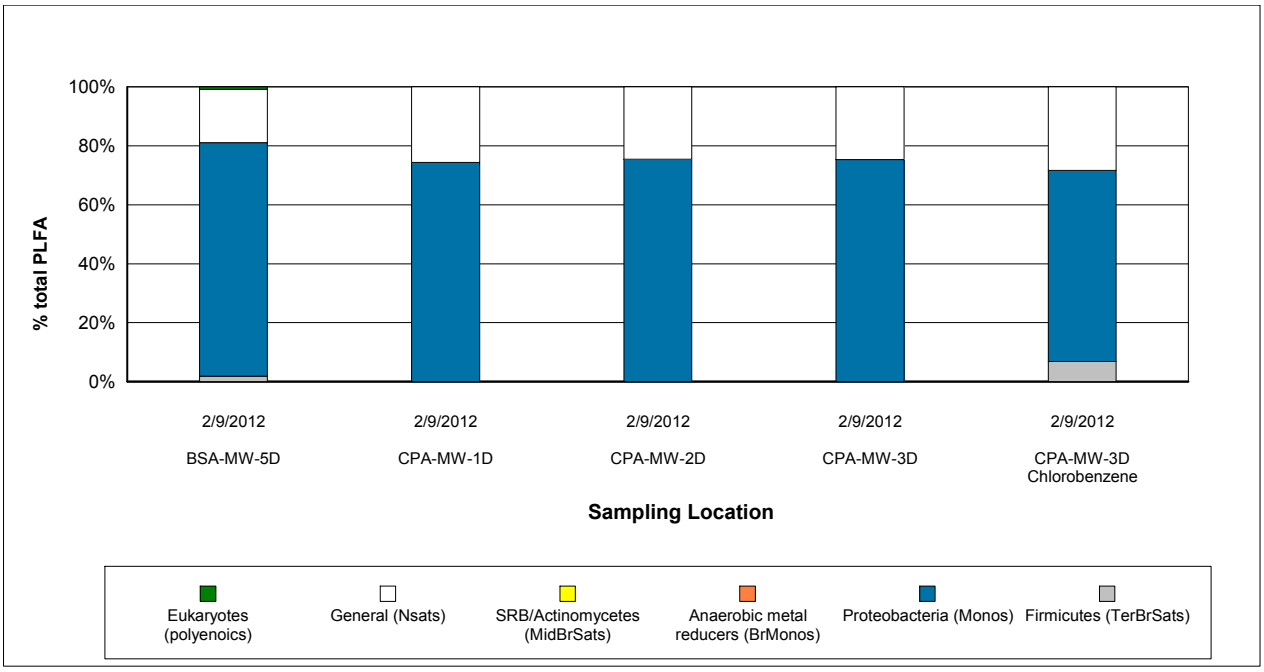

Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

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 1Q

MI Project Number: **041JB**
Date Received: 02/10/2012

Sample Information

Sample Name:	**CPA-MW-4D**	**CPA-MW-5D**
Sample Date:	02/09/2012	02/09/2012
Sample Matrix:	Std. Bio-Trap	Std. Bio-Trap
Analyst:	BJ	BJ

Biomass Concentrations

Total Biomass (cells/bead)	**1.04E+05**	**2.80E+04**

Community Structure (% total PLFA)

Firmicutes (TerBrSats)	**2.90**	**0.00**
Proteobacteria (Monos)	**62.63**	**66.64**
Anaerobic metal reducers (BrMonos)	**0.00**	**0.00**
SRB/Actinomycetes (MidBrSats)	**0.00**	**0.00**
General (Nsats)	**24.61**	**33.35**
Eukaryotes (polyenoics)	**9.86**	**0.00**

Physiological Status (Proteobacteria only)

Slowed Growth	**0.23**	**1.67**
Decreased Permeability	**0.00**	**0.00**

Legend:
NA = Not Analyzed NS = Not Sampled

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

PLFA

Client: **URS Corp**
Project: Solutia WG Krummrich Long Term Monitoring 1Q

MI Project Number: **041JB**
Date Received: 02/10/2012

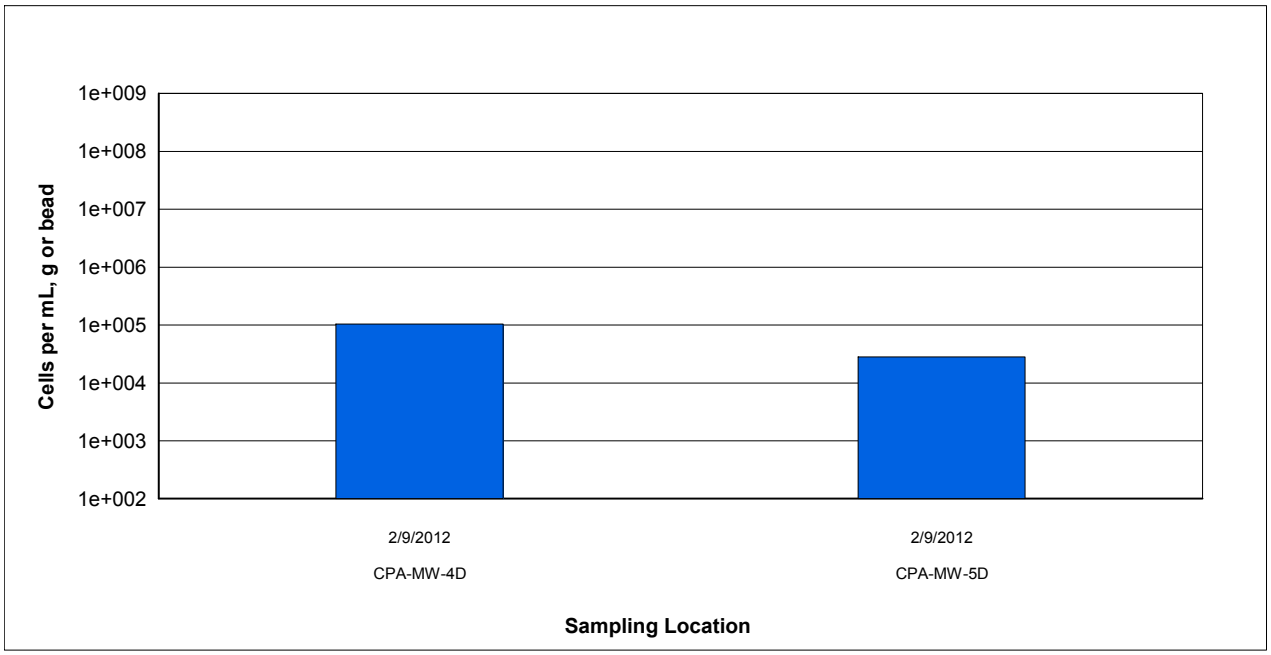

Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

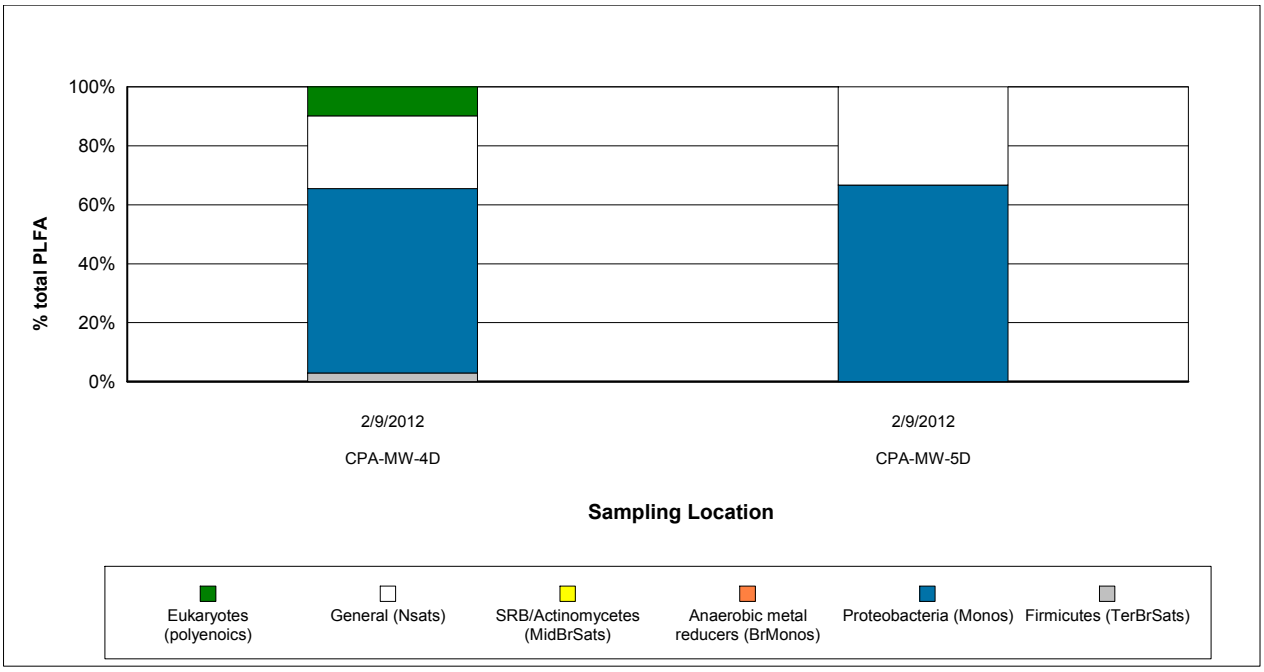

Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

2340 Stock Creek Blvd.
Rockford TN 37853-3044
Phone: (865) 573-8188
Fax: (865) 573-8133
Email: info@microbe.com

Identifier: 041JB **Date Rec:** 02/10/2012 **Report Date:** 03/22/2012

Client Project #: 21562682.00006 **Client Project Name:** Solutia WG Krummrich Long Term Monit

Purchase Order #: 21562682

Comments: The total PLFA biomass of samples CPA-MW-1D, CPA-MW-2D, CPA-MW-3D and CPA-MW-5D was below the laboratory PQL but above the LQL.

2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

SITE LOGIC Report

Stable Isotope Probing (SIP) Study

Contact: Dave Palmer
Address: URS Corporation – St. Louis MO
1001 Highlands Plaza Drive West
Suite 300
St. Louis, MO 63110

Phone: 314-743-4154

Email: dave_palmer@urscorp.com

MI Identifier: 041JB

Report Date: April 10, 2012

Project: Solutia WG Krummrich Long Term Monitoring 1Q12, Project # 21562682.00006

Comments:

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US EPA ARCHIVE DOCUMENT

Executive Summary

A Stable Isotope Probing (SIP) study was performed to determine whether biodegradation of benzene and chlorobenzene is occurring under existing site conditions. Bio-Trap® samplers baited with ^{13}C labeled benzene or ^{13}C labeled chlorobenzene were deployed in monitoring wells BSA-MW-2D and CPA-MW-3D, respectively, for 35 days. Following field deployment, the Bio-Traps were recovered to quantify ^{13}C incorporation into biomass and dissolved inorganic carbon (DIC). A complete summary of the results is provided in Table 1.

- Moderate ^{13}C incorporation into biomass (PLFA) and ^{13}C incorporation into dissolved inorganic carbon (DIC) conclusively demonstrated biodegradation of benzene within monitoring well BSA-MW-2D during the study period.
- For the ^{13}C chlorobenzene unit, no evidence of ^{13}C incorporation into DIC was detected. However, ^{13}C enriched biomass was detected at a low level indicating that biodegradation of chlorobenzene occurred to a limited degree in CPA-MW-3D.

US EPA ARCHIVE DOCUMENT

2340 Stock Creek Blvd.
Rockford, TN 37853-3044
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www.microbe.com

Overview of Approach

Stable Isotope Probing (SIP)

Stable isotope probing (SIP) is an innovative method to track the environmental fate of a "labeled" contaminant of concern to unambiguously demonstrate biodegradation. Two stable carbon isotopes exist in nature – carbon 12 (^{12}C) which accounts for 99% of carbon and carbon 13 (^{13}C) which is considerably less abundant (~1%). With the SIP method, the Bio-Trap® sampler is baited with a specially synthesized form of the contaminant containing ^{13}C labeled carbon. Since ^{13}C is rare, the labeled compound can be readily differentiated from the contaminants present at the site. Following deployment, the Bio-Trap® is recovered and three approaches are used to conclusively demonstrate biodegradation of the contaminant of concern.

- The loss of the labeled compound provides an estimate of the degradation rate (% loss of ^{13}C).
- Quantification of ^{13}C enriched phospholipid fatty acids (PLFA) indicates incorporation into microbial biomass.
- Quantification of ^{13}C enriched dissolved inorganic carbon (DIC) indicates contaminant mineralization.

Phospholipid Fatty Acids (PLFA): PLFA are a primary component of the membrane of all living cells including bacteria. PLFA decomposes rapidly upon cell death (1, 2), so the total amount of PLFA present in a sample is indicative of the viable biomass. When combined with stable isotope probing (SIP), incorporation of ^{13}C into PLFA is a conclusive indicator of biodegradation.

Some organisms produce "signature" types of PLFA allowing quantification of important microbial functional groups (e.g. iron reducers, sulfate reducers, or fermenters). The relative proportions of the groups of PLFA provide a "fingerprint" of the microbial community. In addition, *Proteobacteria* modify specific PLFA during periods of slow growth or in response to environmental stress providing an index of their health and metabolic activity.

US EPA ARCHIVE DOCUMENT

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Rockford, TN 37853-3044
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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	BSA-MW-2D Benzene	CPA-MW-3D Chlorobenzene
^{13}C Contaminant Loss		
^{13}C Benzene Pre-deployment (µg/bd)	185 ± 12	-----
^{13}C Benzene Post-deployment (µg/bd)	44 ± 8	-----
^{13}C Chlorobenzene Pre-deployment (µg/bd)	-----	158 ± 9
^{13}C Chlorobenzene Post-deployment (µg/bd)	-----	200 ± 15
Biomass & ^{13}C Incorporation		
Total Biomass (Cells/bd)	4.17E+05	5.86E+04
^{13}C Enriched Biomass (Cells/bd)	5.61E+03	1.70E+02
Average PLFA Del (‰)	509	6
Maximum PLFA Del (‰)	675	6
^{13}C Mineralization		
DIC Del (‰)	116	-11
% 13C	1.22	1.08
Community Structure (% total PLFA)		
Firmicutes (TerBrSats)	7.0	6.8
Proteobacteria (Monos)	67.1	64.8
Anaerobic metal reducers (BrMonos)	0.0	0.0
Actinomycetes (MidBrSats)	0.0	0.0
General (Nsats)	18.9	28.4
Eukaryotes (Polyenoics)	7.0	0.0
Physiological Status (Proteobacteria only)		
Slowed Growth	0.33	0.00
Decreased Permeability	0.12	0.00

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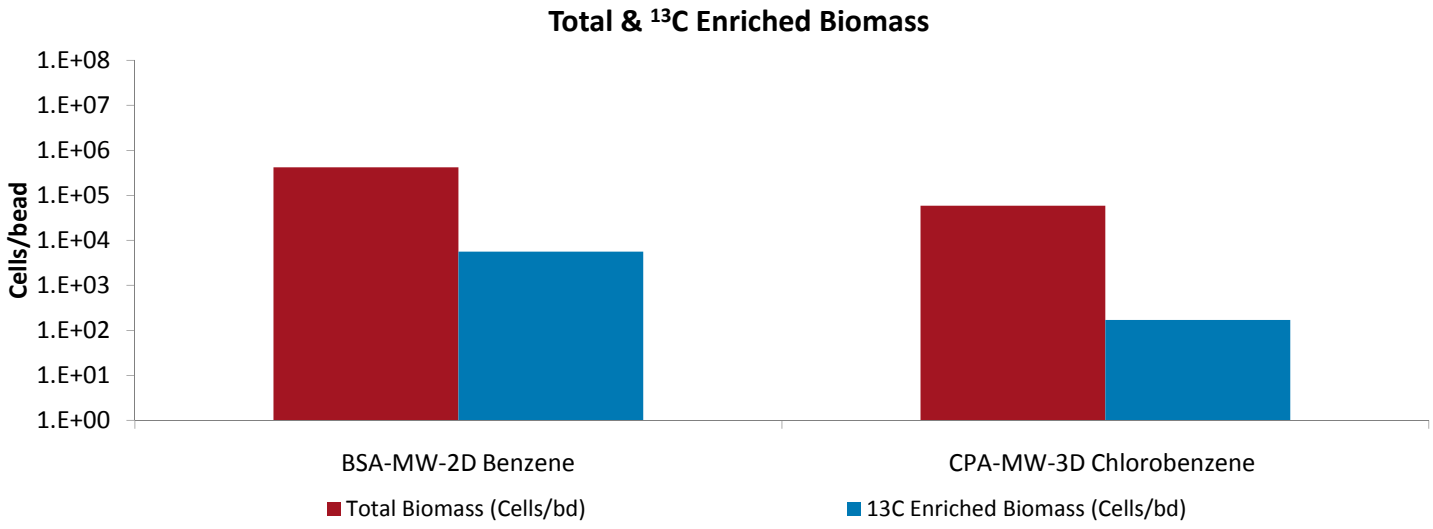

Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass (associated with higher organisms).

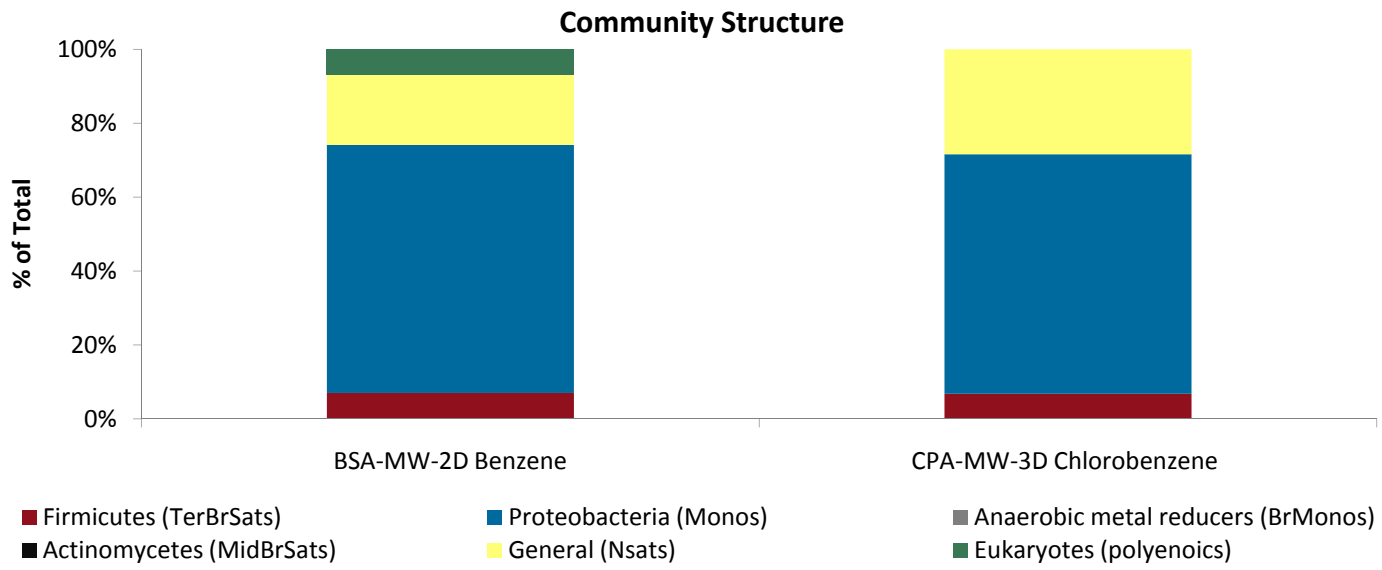

Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis. See the table in the interpretation section for detailed descriptions of the structural groups.

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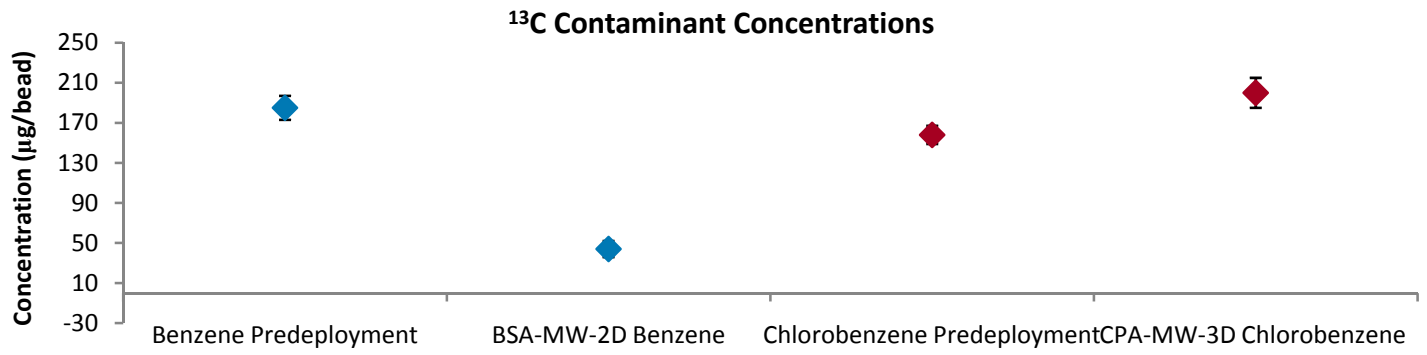

Figure 3. Comparison of Pre-deployment concentrations loaded on Bio-Sep beads to the concentrations detected after incubation.

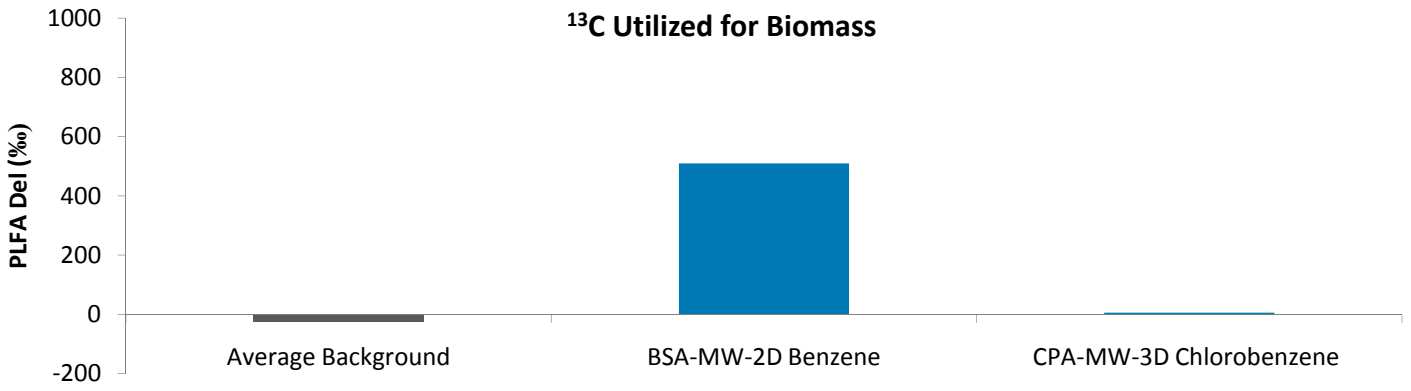

Figure 4. Comparison of the average Del value obtained from PLFA biomarkers from each Bio-Trap® unit to the average background Del observed in samples not exposed to ^{13}C enriched compounds.

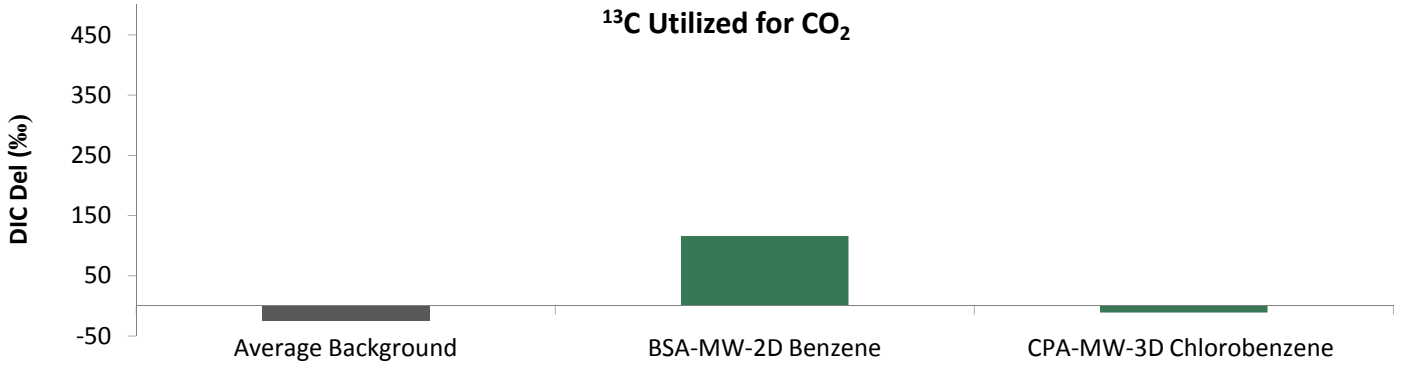

Figure 5. Comparison of the Del value obtained from DIC from each Bio-Trap® unit to the average background Del observed in samples not exposed to ^{13}C enriched compounds.

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Table 2. Summary of the PLFA results for the benzene wells obtained from the Bio-Trap® Units.

Sample Name	BSA-MW-1S	BSA-MW-2D	BSA-MW-2D Benzene	BSA-MW-3D	BSA-MW-4D	BSA-MW-5D
Biomass Concentration						
Total Biomass (Cells/bd)	1.07E+05	3.30E+05	4.17E+05	8.94E+04	8.06E+04	1.29E+05
Community Structure (% total PLFA)						
Firmicutes (TerBrSats)	15.1	4.1	7.0	2.5	3.0	1.8
Proteobacteria (Monos)	50.5	78.2	67.1	59.8	72.9	79.2
Anaerobic metal reducers (BrMonos)	0.0	0.4	0.0	0.0	0.0	0.0
Actinomycetes (MidBrSats)	0.0	1.0	0.0	2.0	3.2	0.0
General (Nsats)	34.5	16.0	18.9	31.2	19.5	18.1
Eukaryotes (Polyenoics)	0.0	0.3	7.0	4.6	1.5	0.9
Physiological Status (Proteobacteria only)						
Slowed Growth	0.15	0.14	0.33	0.10	0.22	0.08
Decreased Permeability	0.03	0.19	0.12	0.17	0.22	0.04

* Total PLFA biomass was below the laboratory PQL but above the LQL.

Table 3. Summary of the PLFA results for the chlorobenzene wells obtained from the Bio-Trap® Units.

Sample Name	CPA-MW-1D	CPA-MW-2D	CPA-MW-3D	CPA-MW-3D Chloroben-zene	CPA-MW-4D	CPA-MW-5D
Biomass Concentration						
Total Biomass (Cells/bd)	4.47E+04*	4.57E+04*	4.94E+04*	5.86E+04	1.04E+05	2.80E+04*
Community Structure (% total PLFA)						
Firmicutes (TerBrSats)	0.0	0.0	0.0	6.8	2.9	0.0
Proteobacteria (Monos)	74.4	75.5	75.3	64.8	62.6	66.6
Anaerobic metal reducers (BrMonos)	0.0	0.0	0.0	0.0	0.0	0.0
Actinomycetes (MidBrSats)	0.0	0.0	0.0	0.0	0.0	0.0
General (Nsats)	25.6	24.5	24.7	28.4	24.6	33.4
Eukaryotes (Polyenoics)	0.0	0.0	0.0	0.0	9.9	0.0
Physiological Status (Proteobacteria only)						
Slowed Growth	0.19	0.34	0.21	0.00	0.23	1.67
Decreased Permeability	0.00	0.00	0.00	0.00	0.00	0.00

* Total PLFA biomass was below the laboratory PQL but above the LQL.

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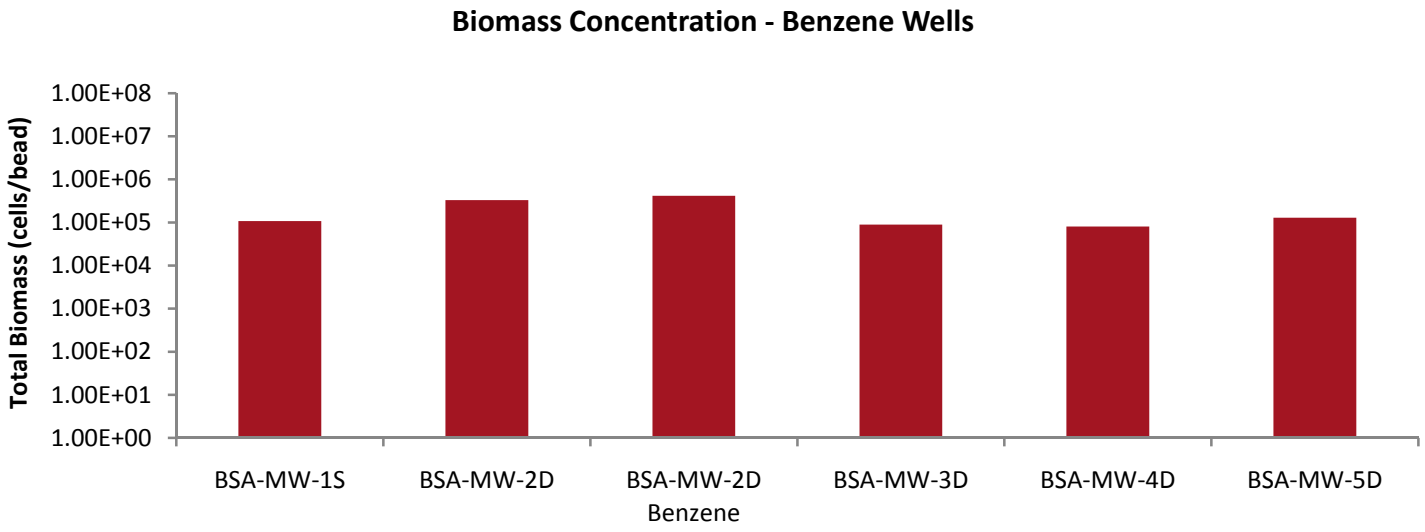

Figure 6. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass (associated with higher organisms).

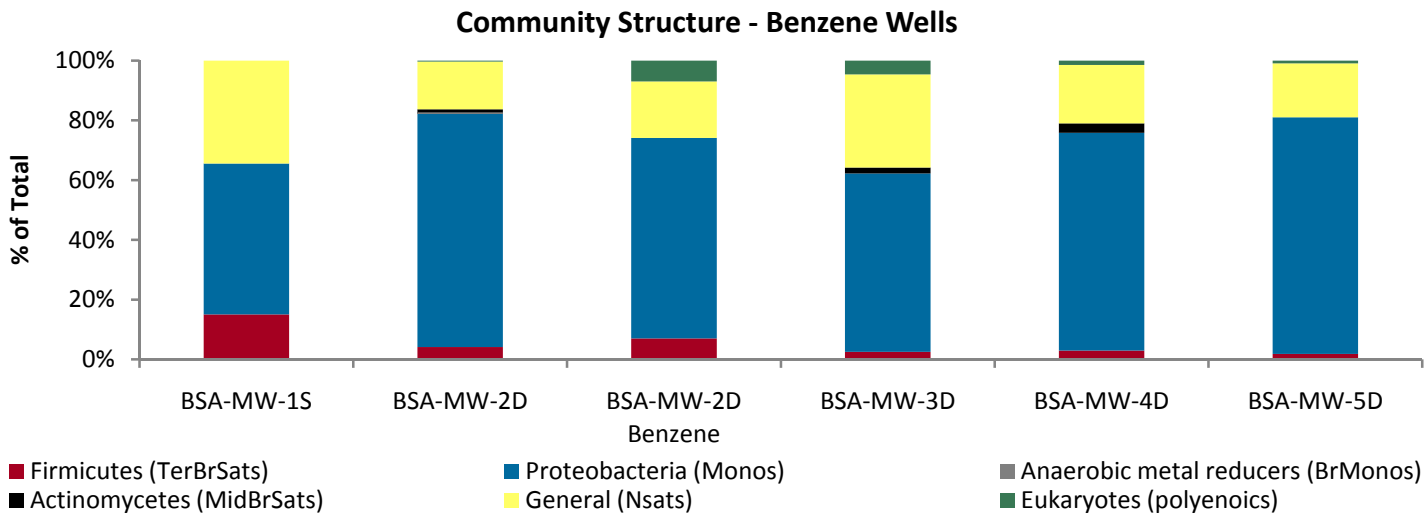

Figure 7. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis. See the table in the interpretation section for detailed descriptions of the structural groups.

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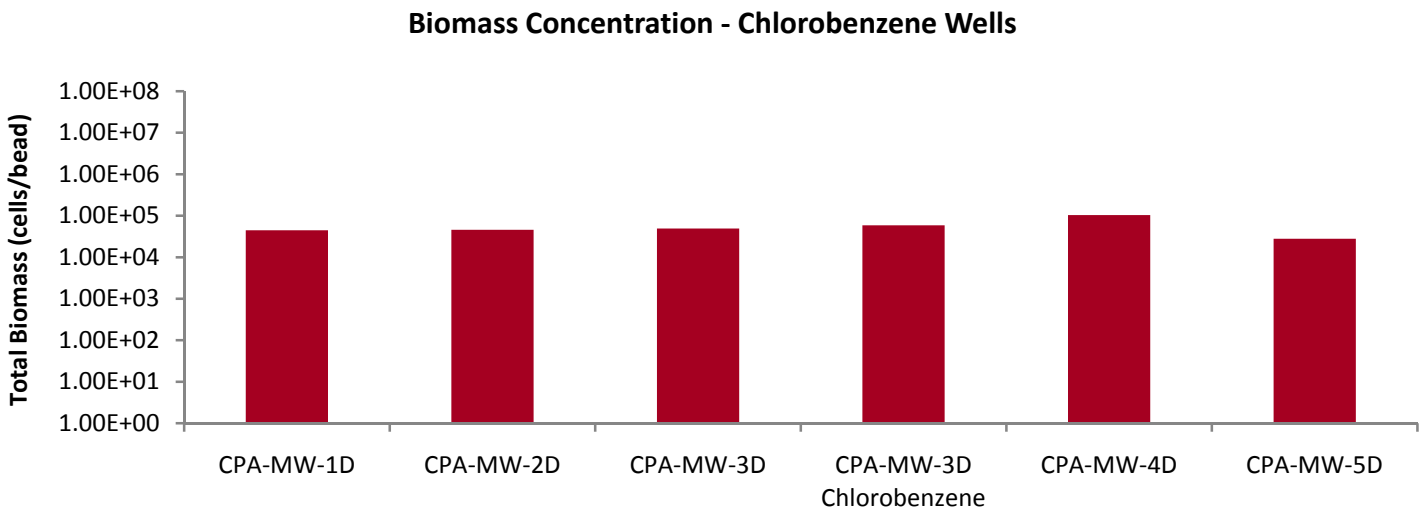

Figure 8. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass (associated with higher organisms).

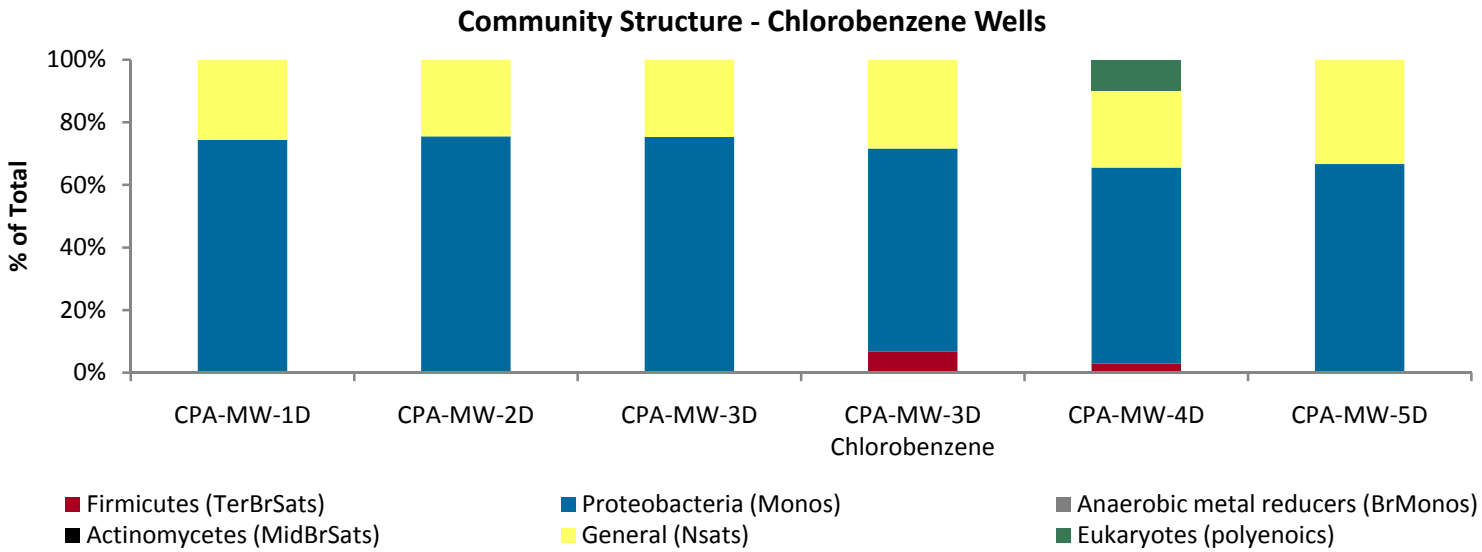

Figure 9. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis. See the table in the interpretation section for detailed descriptions of the structural groups.

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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.

Biomass Concentrations: PLFA analysis is one of the most reliable and accurate methods available for the determination of viable (live) biomass. Phospholipids break down rapidly upon cell death, so biomass calculations based on PLFA content do not include "fossil" lipids from dead cells. Total biomass (cells/bead) is calculated from total PLFA using a conversion factor of 20,000 cells/pmole of PLFA. When making comparisons between wells, treatments, or over time, differences of one order of magnitude or more are considered significant.

	Total Biomass	
Low	**Moderate**	**High**
10^3 to 10^4 cells	10^5 to 10^6 cells	10^7 to 10^8 cells

For SIP studies, the ^{13}C enriched PLFA is also determined to conclusively demonstrate contaminant biodegradation and quantify incorporation into biomass as a result of the ^{13}C being used for cellular growth. The % ^{13}C incorporation (^{13}C enriched biomass/total biomass) is also provided in the data summary table, but the value must be interpreted carefully especially when comparing wells or treatments. Typically, biodegradation of a contaminant of concern is performed by a small subset of the total microbial community. For Bio-Traps® with large total biomass, the % ^{13}C incorporation value could be low despite significant ^{13}C labeled biomass and loss of the compound. The % ^{13}C incorporation should be viewed in light of total biomass, percent loss, and dissolved inorganic carbon (DIC) results.

^{13}C enrichment data is often reported as a del value. The del value is the difference between the isotopic ratio ($^{13}C/^{12}C$) of the sample (R_x) and a standard (R_{std}) normalized to the isotopic ratio of the standard (R_{std}) and multiplied by 1,000 (units are parts per thousand, denoted ‰).

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

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Dissolved Inorganic Carbon (DIC): Often, bacteria can utilize the ^{13}C labeled compound as both a carbon and energy source. The ^{13}C portion used as a carbon source for growth can be incorporated into PLFA as discussed above, while the ^{13}C used for energy is oxidized to $^{13}CO_2$ (mineralized).

^{13}C enriched CO_2 data is often reported as a del value as described above for PLFA. Under natural conditions, the R_x of CO_2 is approximately the same as R_{std} (0.01118 or about 1.1% ^{13}C). For an SIP Bio-Trap® study, mineralization of the ^{13}C labeled contaminant of concern would lead to a greater value of R_x (increased $^{13}CO_2$ production) and thus a positive del value. As with PLFA, del values between 0 and 100‰ are considered low, values between 100 and 1,000‰ are considered moderate, and values greater than 1,000‰ are considered high. Thus DIC %^{13}C are considered low if the value is less than 1.23%, moderate if between 1.23 and 2.24%, and high if greater than 2.24%.

Dissolved Inorganic Carbon (DIC) Del and %^{13}C		
Low	**Moderate**	**High**
0 to 100	100 to 1,000	>1,000
1.11 to 1.23%	1.23 to 2.24%	>2.24%

Community Structure (% total PLFA): Community structure data is presented as a percentage of PLFA structural groups normalized to the total PLFA biomass. The relative proportions of the PLFA structural groups provide a "fingerprint" of the types of microbial groups (e.g. anaerobes, sulfate reducers, etc.) present and therefore offer insight into the dominant metabolic processes occurring at the sample location. Thorough interpretation of the PLFA structural groups depends in part on an understanding of site conditions and the desired microbial biodegradation pathways. For example, an increase in mid chain branched saturated PLFA (MidBrSats), indicative of sulfate reducing bacteria (SRB) and *Actinomycetes*, may be desirable at a site where anaerobic BTEX biodegradation is the treatment mechanism, but would not be desirable for a corrective action promoting aerobic BTEX or MTBE biodegradation. The following table provides a brief summary of each PLFA structural group and its potential relevance to bioremediation.

Table 2. Description of PLFA structural groups.

PLFA Structural Group	General classification	Potential Relevance to Bioremediation Studies
Monoenoic (Monos)	Abundant in Proteobacteria (Gram negative bacteria), typically fast growing, utilize many carbon sources, and adapt quickly to a variety of environments.	Proteobacteria is one of the largest groups of bacteria and represents a wide variety of both aerobes and anaerobes. The majority of Hydrocarbon utilizing bacteria fall within the Proteobacteria
Terminally Branched Saturated (TerBrSats)	Characteristic of Firmicutes (Low G+C Gram-positive bacteria), and also found in Bacteriodes, and some Gram-negative bacteria (especially anaerobes).	Firmicutes are indicative of presence of anaerobic fermenting bacteria (mainly *Clostridia/Bacteriodes*-like), which produce the H_2 necessary for reductive dechlorination
Branched Monoenoic (BrMonos)	Found in the cell membranes of micro-aerophiles and anaerobes, such as sulfate- or iron-reducing bacteria	In contaminated environments high proportions are often associated with anaerobic sulfate and iron reducing bacteria
Mid-Chain Branched Saturated (MidBrSats)	Common in sulfate reducing bacteria and also Actinobacteria (High G+C Gram-positive bacteria).	In contaminated environments high proportions are often associated with anaerobic sulfate and iron reducing bacteria
Normal Saturated (Nsats)	Found in all organisms.	High proportions often indicate less diverse populations.
Polyenoic	Found in eukaryotes such as fungi, protozoa, algae, higher plants, and animals.	Eukaryotic scavengers will often rise up and prey on contaminant utilizing bacteria

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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 ($^{13}C/^{12}C$) of the sample (R_x) and a standard (R_{std}) normalized to the isotopic ratio of the standard (R_{std}) and multiplied by 1,000 (units are parts per thousand denoted ‰).

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

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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.
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Company: URS Corporation
Address: 1001 Highlands Plaza Dr. W. Ste 300 St. Louis, MO 63110
email: dave.palmer@urs.com
Phone: (314) 429-0100
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Project Manager: Dave Palmer
Project Name: Solutia WGK LTM 1Q12
Project No.: 21562682.00006

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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+3ID	DGGE+5ID		qDHC (Dehalococcoides)	DHC Functional genes	qDHB (Dehalobacter)	qDSM (Desulfuromonas)	qDSB (Desulfitobacterium)	qrBAC (Fe0)	qDSR (SRBs only)	qSRB/IRB	qMGN (methanogens)	qMOB (methanotrophs)	qDNF (Denitrifying)	qAOB (ammonia oxidizing)	qPM1 (MTBE aerobic)	qTOD (total PAHs aerobic)	qCA1 (intermediate PAHs aerobic)	qBSS (Toluen/Xylene Anaerobic)	qNAH (Naphthalene aerobic)	add qPCR:	add qPCR:	add qPCR:	RNA (Expression Option)*	Other: Benzene SIP	Other: Chlorobenzene SIP	Other:	Other:
041jB 1	BSA-MW-1S	2/9/12	1010	Water	X																															
2	BSA-MW-2D	2/9/12	1450	Water	X																										3	X				
4	BSA-MW-3D	2/9/12	1510	Water	X																															
5	BSA-MW-4D	2/9/12	1620	Water	X																															
6	BSA-MW-5D	2/9/12	1600	Water	X																															
7	CPA-MW-1D	2/9/12	1400	Water	X																															
8	CPA-MW-2D	2/9/12	1430	Water	X																															
9	CPA-MW-3D	2/9/12	1500	Water	X																										10	X				
11	CPA-MW-4D	2/9/12	1550	Water	X																															
12	CPA-MW-5D	2/9/12	1530	Water	X																															

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