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SOLUTIA
Solutions for a better life.

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July 22, 2010

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

VIA FEDEX

Re: Long-Term Monitoring Program
2nd Quarter 2010 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

Dear Mr. Bardo:

Enclosed please find the Long-Term Monitoring Program 2nd Quarter 2010 Data Report for Solutia Inc.'s W. G. Krummrich Plant, Sauget, IL.

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

A separate report evaluating all of the Long-Term monitoring data collected from 3rd quarter 2008 through 2nd quarter 2010, i.e., since the February 2008 Final Decision, and making recommendations for changes going forward will be submitted shortly.

Sincerely,

Gerald M. Rinaldi
Manager, Remediation Services

Enclosure

cc: Distribution List

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Long-Term Monitoring Program
2nd Quarter 2010 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

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2ND QUARTER 2010
DATA REPORT

LONG-TERM MONITORING PROGRAM

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

Prepared for

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

July 2010

URS Corporation
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Project # **21562401.00004**

1.0 INTRODUCTION 1

2.0 FIELD PROCEDURES 2

3.0 LABORATORY PROCEDURES 5

4.0 QUALITY ASSURANCE 5

5.0 OBSERVATIONS 6

6.0 REFERENCES 8

List of Figures

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

List of Tables

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

List of Appendices

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

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1.0 INTRODUCTION

This report presents the results of the 2nd Quarter 2010 (2Q10) sampling event performed at the Solutia Inc. (Solutia) W.G. Krummrich (WGK) Facility located in Sauget, Illinois (Site). This sampling event was conducted in accordance with the Revised Long-Term Monitoring Program (LTMP) Work Plan (Solutia 2009). The Site location is presented in **Figure 1**.

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

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

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

Quarterly sampling under the Long-Term Monitoring Program commenced 3Q08 and a total of eight quarters have been completed as of 2Q10. A report documenting evaluation of all these groundwater quality and natural attenuation process data will be provided under separate cover.

Groundwater Sampling Parameters - During the 2Q10 groundwater sampling event, groundwater samples were analyzed for benzene, monochlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene using USEPA Method 8260B.

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

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

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

2.0 FIELD PROCEDURES

URS Corporation (URS) conducted the majority of 2Q10 field activities from May 14 through May 26, 2010. Samples were collected from monitoring well CPA-MW-5D on June 3, 2010, as the well was not previously accessible due to high river levels. 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 and if present, the thickness of non-aqueous phase liquid (NAPL), to 0.01 feet. Depth to groundwater measurements were collected from accessible existing wells (i.e., GM-, K- , PSMW- and PMA-series) and piezometers clusters (installed for the Sauget Area 2 RI/FS and WGK CA-750 Environmental Indicator projects) specified in the Revised LTMP Work Plan **(Figure 3**). NAPL was not detected within any of the ten LTMP monitoring wells.

Well gauging information for the 2Q10 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**.

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The Mississippi River elevation was approximately 15 feet higher than it was during the 1Q10 event. Groundwater levels in monitoring wells near the river were as much as 11 feet higher during this event than in the 1Q10 event. This resulted in relatively "flat" groundwater contours across most of the site and bank recharge along the river.

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 250 to 400 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)
- General Chemistry (i.e., alkalinity, chloride, total and dissolved iron, total and dissolved manganese, nitrate, sulfate, and total and dissolved organic carbon)
- Field Parameters (i.e., dissolved oxygen, ferrous iron, and oxidation-reduction potential).

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

Quality assurance/quality control (QA/QC) samples consisting of analytical duplicates (AD) and equipment blanks (EB) were collected at a rate of 10% and matrix spike/matrix spike duplicates (MS/MSD) were collected at a rate of 5%. In addition, trip blanks accompanied each shipment containing samples for VOC analysis.

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

- "**AAA**" denotes "Chlorobenzene Process Area (CPA)" or "Benzene Storage Area (BSA)"and "**MW-#**" denotes "Monitoring Well Number":
- **MMYY –** Month and year of sampling quarter, e.g.: Second quarter (May) 2010, 0510
- **"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 approximately 4°C. Field personnel recorded the project identification and number, sample description/location, required analysis, date and time of sample collection, type and matrix of sample, number of sample containers, preservative used (if applicable), analysis requested/comments, and sampler signature/date/time, with permanent ink on the chain-of-custody (COC). Prior to shipment, coolers were sealed between the lid and sides of the cooler with a custody seal, and then shipped to TestAmerica in Savannah, Georgia by means of an overnight delivery service. Field sampling data sheets are included in **Appendix A**, 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. Disposable sampling equipment, such as gloves were collected and bagged on a daily basis and managed in accordance with Solutia procedures. Purge water was containerized and handled per Solutia procedures.

Biodegradation Evaluation Sampling - Bio-Trap® samplers and Stable Isotope Probes (SIPs), provided by Microbial Insights, Inc. (Rockford, TN), were utilized in the LTMP to provide information regarding biodegradation potential of the Shallow Hydrogeologic Unit (SHU), the MHU and the DHU. Bio-Trap® samplers are passive sampling tools which, over time, collect microbes across a membrane that serves as the sampling matrix. SIPs are similar passive sampling tools that are analyzed to measure the degradation of a specific contaminant (i.e., benzene and chlorobenzene).

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On April 16, 2010, 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 tied to nylon line attached to the well cap and lowered to the middle of the well screen.

On May 19, 2010 (June 3 for monitoring well CPA-MW-5D), 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.

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
- 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).

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

4.0 QUALITY ASSURANCE

Analytical data were reviewed for quality and completeness, as described in the Revised Long Term Monitoring Work Plan. Data qualifiers were added, as appropriate, and are included on the data tables and the laboratory result pages. The Quality Assurance report is included as **Appendix C**. The laboratory report and data review sheets are included in **Appendix D**.

A total of 14 groundwater samples (10 investigative samples, 1 field duplicate, 1 MS/MSD pair and 1 equipment blank) were prepared and analyzed by TestAmerica for combinations of VOCs, dissolved gases, metals, and general chemistry. In addition, six trip blank sets were included in the coolers that contained samples for VOC analysis and were analyzed for VOCs. The results for the various analyses were submitted as sample delivery groups (SDGs) KPS057 KPS058, and KPS059.

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The samples contained in SDGs KPS057, KPS058, and KPS059 are listed below:

SDG KPS057	SDG KPS058	SDG KPS059
BSA-MW-01S-0510	CPA-MW-05D-0610	CPA-MW-02D-0510[1]
BSA-MW-02D-0510	CPA-MW-05D-F(0.2)-0610	CPA-MW-02D-F(0.2)-0510
BSA-MW-03D-0510	2Q10 LTM Trip Blank #6	
BSA-MW-03D-0510-EB		
BSA-MW-04D-0510		
BSA-MW-05D-0510		
CPA-MW-01D-0510		
CPA-MW-02D-0510		
CPA-MW-02D-0510-AD		
CPA-MW-03D-0510		
CPA-MW-04D-0510		
2Q10 LTM Trip Blank #1		
2Q10 LTM Trip Blank #2		
2Q10 LTM Trip Blank #3		
2Q10 LTM Trip Blank #4		
2Q10 LTM Trip Blank #5		

Evaluation of the groundwater analytical data followed procedures outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA 2008), USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 2004), and the Revised Long-Term Monitoring Program (LTMP) Work Plan (Solutia 2009).

Based on the above mentioned criteria, groundwater results reported for the analyses performed were accepted for their intended use. Acceptable levels of accuracy and precision, based on matrix spike/matrix spike duplicate (MS/MSD), laboratory control sample (LCS), surrogate and field duplicate data were achieved for these SDGs to meet the project objectives. Completeness which is defined to be the percentage of analytical results which are judged to be valid with the exception of rejected (**R**) flagged data, including estimated detect/nondetect (**J/UJ**) data was 99 percent.

5.0 OBSERVATIONS

Groundwater analytical detections and MNA results for the 2Q10 LTMP sampling event are presented in **Tables 2** and **3,** respectively. Five constituents - benzene, chlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene and 1,4-dichlorobenzene - were reported in samples collected from the ten LTMP wells during this sampling event. Each of these constituents is discussed below:

[1] SDG KPS059 included analysis of MNA parameters for samples from monitoring well CPA-MW-2D, subsequent to VOC analysis included in SDG KPS057

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Benzene - Benzene was detected in collected samples at levels above the laboratory reporting limit in eight of the ten wells sampled in 2Q10, ranging from 8.9 µg/L (BSA-MW-5D) to 840,000 µg/L (BSA-MW-1S).

Downgradient of the Former Benzene Storage Area, benzene was detected in the DHU at concentrations of 120,000 µg/L (BSA-MW-2D) and 94 µg/L (BSA-MW-3D). Near the river north of the Sauget Area 2 Groundwater Migration Control System (SA2 GMCS), benzene was detected in the DHU at concentrations of 26 µg/L (BSA-MW-4D).

Benzene was detected at the Former Chlorobenzene Process Area at a concentration of 7,200 µg/L (CPA-MW-1D). Downgradient of the Former Chlorobenzene Storage Area, benzene was detected in the DHU at concentrations of 87 µg/L (CPA-MW-3D) and 39 µg/L (CPA-MW-4D). Benzene was not detected in the DHU near the river north of SA2 GMCS at monitoring well CPA-MW-5D.

Chlorobenzenes (Total) - Total chlorobenzenes (e.g., sum of chlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4, dichlorobenzene) were detected at levels above the laboratory reporting limit in nine of the ten wells sampled in 2Q10, ranging from 374 µg/L (BSA-MW-5D) to 46,400 µg/L (CPA-MW-1D).

Downgradient of the Former Chlorobenzene Storage Area, total chlorobenzenes were detected in the DHU at concentrations of 39,230/39,120 µg/L at the North Tank Farm (CPA-MW-2D and duplicate), along with concentrations of 677 µg/L (CPA-MW-3D) and 1,002 µg/L (CPA-MW-4D). Total chlorobenzenes were detected in the DHU near the river north of SA2 GMCS at a concentration of 1,540 µg/L (CPA-MW-5D).

Downgradient of the Former Benzene Storage Area, total chlorobenzenes were detected at concentrations of 1,300 µg/L (BSA-MW-2D) and 2,192 µg/L (BSA-MW-3D). North of the SA2 GMCS, near the river, total chlorobenzenes were detected in the DHU at concentrations of 3,020 µg/L (BSA-MW-4D) and 374 µg/L (BSA-MW-5D).

Figure 4 displays benzene and total chlorobenzenes results from the 2Q10 sampling event.

Monitored Natural Attenuation - The MNA results for this quarter are presented in **Table 3**. PLFA and SIP laboratory results are included in **Appendix E**. These data were compared to other quarterly sampling data in the second annual natural attenuation evaluation report, to be provided under separate cover.

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6.0 REFERENCES

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

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

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

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Figures

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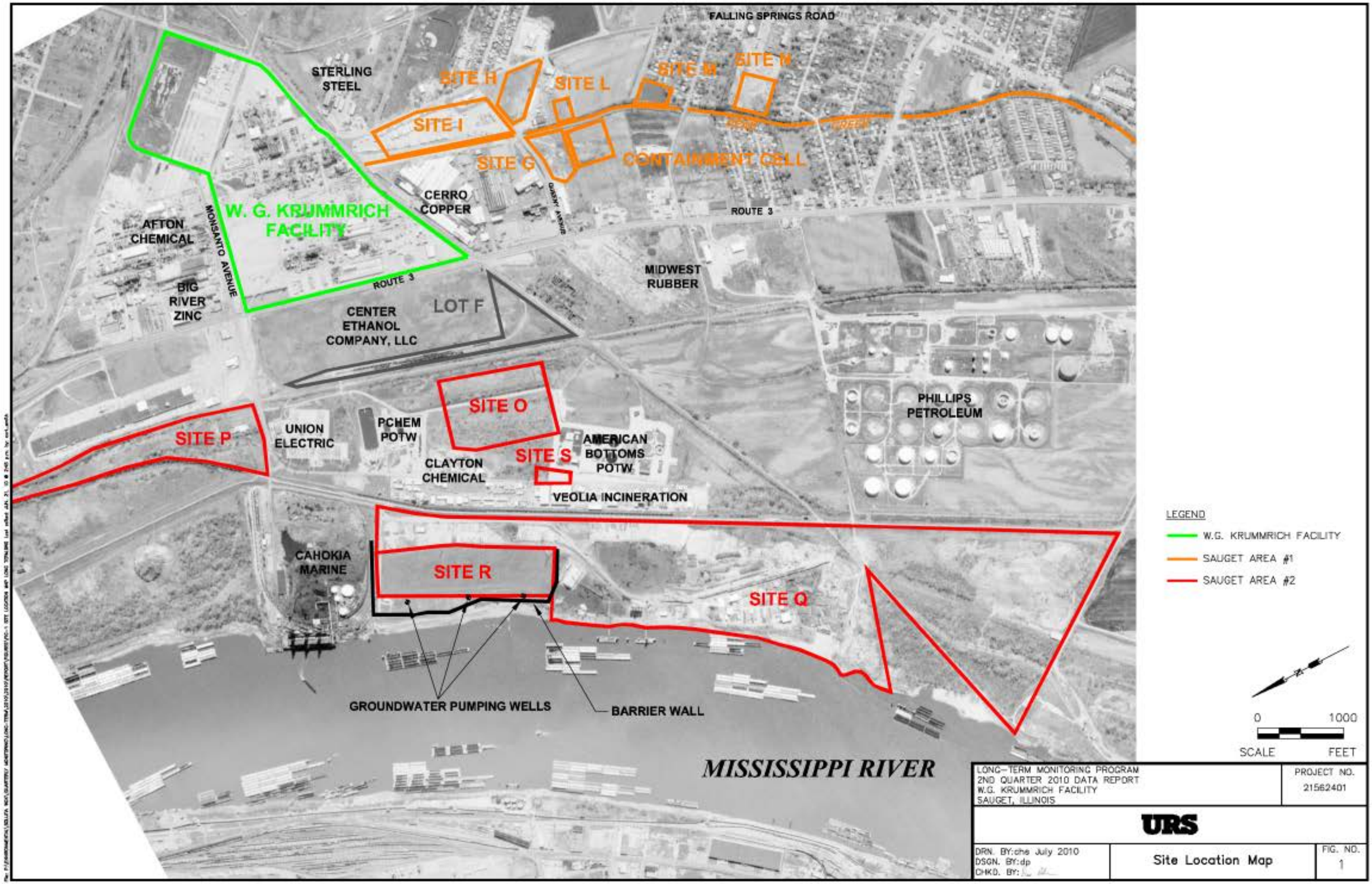

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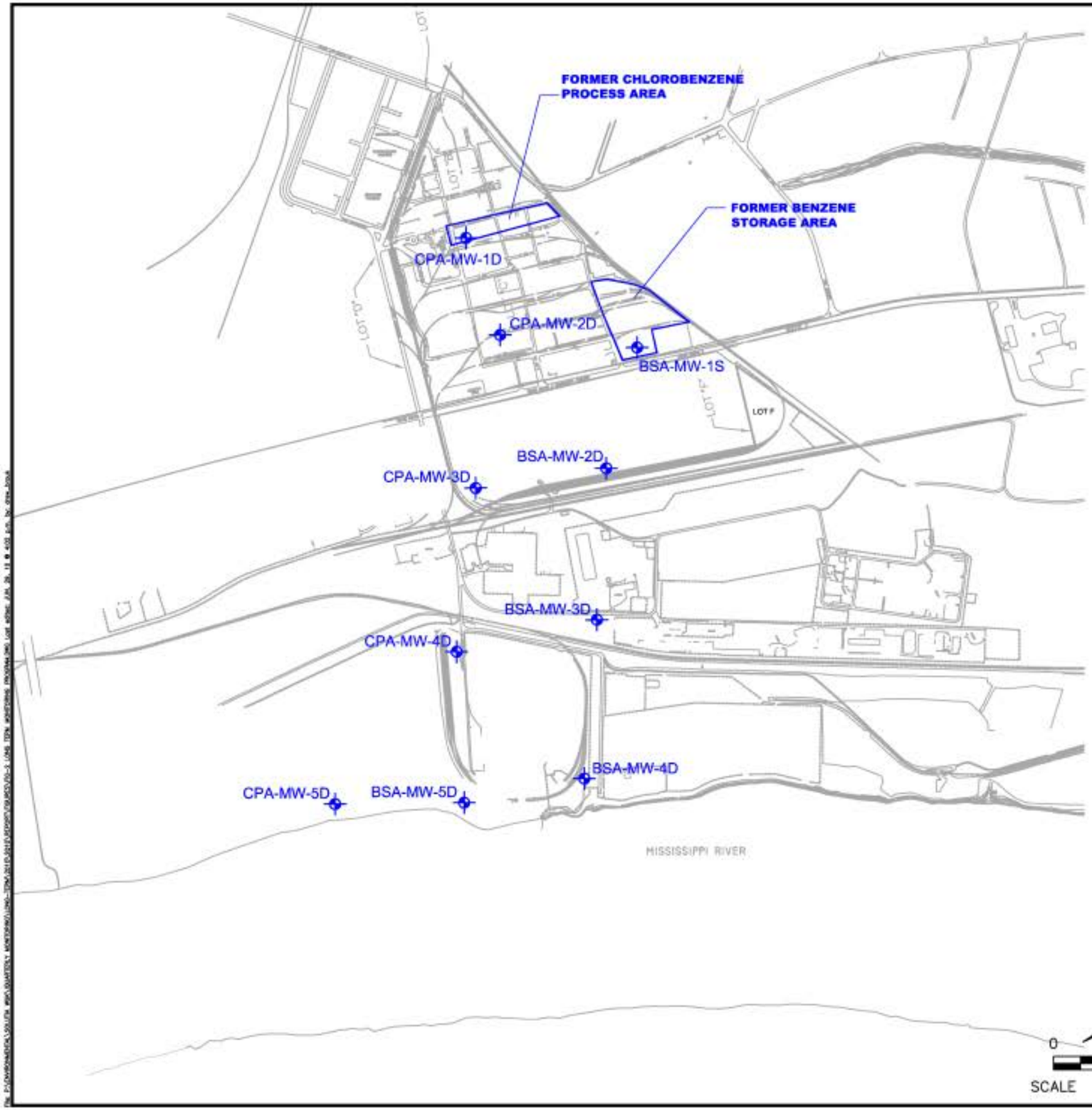

LEGEND

LONG–TERM MONITORING WELL LOCATION

NOTES:

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

LONG–TERM MONITORING PROGRAM 2ND QUARTER 2010 DATA REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS	PROJECT NO. 21562401
URS	
DRN. BY: chs July 2010 DSGN. BY: dp CHKD. BY:	Long–Term Monitoring Program Well Locations
	FIG. NO. 2

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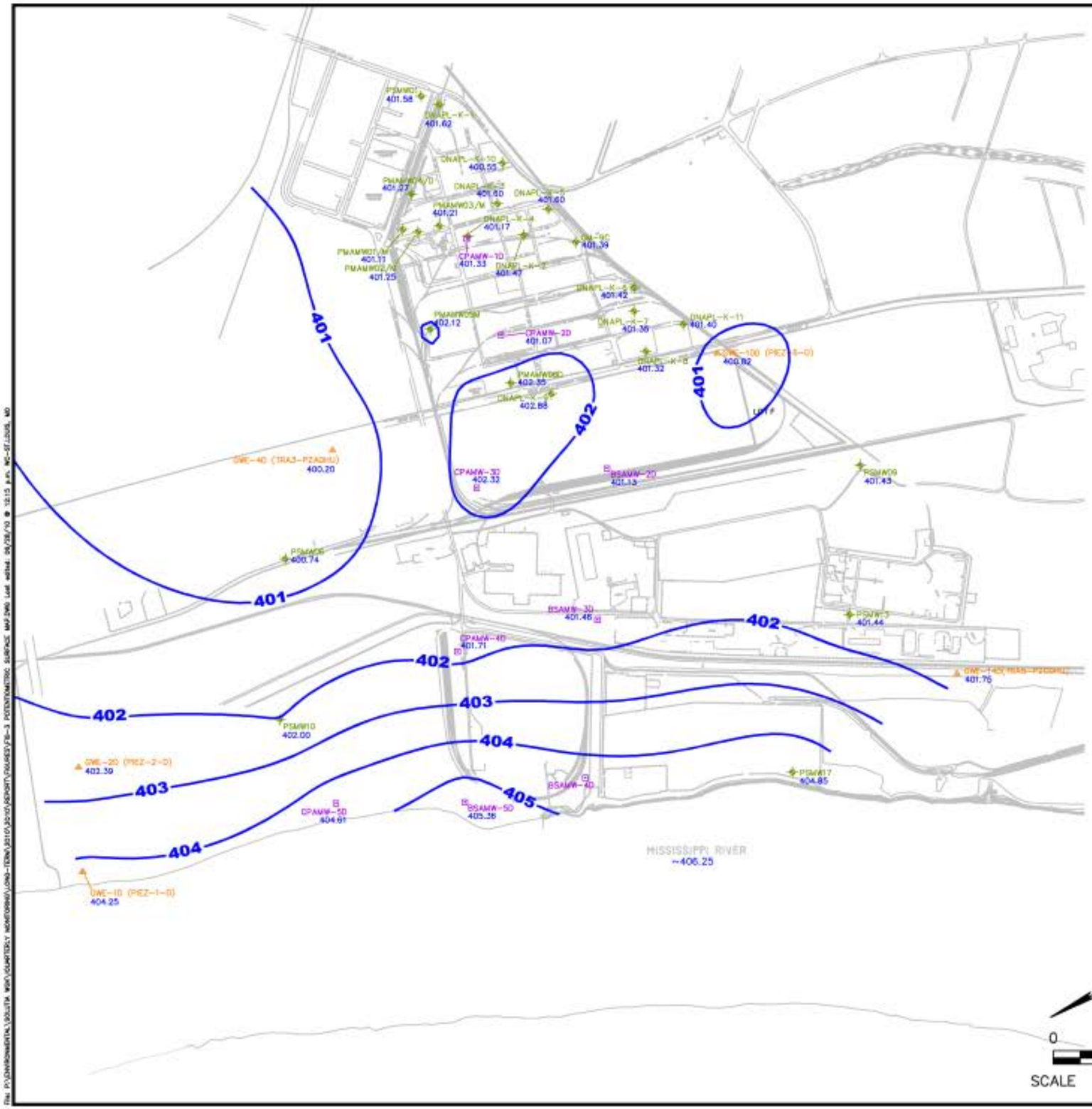


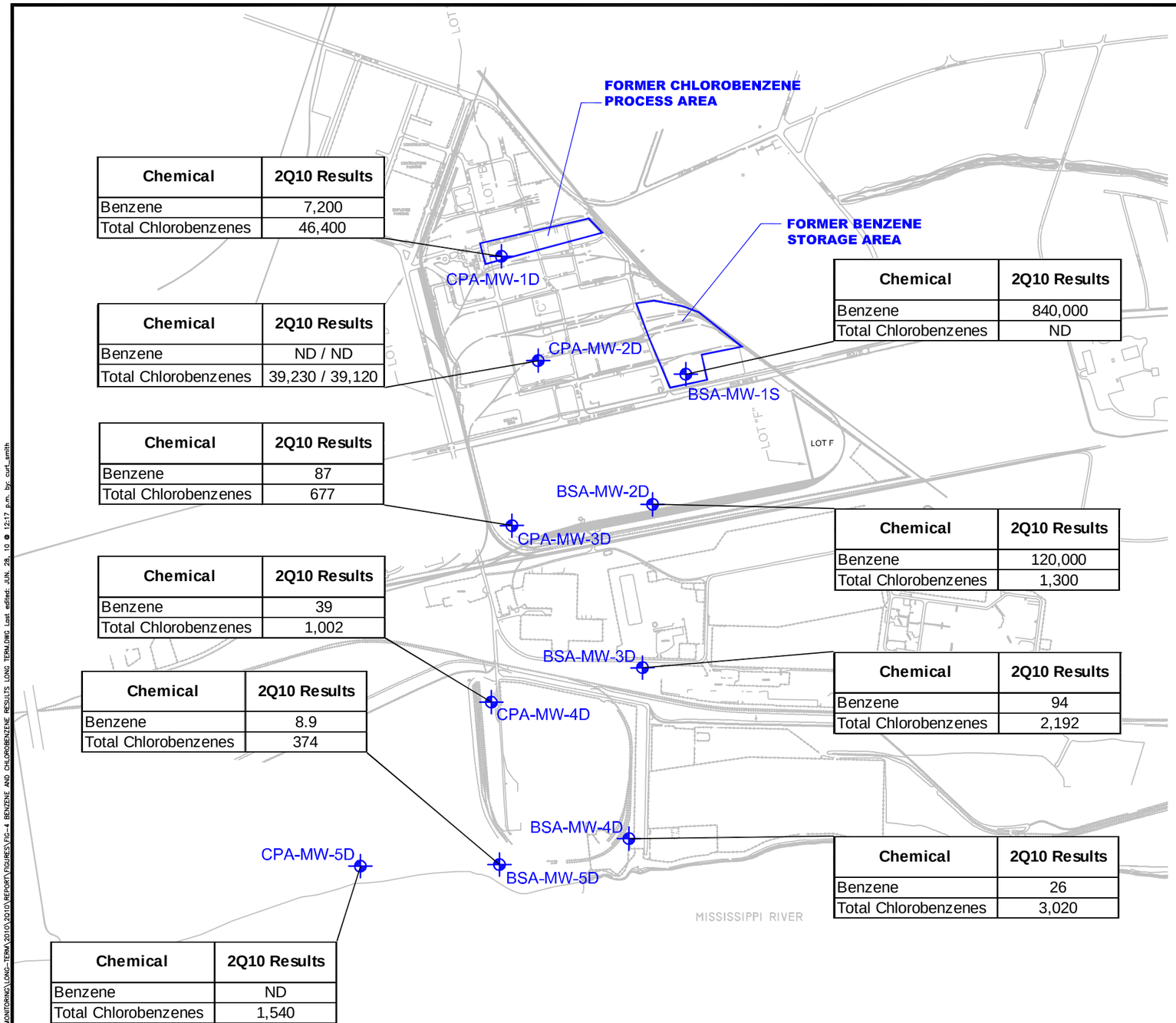
LEGEND

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

NOTES:

1. GROUNDWATER LEVELS WERE MEASURED MAY 14, 2010.
2. CONTOURS GENERATED PRIMARILY USING SURFER SOFTWARE VERSION 8. SOME INTERPRETATION WAS DONE USING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
3. THE MISSISSIPPI RIVER STAGE ELEVATION PRESENTED ON THE FIGURE IS AN AVERAGE ELEVATION FOR THE TIME OF THE GAUGING EVENT. THE INFORMATION WAS OBTAINED FROM THE SITE R BUBBLER.
4. LOCATIONS WITH WELLS SCREENED IN BOTH THE MHU AND DHU UTILIZED THE DHU WELL FOR DEVELOPMENT OF THE POTENTIOMETRIC SURFACE MAP.

LONG-TERM MONITORING PROGRAM 2ND QUARTER 2010 DATA REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS	PROJECT NO. 21562401
URS	
DRN. BY: chs July 2010 DSGN. BY: dp CHKD. BY:	Potentiometric Surface Map Middle/Deep Hydrogeologic Unit
	FIG. NO. 3



Chemical	2Q10 Results
Benzene	7,200
Total Chlorobenzenes	46,400

Chemical	2Q10 Results
Benzene	ND / ND
Total Chlorobenzenes	39,230 / 39,120

Chemical	2Q10 Results
Benzene	87
Total Chlorobenzenes	677

Chemical	2Q10 Results
Benzene	39
Total Chlorobenzenes	1,002

Chemical	2Q10 Results
Benzene	8.9
Total Chlorobenzenes	374

Chemical	2Q10 Results
Benzene	ND
Total Chlorobenzenes	1,540

Chemical	2Q10 Results
Benzene	840,000
Total Chlorobenzenes	ND

Chemical	2Q10 Results
Benzene	120,000
Total Chlorobenzenes	1,300

Chemical	2Q10 Results
Benzene	94
Total Chlorobenzenes	2,192

Chemical	2Q10 Results
Benzene	26
Total Chlorobenzenes	3,020

LEGEND

BSA-MW-1D — LONG–TERM MONITORING WELL LOCATION

NOTES:

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

0 1000
SCALE FEET

LONG–TERM MONITORING PROGRAM
2ND QUARTER 2010 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562401

URS

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

Benzene and Total Chlorobenzenes Results

FIG. NO. 4

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\LONG-TERM 2010\2010\REPORT\FIGURES\FIG-4 BENZENE AND CHLOROBENZENE RESULTS LONG TERM.DWG Last edited: JUN. 28, 10 @ 12:17 p.m. by: curt_smith

Tables

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See last page of table for notes.

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						May 14, 2010		
	Ground Elevation (feet)*	Casing Elevation* (feet)	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Top of Screen Elevation* (feet)	Bottom of Screen Elevation* (feet)	Depth to Water (feet btoc)	Depth to Bottom (feet btoc)	Water Elevation* (feet)
Shallow Hydrogeologic Unit (SHU 395-380 feet NAVD 88)									
BSA-MW-1S	409.49	412.31	19.68	24.68	389.81	384.81	11.05	NG	401.26
Middle Hydrogeologic Unit (MHU 380-350 feet NAVD 88)									
PMA-MW-1M	410.32	410.08	54.54	59.54	355.78	350.78	8.97	NG	401.11
PMA-MW-2M	412.26	411.93	56.87	61.87	355.39	350.39	10.68	NG	401.25
PMA-MW-3M	412.36	412.10	57.07	62.07	355.29	350.29	10.89	NG	401.21
PMA-MW-5M	411.27	410.97	52.17	57.17	359.10	354.10	8.85	NG	402.12
PS-MW-1	409.37	412.59	37.78	42.78	371.59	366.59	11.01	NG	401.58
Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock)									
BSA-MW-2D	412.00	415.13	68.92	73.92	343.08	338.08	14.00	NG	401.13
BSA-MW-3D	412.91	415.74	107.02	112.02	305.89	300.89	14.28	NG	401.46
BSA-MW-4D	425.00	424.69	118.54	123.54	306.46	301.46	NG	NG	NG
BSA-MW-5D	420.80	420.49	115.85	120.85	304.95	299.95	15.13	NG	405.36
CPA-MW-1D	408.62	408.32	66.12	71.12	342.50	337.50	6.99	NG	401.33
CPA-MW-2D	408.51	408.20	99.96	104.96	308.55	303.55	7.13	NG	401.07
CPA-MW-3D	410.87	410.67	108.20	113.20	302.67	297.67	8.35	NG	402.32
CPA-MW-4D	421.57	421.20	116.44	121.44	305.13	300.13	19.49	NG	401.71
CPA-MW-5D	411.03	413.15	107.63	112.63	303.40	298.40	8.54	NG	404.61
DNAPL-K-1	413.07	415.56	108.20	123.20	304.87	289.87	13.94	NG	401.62
DNAPL-K-2	407.94	407.72	97.63	112.63	310.31	295.31	6.25	NG	401.47
DNAPL-K-3	412.13	411.91	104.80	119.80	307.33	292.33	10.31	NG	401.60
DNAPL-K-4	409.48	409.15	102.55	117.55	306.93	291.93	7.98	NG	401.17
DNAPL-K-5	412.27	411.91	102.15	117.15	310.12	295.12	10.31	NG	401.60
DNAPL-K-6	410.43	410.09	102.47	117.47	307.96	292.96	8.67	NG	401.42
DNAPL-K-7	408.32	407.72	100.40	115.40	307.92	292.92	6.37	NG	401.35
DNAPL-K-8	408.56	411.38	102.65	117.65	305.91	290.91	10.06	NG	401.32
DNAPL-K-9	406.45	405.97	97.42	112.42	309.03	294.03	3.09	NG	402.88
DNAPL-K-10	413.50	413.25	105.43	120.43	308.07	293.07	11.70	NG	401.55
DNAPL-K-11	412.20	411.78	105.46	120.46	306.74	291.74	10.38	NG	401.40

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See last page of table for notes.

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						May 14, 2010		
	Ground Elevation (feet)*	Casing Elevation* (feet)	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Top of Screen Elevation* (feet)	Bottom of Screen Elevation* (feet)	Depth to Water (feet btoc)	Depth to Bottom (feet btoc)	Water Elevation* (feet)
Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock) (continued)									
GM-9C	409.54	411.21	88.00	108.00	321.54	301.54	9.82	NG	401.39
GWE-1D (PIEZ-1D)	412.80	415.60	117.00	127.00	295.80	285.80	11.35	NG	404.25
GWE-2D (PIEZ-2D)	417.45	417.14	127.00	137.00	290.45	280.45	14.75	NG	402.39
GWE-4D (TRA3-PZADHU)	406.05	405.74	74.00	80.00	332.05	326.05	5.54	NG	400.20
GWE-10D (PIEZ-6D)	410.15	412.87	102.50	112.50	307.65	297.65	12.05	NG	400.82
GWE-14D (TRA5-PZCDHU)	420.47	422.90	90.00	96.00	330.47	324.47	21.15	NG	401.75
PMA-MW-4D	411.22	410.88	68.84	73.84	342.38	337.38	9.61	NG	401.27
PMA-MW-6D	407.63	407.32	96.49	101.49	311.14	306.14	4.97	NG	402.35
PSMW-6	404.11	406.63	99.80	104.80	304.31	299.31	5.89	NG	400.74
PSMW-9	403.92	403.52	100.40	105.40	303.52	298.52	2.09	NG	401.43
PSMW-10	409.63	412.18	101.23	106.23	308.40	303.40	10.18	NG	402.00
PSMW-13	405.80	405.53	106.08	111.08	299.72	294.72	4.09	NG	401.44
PSMW-17	420.22	423.26	121.25	126.25	298.97	293.97	18.41	NG	404.85

Notes:
* - Elevation based upon North American Vertical Datum (NAVD) 88 datum
bgs - below ground surface
btoc - Below top of casing
NG - not gauged

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Table 2
Groundwater Analytical Results

		VOC (µg/L)					SVOC (µg/L)			
Sample ID	**Sample Date**	**Benzene**	**Chlorobenzene**	**1,2-Dichlorobenzene**	**1,3-Dichlorobenzene**	**1,4-Dichlorobenzene**	**4-Chloroaniline**	**2-Chlorophenol**	**1,4-Dioxane**	**1,2,4-Trichlorobenzene**
BENZENE STORAGE AREA										
BSA-MW-1S-0510	5/19/2010	**840,000**	<5,000	<5,000	<5,000	<5,000	NA	*	NA	*
BSA-MW-2D-0510	5/25/2010	**120,000**	**1,300**	<1,000	<1,000	<1,000	NA	*	*	*
BSA-MW-3D-0510	5/25/2010	**94**	**1,500**	**71**	**31**	**590**	NA	*	*	*
BSA-MW-4D-0510	5/20/2010	**26**	**2,800**	**80**	<20	**140**	NA	*	*	*
BSA-MW-5D-0510	5/24/2010	**8.9**	**290**	**42**	**5.1**	**37**	NA	*	*	*
CHLOROBENZENE PROCESS AREA										
CPA-MW-1D-0510	5/20/2010	**7,200**	**16,000**	**18,000**	**1,400**	**11,000**	NA	*	NA	*
CPA-MW-2D-0510	5/20/2010	<200	**30,000**	**440**	**290**	**8,500**	NA	*	NA	*
CPA-MW-2D-0510-AD	5/20/2010	<200	**30,000**	**330**	**290**	**8,500**	NA	*	NA	*
CPA-MW-3D-0510	5/26/2010	**87**	**560**	**55**	**5.6**	**56**	*	*	NA	*
CPA-MW-4D-0510	5/24/2010	**39**	**920**	**42**	<10	**40**	*	*	NA	*
CPA-MW-5D-0610	6/3/2010	<5	**1,500 D**	**19**	<5	**21**	*	*	NA	*

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)	Dissolved Organic Carbon (mg/L)	Total Organic Carbon (mg/L)	ORP (mV)
Benzene Storage Area																		
BSA-MW-1S-0510	5/19/2010	930	31	100 J	0.6	<0.35	<0.33		1.9		0.4		8,400	<0.05	<5		9.7	123.2
BSA-MW-1S-F(0.2)-0510	5/19/2010							0.82		1.6		0.4				8.2		
BSA-MW-2D-0510	5/25/2010	720	60	92	6.45	12	<0.33		3.2		0.53		28,000	<0.05	<5		5.5	-92.5
BSA-MW-2D-F(0.2)-0510	5/25/2010							2.74		3		0.51				4.4		
BSA-MW-3D-0510	5/25/2010	500	34	72	4.3	1.7	3.7		11		0.52		380	<0.05	260		3.6	-104.5
BSA-MW-3D-F(0.2)-0510	5/25/2010							3.44		11		0.53				4.2		
BSA-MW-4D-0510	5/20/2010	660	36	150	0.39	3.2	<0.33		9.3		0.72		86	<0.05	45		4.9	163.8
BSA-MW-4D-F(0.2)-0510	5/20/2010							>5		9.3		0.69				4.1		
BSA-MW-5D-0510	5/24/2010	<5	<5	190	0.53	6.8	<0.33		17		0.92		3,500	<0.05	<5		4.9	-139.2
BSA-MW-5D-F(0.2)-0510	5/24/2010							>5		16		0.91				4.8		
Chlorobenzene Process Area																		
CPA-MW-1D-0510	5/20/2010	1,000	<5	110	0.21	34	<0.33		1.2		0.085		17,000	<0.5	12		12	248.4
CPA-MW-1D-F(0-2)-0510	5/20/2010							0.26		1.1		0.073				11		
CPA-MW-2D-0510	5/20/2010	610	32	76	0.54	3.3 H J	<0.33 H R		5		0.32		1,800 H J	<0.05	<5		12	169.5
CPA-MW-2D-F(0-2)-0510	5/20/2010							4.86		4.7		0.32				11		
CPA-MW-3D-0510	5/26/2010	610	60	160	0.26	13	<0.33		14		0.59		15,000	<0.05	<5		11	-98.2
CPA-MW-3D-F(0.2)-0510	5/26/2010									12		0.6				10		
CPA-MW-4D-0510	5/24/2010	<5	<5	270	6.8	12	2.5		9.5		0.24		4,000	<0.05	<5		6	103.4
CPA-MW-4D-F(0.2)-0510	5/24/2010							>5		9.1		0.24				5		
CPA-MW-5D-0610	6/3/2010	320	130	290	6.47	3	<0.33		71		2.4		13	0.058	1,800		3.6	-53.1
CPA-MW-5D-F(0.2)-0610	6/3/2010									81		2.6				3.1		

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

Appendix A

Groundwater Purging and Sampling Forms

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

LOW FLOW GROUNDWA SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00003 FIELD PERSONNEL: [illegible]
DATE: 5/[illegible] WEATHER: [illegible]
MONITORING WELL ID: BSAMW01S SAMPLE ID: BSAMW01S-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): [illegible] ft
Constructed Well Depth (btoc): [illegible] ft
Depth to Water (btoc): [illegible] ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): [illegible] ft
Screen Length: 5 ft

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

Volume of Flow Through Cell I: 750 mL
Minimum Purge Volume = (3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 1.5 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (ms/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mV)
					0.2		3%		0.2/N%	20mV
0	0952	9.81	Lt. Gn	Yes	7.22	15.89	1745	32.0	3.83	[illegible]
750	0955	9.81	Lt. Gn	Yes	7.39	15.80	1788	18.5	1.28	173.1
1500	0958	9.81	Lt. Gn	Yes	7.40	15.89	1799	13.0	0.82	159.6
2250	1001	9.81	Lt. Gn	Yes	7.41	15.94	1806	7.4	0.70	132.1
3000	1004	9.81	Lt. Gn	Yes	7.41	15.99	1815	7.7	0.65	126.3
3750	1007	9.81	Lt. Gn	Yes	7.42	16.02	1816	6.9	0.60	123.2

Start Time: 0952
Stop Time: 1007
Elapsed Time: 15
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6920
Date Calibrated:

SAMPLING DATA

Sample Date: 5/[illegible]
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace [X] Initials: NM
Sample Time: 1020
Sample Flow Rate: 250 ml/min
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: None

COMMENTS

MNA: Alkalinity, CO_2, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC

Ferrous Iron (Filtered 0.2 micron) = 0.82

US EPA ARCHIVE DOCUMENT

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00003 FIELD PERSONNEL: Mike Corbett, Susie Jansen
DATE: 5/25/10 WEATHER: sun, clouds, 80s
MONITORING WELL ID: BSAMW02D SAMPLE ID: BSAMW02D-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 77.02 ft
Constructed Well Depth (btoc): 77.05 ft
Depth to Water (btoc): 11.00 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 72.05 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 66.02 ft
If Depth to Top of Screen is > Depth to Water AND Screen Length is (4 feet):
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 74.55 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are (4 ft):
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell (): 750 mL
Minimum Purge Volume = (3 x Flow Through Cell Volume): 2,250 mL
Ambient PID/FID Reading: 2.3 ppm
Wellbore PID/FID Reading: 2.3 ppm

PURGE DATA

Pump Type: Stainless Steel Bladder

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond (mS/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
0	1252	11.03	colorless	hydrocarbon	6.76	17.84	1.545	4.6	3.02	8.0
750	1255				6.75	17.94	1.546	4.8	3.64	-2.4
1,500	1258				6.76	18.41	1.546	5.1	3.99	-29.6
2,250	1301				6.77	17.53	1.565	4.9	3.66	-50.9
3,000	1304**				7.04	NM	NM	NM	NM	NM
7,000	1430				6.72	17.67	1.537	25.2	2.50	32.6
3,750	1433				6.75	18.38	1.535	21.9	1.78	26.2
4,500	1436				6.77	19.37	1.554	17.1	2.25	4.0
5,250	1439				6.78	19.57	1.556	16.0	2.52	-19.2
6,000	1442				6.78	19.96	1.556	15.5	3.21	-36.5
6,750	1445				6.78	18.50	1.558	15.5	3.03	-52.8
7,500	1448				6.78	18.36	1.553	12.5	3.24	-66.4
8,250	1451				6.78	18.34	1.559	13.0	3.34	-72.4
9,000	1454				6.79	18.35	1.556	10.5	3.49	-78.8
9,750	1457				6.79	18.29	1.558	10.7	4.84	-80.9
10,500	1500				6.79	18.33	1.563	8.6	6.51	-84.4

Start Time: 1252
Stop Time: 1509
Elapsed Time: 51 min. (see notes below)
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6920
Date Calibrated: 5/25/10

SAMPLING DATA

Sample Date: 5/25/10
Sample Method: Stainless Steel Bladder
Sample Time: 1520
Sample Flow Rate: 250 mL/min
Analysis: VOCs, ~~SVOCs~~ mc, Metals, MNA
QA/QC Samples: none
VOA Vials, No Headspace ☒ Initials MC – unpreserved VOA vials

COMMENTS:
MNA – Alkalinity, CO_2, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = 2.74 ppm
*Elevated ambient readings due to high humidity.
**pump motor goes dead. Replace pump / troubleshoot.

5/25/10

PURGE DATA CONTINUED: BSAMW02D

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mv)
11,250	1503	11.03	colorless	hydrocarbon	6.79	18.24	1.563	9.7	6.42	-87.6
12,000	1506	↓	↓	↓	6.80	18.11	1.569	6.9	6.50	-90.0
12,750	1509	↓	↓	↓	6.80	17.92	1.570	9.0	6.45	-92.5

COMMENTS:

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 215624C1.00003 FIELD PERSONNEL: Mike Corbett, Susie Jansen
DATE: 5/25/10 WEATHER: sunny, 80s
MONITORING WELL ID: BSAMW03D SAMPLE ID: BSAMW03D-05/10

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 114.80 ft
Constructed Well Depth (btoc): 114.35 ft
Depth to Water (btoc): 10.10 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 104.35 ft
Screen Length: 10 ft

Water Column Height (do not inc. use LNAPL or DNAPL): 104.70 ft
If Depth to Top of Screen is > Depth to Water AND Screen Length is (4 feet.
Place Pump at: Total Well Depth – 0.5 (Screen Length – DNAPL Column Height) = 112.35 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are (4ft.
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft. Place Pump at: Total Well Depth – 2 ft = — ft btoc

Volume of Flow Through Cell: 750 mL
Minimum Purge Volume = (3 x Flow Through Cell Volume): 2,250 mL
Ambient PID/FID Reading: 0.6 ppm
Wellhead PID/FID Reading: 0.7 ppm

PURGE DATA

Pump Type: Grundfos Stainless Steel Submersible

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (mS/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mV)
0	0934	10.10	colorless	hydrocarbon	6.81	17.54	1.560	6.1	5.52	96.9
750	0937	↓	↓	↓	6.82	17.28	1.566	4.2	4.80	46.3
1,500	0940				6.83	17.30	1.568	3.9	4.63	36.6
2,250	0943				6.83	17.43	1.565	3.5	4.51	24.8
3,000	0946				6.84	17.32	1.572	3.2	4.49	11.4
3,750	0949				6.84	17.46	1.566	3.0	4.38	-2.9
4,500	0952				6.84	17.41	1.571	2.6	4.68	-22.2
5,250	0955				6.84	17.25	1.570	2.7	4.44	-38.0
6,000	0958				6.84	17.31	1.570	2.6	4.57	-50.1
6,750	1001				6.85	17.36	1.570	2.6	4.41	-73.9
7,500	1004				6.84	17.10	1.570	2.6	4.49	-84.9
8,250	1007				6.84	16.97	1.568	2.6	4.72	-91.5
9,000	1010				6.84	17.00	1.567	2.6	4.56	-100.1
9,750	1013				6.85	17.12	1.566	2.6	4.30	-104.5

Start Time: 0934
Stop Time: 1013
Elapsed Time: 39 min.
Average Purge Rate (mL/min): 250
Water Quality Meter ID: [illegible]
Date Calibrated: 5/25/10

SAMPLING DATA

Sample Date: 5/25/10
Sample Method: Grundfos Stainless Steel Submersible
Sample Time: 1020
Sample Flow Rate: 250 mL/min
Analysis: VOCs, Sulfate, Nitrate, MNA
QA/QC Samples: ES (before this well)
VOA Vials, No Headspace: ☒ Initials: MC

COMMENTS:

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

Ferrous Iron (Filtered 0.2 micron): 3.44 ppm

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: LTM Program
PROJECT NUMBER: 21562401.00003
FIELD PERSONNEL: N. N. Nolan, K. Unruh
DATE: 5/20/16
WEATHER: Rain, 60°F
MONITORING WELL ID: BSAMW04D
SAMPLE ID: BSAMW04D-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 60 ft
Constructed Well Depth (btoc): 121.25 ft
Depth to Water (btoc): 16.63 ft
Depth to LNAPL/DNAPL (btoc): ft
Depth to Top of Screen (btoc): 116.25 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): ft
If Depth to Top of Screen is > Depth to Water AND Screen Length is ≤4 feet.
Place Pump at Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ≤4 ft,
Place Pump at Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at Total Well Depth - 2 ft = 1 ft btoc

Volume of Flow Through Cell: 750 mL
Minimum Purge Volume =
(3 x Flow Through Cell volume) 2250 mL
Ambient PID/FID Reading: 0.7 ppm
Wellbore PID/FID Reading: 1.0 ppm

PURGE DATA

Pump Type: Stainless Steel Vacuum

Purge volume (ml)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. ~~(mS/cm)~~ µS/cm	Turbidity (NTUs)	DO (mg/l)	ORP (mV)
					0.2		3%		0.2/10%	20
0	1620	16.65	Clr	Yes	6.91	15.96	1658	2.1	1.74	146.3
750	1623	16.65	Clr	Yes	6.92	15.80	1736	1.4	0.71	152.5
1500	1626	16.65	Clr	Yes	6.90	15.84	1747	1.4	0.58	141.4
2250	1629	16.65	Clr	Yes	6.91	15.84	1745	1.3	0.45	163.8
3000	1632	16.65	Clr	Yes	6.91	15.82	1744	1.3	0.39	163.8

Start Time: 1620
Stop Time: 1632
Elapsed Time: 12
Average Purge Rate (ml/min): 250
Water Quality Meter ID: YS 6920
Date Calibrated: 5/20/16

SAMPLING DATA

Sample Date: 5/20/16
Sample Time: 1640
Analysis: VOCs, SVOCs, Metals, MNA
Sample Method: Stainless Steel Vacuum
Sample Flow Rate: 250 mL/min
QA/QC Samples: None
VOA Vials, No Headspace: ☐ Vials:

COMMENTS:
MNA: Alkalinity, CO2, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = Quadrangle

US EPA ARCHIVE DOCUMENT

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: LTM Program
PROJECT NUMBER: 21562401.00003
FIELD PERSONNEL: Mike Corbett, Kurt Owings
DATE: 5/24/10
WEATHER: Sunny, 80s
MONITORING WELL ID: BSAMW05D
SAMPLE ID: BSAMW05D-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 120.95 ft
Constructed Well Depth (btoc): 20.64 ft
Depth to Water (btoc): 8.97 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 115.64 ft
Screen Length: ft

Water Column Height (do not include LNAPL or DNAPL): 111.98 ft
If Depth to Top of Screen is > Depth to Water AND Screen Length is (4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 118.45 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are (4 ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height – DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell: 750 mL
Minimum Purge Volume = (3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 8.5 * ppm
Wellbore PID/FIC Reading: 8.6 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (mS/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
0	1021	8.98	colorless	hydrocarbon	6.71	18.99	1.653	3.1	0.80	73.4
750	1024				6.72	18.78	1.651	3.5	0.66	59.8
1,500	1027				6.72	18.80	1.651	3.4	0.61	50.7
2,250	1030				6.72	18.75	1.651	3.1	0.57	44.0
3,000	1033				6.72	18.79	1.653	3.0	0.52	32.7
3,750	1036				6.72	18.76	1.652	3.0	0.49	19.3
4,500	1039				6.72	18.76	1.652	3.0	0.47	-0.6
5,250	1042				6.72	18.77	1.652	3.1	0.46	-20.2
6,000	1045				6.72	18.73	1.657	3.3	0.45	-60.1
6,750	1048				6.72	18.76	1.668	3.1	0.45	-86.8
7,500	1051				6.72	18.77	1.697	3.1	0.42	-105.5
8,250	1054				6.73	18.77	1.741	3.1	0.42	-115.4
9,000	1057				6.74	18.54	1.799	3.1	0.49	-122.7
9,750	1100				6.76	18.56	1.858	3.3	0.54	-129.4
10,500	1103				6.77	18.71	1.874	3.4	0.54	-131.6
11,250	1106				6.77	18.86	1.895	3.2	0.56	-134.1

Start Time: 1021
Stop Time: 1115
Elapsed Time: 54 min.
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YS 6220
Date Calibrated: 5/24/10

SAMPLING DATA

Sample Date: 5/24/10
Sample Method: Stainless Steel Monsoon
Sample Time: 1130
Sample Flow Rate: 250 mL/min
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: MS/MSD
VOA Vials, No Headspace: X
Initials: MC

COMMENTS:
MNA - Alkalinity, CO2, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = Overrange
* Elevated ambient reading possibly due to high humidity.

US EPA ARCHIVE DOCUMENT

5/24/10

PURGE DATA CONTINUED: BSAMW05D

Purge Volume (gal.)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (ms/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
12,000	1109	8.98	colorless	hydrocarbon	6.78	19.05	1.916	3.3	0.55	-136.8
12,750	1112	↓	↓	↓	6.79	19.04	1.938	3.3	0.50	-138.8
13,500	1115	↓	↓	↓	6.79	18.79	1.951	3.5	0.53	-139.2

COMMENTS:

US EPA ARCHIVE DOCUMENT

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: LTM Program
PROJECT NUMBER: 21562401.00003
FIELD PERSONNEL: N. McNulen, K. Dwyer
DATE: 5/20/10
WEATHER: Rain, 60°F
MONITORING WELL ID: CPAMW01C
SAMPLE ID: CPAMW01D-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): NM ft
Constructed Well Depth (btoc): 77.50 ft
Depth to Water (btoc): ~~[illegible]~~ 5.65 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 65.50 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): ft
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet.
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4 ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = 66.5 ft btoc

Volume of Flow Through Cell 1: 750 mL
Minimum Purge Volume = (3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 1.5 ppm
Wellhore PID/FID Reading: 1.5 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond (~~mS/cm~~ mS/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mV)
					0.2		3%		0.2/10%	20
0	1027	5.65	Bln	Yes	10.05	16.49	1705	76.7	2.47	252.2
750	1030	5.65	Bln	Yes	9.30	16.41	1963	39.3	0.45	251.6
1500	1033	5.65	Bln	Yes	9.27	16.42	1980	32.7	0.32	250.6
2250	1036	5.65	Bln	Yes	9.25	16.46	2010	23.7	0.39	249.1
3000	1039	5.65	Bln	Yes	9.25	16.53	2019	22.3	~~0.19~~ 0.21	248.4

Start Time: 1027
Stop Time: 1039
Elapsed Time: 12
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6970
Date Calibrated: 5/20/10

SAMPLING DATA

Sample Date: 5/20/10
Sample Time: 1050
Analysis: VOCs, SVOCs, Metals, MNA
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 250 ml/min
QA/QC Samples: None
VOA vials, No Headspace ☐ Initials: Robert [illegible] could not be eliminated. NM

COMMENTS:
MNA – Alkalinity, CO2, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (filtered 0.2 micron) = 0.26 ppm

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21562401.00003 FIELD PERSONNEL: N.McNallen
DATE: 5/12/10 WEATHER: Rain, 60°F
MONITORING WELL ID: CPAMW02D SAMPLE ID: CPAMW02D-0513

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): NA ft
Constructed Well Depth (btoc): 104.65 ft
Depth to Water (btoc): 5.08 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 99.65 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): ft
* Depth to Top of Screen is > Depth to Water AND Screen Length is ≤4 feet
Place Pump at: Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = ft btoc
* Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ≤4ft
Place Pump at: Total Well Depth - (0.5 X Water Column Height + DNAPL Column Height) = ft btoc
* Screen Length and/or water column height is < 4 ft. Place Pump at: Total Well Depth - 2 ft = 102.5 ft btoc

Volume of Flow Through Cell I: 750 mL
Minimum Purge Volume = (3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 0.1 ppm
Wellbore PID/FID Reading: 1.3 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (mS/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mV)
					0.2		3%		0.2/10%	20 mV
0	1335	5.08	4 Yellow	Yes	7.28	17.59	1131	14.7	0.25	136.3
750	1338	5.11	4 Yellow	Yes	6.95	17.64	1314	14.0	0.81	193.0
1500	1341	5.11	4 Yellow	Yes	6.95	17.67	1349	8.0	0.77	174.3
2250	1345	5.11	4 Yellow	Yes	6.95	17.67	1353	6.2	0.60	171.7
3000	1347	5.11	4 Yellow	Yes	6.95	17.68	1353	5.3	0.58	170.8
3750	1350	5.11	4 Yellow	Yes	6.95	17.69	1352	6.1	0.54	163.5

Start Time: 1335
Stop Time: 1350
Elapsed Time: 15
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6920
Date Calibrated: 5/13/10

SAMPLING DATA

Sample Date: 5/12/10
Sample Method: Stainless Steel Monsoon
VOA Vials, No Headspace: ☒ Initials: NM
Sample Time: 1400
Sample Flow Rate: 250 mL/min
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: Analytical Duplicate

COMMENTS:

MNA - Alkalinity, CO_2, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = 4.8L

US EPA ARCHIVE DOCUMENT

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 21962401.03003 FIELD PERSONNEL: Mike Corbett, Susie Jansen
DATE: 5/26/10 WEATHER: sunny, 80s
MONITORING WELL ID: CPAMW03C SAMPLE ID: CPAMW03C-051C

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 117.84 ft
Constructed Well Depth (btoc): [illegible] ft
Depth to Water (btoc): 4.86 ft
Depth to LNAPL/DNAPL (btoc): ___ ft
Depth to Top of Screen (btoc): 106.70 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 107.98 ft
If Depth to Top of Screen is > Depth to Water AND Screen Length is ≥ 4 feet
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 110.50 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are ≥ 4 ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ___ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth – 2 ft = ___ ft btoc

Volume of Flow Through Cell: 750 mL
Minimum Purge Volume = (3 x Flow Through Cell Volume): 2,250 mL
Ambient PID/FID Reading: 0.9 ppm
Wellbore PID/FID Reading: 0.7 ppm

PURGE DATA

Pump Type: Stainless Steel Versapump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (ms/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mV)
0	0858	4.88	colorless	hydrocarbon	6.71	18.22	1.713	6.6	1.65	192.7
750	0901				6.75	18.37	1.710	5.4	0.63	159.3
1,500	0904				6.76	18.62	1.698	3.6	0.46	104.9
2,250	0907				6.77	18.92	1.699	4.8	0.39	66.8
3,000	0910				6.77	19.33	1.692	3.5	0.36	49.2
3,750	0913				6.77	19.61	1.696	3.3	0.34	32.2
4,500	0916				6.78	19.61	1.699	3.6	0.34	15.7
5,250	0919				6.78	19.23	1.700	3.6	0.33	-18
6,000	0922				6.78	18.78	1.696	3.9	0.31	-10.2
6,750	0925				6.78	18.69	1.690	3.7	0.31	-29.0
7,500	0928				6.78	18.75	1.688	3.6	0.31	-39.5
8,250	0931				6.78	18.73	1.682	3.7	0.35	-54.8
9,000	0934				6.78	18.66	1.698	3.2	0.25	-71.2
9,750	0937				6.78	18.74	1.695	4.0	0.24	-80.9
10,500	0940				6.78	18.77	1.693	3.3	0.24	-88.8
11,250	0943				6.78	18.74	1.692	3.0	0.25	-95.3

Start Time: 0858
Stop Time: 0946
Elapsed Time: 48 min.
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6920
Date Calibrated: 5/26/10

SAMPLING DATA

Sample Date: 5/26/10
Sample Method: Stainless Steel Versapump
Sample Time: 1000
Sample Flow Rate: 250 mL/min
Analyses: VOCs ~~SVOCs~~ MNA
QA/QC Samples: none
VOA Vials No Headspace: ___ Initials: ___

COMMENTS

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

5/26/10

PURGE DATA CONTINUED: GPA\MW03D

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (ms/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mV)
12,000	0946	4.88	colorless	hydrocarbon	6.78	18.61	1.692	3.2	0.26	-98.2

COMMENTS:

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: LTM Program
PROJECT NUMBER: 21552401.00003
FIELD PERSONNEL: Mike Corbett, Kurt Owings
DATE: 5/24/10
WEATHER: Sunny, 90°F
MONITORING WELL ID: CPAMW04D
SAMPLE ID: CPAMW04D-0510

INITIAL DATA

Well Diameter: 2 in.
Measured Well Depth (btoc): 121.00 ft
Constructed Well Depth (btoc): 121.00 ft
Depth to Water (btoc): 13.89 ft
Depth to DNAPL (btoc): ___ ft
Depth to Top of Screen (btoc): 116.00 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 107.11 ft
If Depth to Top of Screen is > Depth to Water AND Screen Length is 4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 118.57 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column + Height and Screen Length are < 4,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ___ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth – 2 ft = ___ ft btoc

Volume of Flow Through Cell: 750 mL
Minimum Purge Volume = (3 x Flow Through Cell Volume) 2,250 mL
Ambient PID/FID Reading: 14.8 ppm
Wellbore PID/FID Reading: 14.8 ppm

PURGE DATA

Pump Type: Grundfos Stainless Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (mS/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
0	1250	13.90	colorless	hydrocarbon	7.14	19.26	1.909	4.7	3.72	243.6
750	1253	13.90			6.86	19.07	2.263	5.1	2.74	204.1
1,500	1256	13.92			6.84	18.32	2.266	4.2	2.02	189.3
2,250	1259	13.92			6.83	18.16	2.262	4.2	1.86	177.9
3,000	1302				6.83	18.10	2.260	4.1	2.51	163.0
3,750	1305				6.84	18.03	2.258	4.0	3.27	149.7
4,500	1308				6.84	17.94	2.257	4.1	3.90	135.2
5,250	1311				6.85	18.33	2.249	3.4	5.13	126.1
6,000	1314				6.85	18.23	2.255	4.1	5.60	119.4
6,750	1317				6.85	18.33	2.252	3.7	6.25	117.8
7,500	1320				6.85	18.17	2.249	3.8	6.82	113.4
8,250	1323				6.86	18.01	2.248	3.9	7.08	110.0
9,000	1326				6.86	18.24	2.243	3.2	7.99	106.9
9,750	1329				6.86	18.15	2.246	3.8	6.80	103.4

Start Time: 1250
Stop Time: 1329
Elapsed Time: 39 min.
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 556
Date Calibrated: 5/24/10

SAMPLING DATA

Sample Date: 5/24/10
Sample Method: Stainless Steel Monsoon
Sample Time: 1345
Sample Flow Rate: 250 mL/min.
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: none
VOA Vials No Headspace [X] Initials: MC

COMMENTS:

MNA – Alkalinity, CO_2, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, TOC
Ferrous Iron (Filtered 0.2 micron) = Overrange
* Elevated PID readings possibly due to high humidity.

US EPA ARCHIVE DOCUMENT

LOW FLOW GROUNDWA SAMPLING DATA SHEET

PROJECT NAME: LTM Program PROJECT NUMBER: 215624C1.30003 FIELD PERSONNEL: Mike Corbett, Susie Jansen
DATE: 6/3/10 WEATHER: sun, clouds, 80s
MONITORING WELL ID: CPAMW05D SAMPLE ID: CPAMW05D-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 114.67 ft
Constructed Well Depth (btoc): [illegible] ft
Depth to Water (btoc): 10.83 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 102.75 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 103.84 ft
If Depth to Top of Screen is > Depth to Water AND Screen Length is ≥ 4 feet
Place Pump at: Total Well Depth − 0.5 (Screen Length + DNAPL Column Height) = 112.25 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft
Place Pump at: Total Well Depth − 0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft. Place Pump at: Total Well Depth − 2 ft = — ft btoc

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

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (ml)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)
0	1421	10.84	colorless	none	6.10	15.12	3.717	1.2	2.16	−38.9
1,200	1425				6.06	14.09	3.716	0.7	3.68	−37.4
2,400	1429				6.10	13.96	3.224	0.0	3.04	−38.2
3,600	1433				6.13	13.98	3.720	−0.3	3.26	−41.9
4,800	1436				6.17	13.88	3.717	−0.4	3.80	−44.1
6,000	1439				6.18	13.94	3.718	−0.5	4.10	−46.2
7,200	1442				6.21	13.98	3.721	−0.5	4.40	−48.5
8,400	1445				6.23	14.01	3.719	−0.4	4.54	−49.8
9,600	1448				6.24	14.00	3.719	−0.4	5.26	−49.9
10,800	1451				6.24	14.06	3.713	−0.4	5.74	−50.8
12,000	1454				6.25	13.99	3.706	−0.4	5.83	−50.4
13,200	1457				6.26	13.94	3.708	−0.5	6.38	−51.0
14,400	1500				6.27	13.94	3.709	−0.4	6.67	−51.7
15,600	1503				6.28	13.95	3.706	−0.5	6.61	−52.3
16,800	1506				6.28	13.95	3.707	−0.5	6.58	−52.8
18,000	1509				6.28	13.96	3.707	−0.5	6.47	−53.1

Start Time: 1421
Stop Time: 1509
Elapsed Time: 48 min.
Average Purge Rate (mL/min): 300 mL 400
Water Quality Meter ID: YSI 6820
Date Calibrated: 6/3/10

SAMPLING DATA

Sample Date: 6/3/10
Sample Method: Stainless Bladder Pump
Sample Time: 1520
Sample Flow Rate: 400 mL/min
Analysis: VOCs, SVOCs, Metals, MNA
QA/QC Samples: none
VOA Vials, No Headspace: X
Initials: MC

COMMENTS:
MNA – Alkalinity, DO, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = Not measured – Lamotte colorimeter was not working.

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: Nathan McNurlen	Date: 5/19/10	COC No: 3
URS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gulizia	Carrier: FedEx	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562401.00003
St. Louis, MO 63110	Calendar (C) or Work Days (W)			SDG No.
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks			
Project Name: 2Q10 LTM GW Sampling	☒ 1 week			
Site: Solutia WG Krummrich Facility	☐ 2 days			
PO#	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs by 8260	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- 015 -0510	5/19/10	1020	G	Water	12		3	1	1	1	3	2	1			
BSA -MW- 015 -F(0.2)-0510	5/19/10	1020	G	Water	2	X								1	1	
2Q10 LTM Trip Blank #01	5/19/10	0000	—	Water	3		3									
							2	1	4	1	1	1	3,1	2	4	2

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

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

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

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

Temp 0.4

680-57808

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	5/19/10 1700	Beth A Daughtry	TA SAV	5-20-10@1002
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Savannah
5102 LaRoche Avenue
Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact
URS Corporation
1001 Highlands Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100 Phone
(314) 429-0462 FAX
Project Name: 2Q10 LTM GW Sampling
Site: Solutia WG Krummrich Facility
P O #

Project Manager: Dave Palmer
Tel/Fax: (314) 743-4228

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

Site Contact: Nathan McNurlen
Lab Contact: Lidya Gulizia

Date: 5/20/10
Carrier:

COC No: 4
1 of 1 COCs
Job No. 21562401.00003
SDG No.

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs by 8260	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:
CPA -MW- 01D -0510	5/20/10	1050	G	Water	12		3	1	1	1	3	2	1			
CPA -MW- 01D -F(0.2)-0510	5/20/10	1050	G	Water	2	X								1	1	
CPA -MW-02D-0510	5/20/10	1400	G	Water	12		3	1	1	1	3	2	1			
CPA-MW-02D-F(0.2)-0510	5/20/10	1400	G	Water	2	X								1	1	
CPA -MW-02D-0510-AD	5/20/10	1400	G	Water	12		3	1	1	1	3	2	1			
CPA-MW-02D-F(0.2)-0510-AD	5/20/10	1400	G	Water	2	X								1	1	
BSA-MW-04D-0510	5/20/10	1640	G	Water	12		3	1	1	1	3	2	1			
BSA-MW-04D-F(0.2)-0510	5/20/10	1640	G	Water	2	X								1	1	
2Q10 LTM Trip Blank # 2				Water	3		3									
							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

2.8°C 680-57861

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	URS	5/20/10 1800		TA	5/20/10 1800
Relinquished by:	Company: TA	Date/Time: 5/20/10 1820	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by: George K Conner	Company: TA SV	Date/Time: 5/21/10 0906

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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact
URS Corporation
1001 Highlands Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100 Phone
(314) 429-0462 FAX
Project Name: 2Q10 LTM GW Sampling
Site: Solutia WG Krummrich Facility
P O #

Project Manager: Dave Palmer
Tel/Fax: (314) 743-4228

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

Site Contact: Nathan McNurlen
Lab Contact: Lidya Gulizia

Date: 5/24/10
Carrier: Fed Ex

COC No: 1 of 1 COCs
Job No. 21562401.00003
SDG No.

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs by 8260	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- 05D -0510	5/24/10	1130	G	Water	12		3	1	1	1	3	2	1			
BSA -MW- 05D -F(0.2)-0510	↓	1130	G	Water	2	X								1	1	
BSA-MW-05D-0510-MS		1130	G	Water	3		3									
BSA-MW-05D-0510-MSD		1130	G	Water	3		3									
CPA-MW-04D-0510		1345	G	Water	12		3	1	1	1	3	2	1			
CPA-MW-04D-F(0.2)-0510	↓	1345	G	Water	2	X								1	1	
2Q10 LTM Trip Blank # 3	5/24/10	—	G	Water	3		3									
							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*

Temp 4.6

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

680-57937

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	5/24/10 1600	Beth A Daughtry	TASAV	5.25.10 0928
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Nathan McNurlen	Date: 5/25/10	COC No:
URS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gulizia	Carrier: Fed Ex	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562401.00003
St. Louis, MO 63110	Calendar (C) or Work Days (W) _____			SDG No.
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks			
Project Name: 2Q10 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	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- 03D -0510	5/25/10	1020	G	Water	12		3	1	1	1	3	2	1			
BSA -MW- 03D -F(0.2)-0510	↓	1020	G	Water	2	X								1	1	
BSA-MW-03D-0510-EB		0920	G	Water	3		3									
BSA-MW-02D-0510		1520	G	Water	12		3*	1	1	1	3	2	1			*Voc samples unpreserved due to effervescent reaction to HCl.
BSA-MW-02D-F(0.2)-0510	↓	1520	G	Water	2									1	1	
2Q10 LTM Trip Blank # 4	5/25/10	—	G	Water	3		3									
							2	1	4	1	1	1	3,1	2	4	2

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

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

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

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

Temp 2.8

680-57973

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	5/25/10 1700	Ruth A Daughtry	TASAV	5.26.10 @ 0905
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Savannah, GA 31404
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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Nathan McNurlen	Date: 5/26/10	COC No:
URS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gulizia	Carrier: FedEx	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562401.00003
St. Louis, MO 63110	Calendar (C) or Work Days (W)			SDG No.
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks			
Project Name: 2Q10 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	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:
CPA -MW- 03D -0510	5/26/10	1000	G	Water	12		3	1	1	1	3	2	1			VOC samples unpreserved due to effervescent reaction with HCl
CPA -MW- 03D -F(0.2)-0510	5/26/10	1000	G	Water	2	X								1	1	
2Q10 LTM Trip Blank # 5	5/26/10	—	G	Water	3		3									
							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°c 680-58012

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	5/26/10 1400	[signature]	TH SV	5/27/10 0943
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Nathan McNurlen	Date: 6/3/10	COC No:
URS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gulizia	Carrier: FedEx	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562401.00003
St. Louis, MO 63110	Calendar (C) or Work Days (W)			SDG No.
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks			
Project Name: 2Q10 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	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:
CPA -MW- 05D -0610	6/3/10	1520	G	Water	12		3	1	1	1	3	2	1			
CPA -MW- 05D -F(0.2)-0610	6/3/10	1520	G	Water	2	X								1	1	
2Q10 LTM Trip Blank # 6	6/3/10	—	—	Water	3		3									
							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*

Temp 3.2

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

680-58262

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	6/3/10 1730	Ruth A Daughtry	TA SAV	6.4.10 0941
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Appendix C

Quality Assurance Report

QUALITY ASSURANCE REPORT

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

Long-Term Monitoring Program
2nd Quarter 2010 Data Report

Prepared for

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

June 2010

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

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1.0 INTRODUCTION 1

2.0 RECEIPT CONDITION AND SAMPLE HOLDING TIMES 3

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

4.0 SURROGATE SPIKE RECOVERIES 4

5.0 LABORATORY CONTROL SAMPLE RECOVERIES 5

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

7.0 FIELD DUPLICATE RESULTS 5

8.0 INTERNAL STANDARD RESPONSES 6

9.0 RESULTS REPORTED FROM DILUTIONS 6

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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 May and June of 2010 at the Solutia W.G. Krummrich plant as part of the 2nd Quarter 2010 Long-Term Monitoring Program. The samples were collected by URS Corporation personnel and analyzed by TestAmerica Laboratories located in Savannah, Georgia using USEPA methods, Standard Methods and USEPA SW-846 methodologies. Groundwater samples were tested for volatile organic compounds (VOCs), semivolatile compounds (SVOCs), metals, dissolved gasses, and general chemistry parameters.

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

A total of 14 groundwater samples (10 investigative samples, one field duplicate pair, one MS/MSD pair, and one equipment blank) were analyzed by Test America. In addition, six 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 Sample Delivery Groups (SDGs) KPS057, KPS058, KPS059 utilizing the following USEPA SW-846 Methods:

- Method 8260B for VOCs (Benzene, Chlorobenzene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene and 1,4-Dichlorobenzene)
- Method 6010B for total and dissolved iron and manganese

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

- Method RSK-175 for Dissolved Gases (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

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

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

TABLE 1 Laboratory Data Qualifiers

Lab Qualifier	Definition
U	Analyte was not detected at or above the reporting limit.
*	LCS, LCSD, MS, MSD, MD or surrogate exceeds the control limits.
E	Result exceeded the calibration range, secondary dilution required.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Spike recovery exceeds upper or lower control limits.
F	MS, MSD or RPD exceeds upper or lower control limits.
P	The difference between the results of the two GC columns is greater than 40%
H	Sample was prepped or analyzed beyond the specified holding time.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

TABLE 2 URS Data Qualifiers

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

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy, precision, and representativeness (based on MS/MSD, LCS, surrogate compounds and field duplicate results) were achieved for this data set, except where noted in this report. In addition, analytical completeness, defined as the percentage of analytical results that are judged to be valid with the exception of rejected (**R**) flagged data, including estimated detect/non-detect (**J/UJ**) data was 99 percent.

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The data review included evaluation of the following criteria:

Organics

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

Inorganics/General chemistry

- Receipt condition and sample holding times
- Laboratory method blank and field equipment blank samples
- LCS recoveries
- MS/MSD sample recoveries and matrix duplicate RPD values
- Field duplicate and laboratory duplicate results
- Results reported from dilutions

The following sections present the results of the data review.

2.0 RECEIPT CONDITION AND SAMPLE HOLDING TIMES

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

Upon review of the KPS057 data, the cooler receipt form indicated that effervescence was observed in samples BSA-MW-02D-0510 and CPA-MW-03D-0510 during collection and therefore three out of three unpreserved VOA vials were filled in the field for both of these samples. The unpreserved vials did not contain headspace and so were used in the analyses of samples BSA-MW-02D-0510 and CPA-MW-03D-0510. Samples BSA-MW-02D-0510 and

CPA-MW-03D-0510 were analyzed for VOCs within 7 days of sample collection; therefore, no qualification of data was required.

Upon review of the KPS059 data, sample CPA-MW-02D-0510 was analyzed 12 days outside holding time criteria (14 days) for dissolved gases. Professional judgment was used to qualify but not reject methane and ethane results because these gases were detected. The ethylene result was rejected because ethylene was not detected in sample CPA-MW-02D-0510.

Sample ID	Parameter	Analyte	Qualification
CPA-MW-02D-0510	Dissolved gases	Methane	**J**
CPA-MW-02D-0510	Dissolved gases	Ethane	**J**
CPA-MW-02D-0510	Dissolved gases	Ethylene	**R**

MNA analyses for sample CPA-MW-02D-0510 were interpreted by the laboratory as cancelled. URS had the laboratory reactivate MNA analyses upon review of the preliminary data from analyses completed as part of SDG KPS057.

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 six trip blank sample sets. Trip blank samples were nondetect; therefore, no qualification of data was required.

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

Equipment blank samples are used to assess the effectiveness of equipment decontamination procedures. Equipment blank samples were nondetect; therefore, no qualification of data was required.

4.0 SURROGATE SPIKE RECOVERIES

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

Groundwater VOC surrogate recoveries were within evaluation criteria. No qualification of data was required.

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5.0 LABORATORY CONTROL SAMPLE RECOVERIES

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

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

MS/MSD samples are analyzed to assess the accuracy and precision of the analytical process on an analytical sample in a particular matrix. MS/MSD samples were required to be collected at a frequency of one per 20 investigative samples in accordance with the work plan. URS Corporation submitted one MS/MSD sample set for 10 investigative samples, meeting the work plan frequency requirement (one per 20 investigative samples or 5 percent).

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

Groundwater samples spiked and analyzed as MS/MSDs and their respective recoveries are discussed further in data reviews in Appendix D. Data requiring qualification based on MS/MSD recoveries outside evaluation criteria are summarized in the table below.

SDG	Sample ID	Parameter	Analyte	Qualification
KPS057	BSA-MW-01S-0510	General chemistry	Chloride	**J**
KPS059	CPA-MW-02D-F(0.2)-0510	General chemistry	Sulfate	**UJ**

7.0 FIELD DUPLICATE RESULTS

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

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

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Groundwater field duplicate RPDs were within evaluation criteria.

8.0 INTERNAL STANDARD RESPONSES

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

The internal standards area responses for VOCs were verified for the data review. VOC IS responses met the criteria described above for groundwater samples.

9.0 RESULTS REPORTED FROM DILUTIONS

VOC, chloride, and sulfate results for groundwater samples were diluted when high levels of target analytes were present. The diluted sample results for these analytes were reported for the associated samples.

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Appendix D

Groundwater Analytical Results (with Data Review Sheets)

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SDG KPS057

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

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Solutia Krummrich Data Review
WGK LTM 2Q10

Laboratory SDG: KPS057

Reviewer: Elizabeth Kunkel

Date Reviewed: 6/15/2010

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

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

Sample Identification	
BSA-MW-01S-0510	CPA-MW-01D-0510
BSA-MW-01S-F(0.2)-0510	CPA-MW-01D-F(0.2)-0510
BSA-MW-02D-0510	CPA-MW-02D-0510
BSA-MW-02D-F(0.2)-0510	CPA-MW-02D-0510-AD
BSA-MW-03D-0510	CPA-MW-03D-0510
BSA-MW-03D-0510-EB	CPA-MW-03D-F(0.2)-0510
BSA-MW-03D-F(0.2)-0510	CPA-MW-04D-0510
BSA-MW-04D-0510	CPA-MW-04D-F(0.2)-0510
BSA-MW-04D-F(0.2)-0510	2Q10 LTM Trip Blank #2
BSA-MW-05D-0510	2Q10 LTM Trip Blank #3
BSA-MW-05D-F(0.2)-0510	2Q10 LTM Trip Blank #4
2Q10 LTM Trip Blank #1	2Q10 LTM Trip Blank #5

1.0 Data Package Completeness

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

Yes, however MNA analyses for sample CPA-MW-02D-0510 were interpreted by the laboratory as cancelled. URS had the laboratory reactivate MNA analyses upon review of the preliminary data from analyses completed as part of this SDG. MNA analysis results for sample CPA-MW-02D-0510 were reported in a separate SDG (KPS059).

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 one VOC MS recovery and MS/MSD recoveries for chloride were outside evaluation criteria. Sample CPA-MW-01D-0510 was diluted due to appearance. Samples were diluted due to high levels of VOCs, chloride, nitrate, and sulfate. These issues are addressed further in the appropriate sections below.

The cooler receipt form indicated that effervescence was observed in the field during collection of samples BSA-MW-02D-0510 and CPA-MW-03D-0510, therefore

unpreserved VOA vials were filled in the field for both of these samples. The unpreserved vials did not contain headspace and so were used in the analyses of samples BSA-MW-02D-0510 and CPA-MW-03D-0510. Samples BSA-MW-02D-0510 and CPA-MW-03D-0510 were analyzed for VOCs within 7 days of sample collection; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

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

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

Yes

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, sample BSA-MW-03D-0510 was spiked and analyzed for VOCs. Samples BSA-MW-01S-0510 and BSA-MW-05D-0510 were spiked and analyzed for chloride. Samples BSA-MW-01S-0510 and CPA-MW-03D-0510 were spiked and analyzed for nitrate and nitrate nitrite.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD RPD Criteria
BSA-MW-03D-0510	VOCs	Chlorobenzene	**84**/86	1	85-116/30
BSA-MW-01S-0510	General Chemistry	Chloride	**77/77**	0	85-115/30

Data requiring qualification are summarized in the table below. USEPA National Functional Guidelines for Superfund Organic methods Data Review indicates that organic data does not require qualification based on MS/MSD data alone and LCS recoveries were within evaluation criteria; therefore, no qualification of VOC data was required.

Sample ID	Parameter	Analyte	Qualification
BSA-MW-01S-0510	General Chemistry	Chloride	**J**

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8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples reported as part of this SDG?

Yes, samples BSA-MW-01S-0510 and CPA-MW-04D-0510 were duplicated and analyzed for alkalinity and free carbon dioxide. Sample CPA-MW-04D-F(0.2)-0510 was duplicated and analyzed for sulfate. Sample BSA-MW-05D-0510 was duplicated and analyzed for sulfate. Sample BSA-MW-05D-F(0.2)-0510 was duplicated and analyzed for dissolved organic carbon.

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

Yes

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
CPA-MW-02D-0510	CPA-MW-2D-0510-AD

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

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

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

12.0 Additional Qualifications

Were additional qualifications applied?

No

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-57808-1

SDG Number: KPS057

Job Description: WGK Long Term Monitoring 2Q10 MAY 2010

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

Attention: Mr. Jerry Rinaldi

Lidya Gulizia
Project Manager I
lidya.gulizia@testamericainc.com
06/11/2010

Reviewed on JUN 15 2010 EZK

cc: Mr. Bob Birman
Dave Palmer

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

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DC; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 96001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819510; WY/EPAR8: STMS-Q

TestAmerica Laboratories, Inc.
TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404
Tel (912) 354-7858 Fax (912) 357-0165 www.testamericainc.com

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Job Narrative
680-57808-1 / SDG KPS057

Receipt
TOC/TOC samples were received with insufficient preservative and were properly preserved in the lab

All other samples were received in good condition within temperature requirements

GC/MS VOA
Method(s) 8260B: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for four analytes to recover outside criteria for this method when a full list spike is utilized. The MS associated with batch 170130 had one analyte outside control limits; therefore, re-analysis was not performed. These results have been reported and qualified

No other analytical or quality issues were noted

GC VOA
No analytical or quality issues were noted

Metals
Method(s) 6010B: The post digestion spike % recovery for manganese was outside of control limits

Method(s) 6010B: Due to the high concentration of manganese, the matrix spike / matrix spike duplicate (MS/MSD) for batch 680-169670 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria

No other analytical or quality issues were noted

General Chemistry
Method(s) 325.2, SM 4500 C - E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 169861 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria

Method(s) 353.2: The following sample(s) was diluted due to appearance or color: CPA-MW-01D-0510 (680-57861-1). Elevated reporting limits (RL) are provided

No other analytical or quality issues were noted

Comments
Per the sampler's instruction, all MNA and metals parameters were cancelled on May 24, 2010 for parent sample CPA-MW-02D-0510. Following the issue of a preliminary report to the client review team, the MNA and metals analyses were re-activated for analysis. These analyses were logged under job number 680-57861-2 and will be reported under laboratory SDG KPS069

No other additional comments.

JUN 15 2010 EZK

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METHOD SUMMARY

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B
Dissolved Gases (GC)	TAL SAV	RSK RSK-175	
Metals (ICP)	TAL SAV	SW846 6010B	
Sample Filtration, Field	TAL SAV		FIELD_FLTRD
Preparation, Total Recoverable or Dissolved Metals	TAL SAV		SW846 3005A
Alkalinity	TAL SAV	MCAWW 310.1	
Chloride	TAL SAV	MCAWW 325.2	
Nitrogen, Nitrate Nitrite	TAL SAV	MCAWW 353.2	
Sulfate	TAL SAV	MCAWW 375.4	
DOC	TAL SAV	MCAWW 415.1	
TOC	TAL SAV	MCAWW 415.1	
Sample Filtration, Field	TAL SAV		FIELD_FILTRD

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

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

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

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

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METHOD / ANALYST SUMMARY

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPSD57

Method	Analyst	Analyst ID
SW846 8260B	Lanier, Carolyn	CL
RSK RSK-175	Monchet, Amy J	AJM
SW846 6010B	Bland, Brian	BCB
SW846 6010B	Robertson, Bryn	BR
MCAWW 310.1	Lanier, Jerry	JAL
MCAWW 310.1	Vasquez, Juana	JV
MCAWW 325.2	Hoss, Jon	JR
MCAWW 353.2	Hoss, Jon	JR
MCAWW 375.4	Ross, Jon	JR
MCAWW 415.1	Blackshear, Kim	KB

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SAMPLE SUMMARY

Client: Solutia Inc

Job Number: 680-57858-1
Sdg Number: KPS057

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-57858-1	BSA-MW-01S-0510	Water	05/19/2010 1020	05/20/2010 1002
680-57858-2	BSA-MW-01S-F(0.2)-0510	Water	05/19/2010 1020	05/20/2010 1002
680-57858-3	2010 LTM Trip Blank #01	Water	05/19/2010 0000	05/20/2010 1002
680-57861-1	CPA-MW-01D-0510	Water	05/20/2010 1050	05/21/2010 0906
680-57861-2	CPA-MW-01D-F(0.2)-0510	Water	05/20/2010 1050	05/21/2010 0906
680-57861-3	CPA-MW-02D-0510	Water	05/20/2010 1400	05/21/2010 0906
680-57861-5FD	CPA-MW-02D-0510-AD	Water	05/20/2010 1400	05/21/2010 0906
680-57861-7	BSA-MW-04D-0510	Water	05/20/2010 1640	05/21/2010 0906
680-57861-8	BSA-MW-04D-F(0.2)-0510	Water	05/20/2010 1640	05/21/2010 0906
680-57861-9TB	2010 LTM Trip Blank #2	Water	05/20/2010 0000	05/21/2010 0906
680-57937-1	BSA-MW-05D-0510	Water	05/24/2010 1130	05/25/2010 0928
680-57937-1MS	BSA-MW-05D-0510	Water	05/24/2010 1130	05/25/2010 0928
680-57937-1MSD	BSA-MW-05D-0510	Water	05/24/2010 1130	05/25/2010 0928
680-57937-2	BSA-MW-05D-F(0.2)-0510	Water	05/24/2010 1130	05/25/2010 0928
680-57937-3	CPA-MW-04D-0510	Water	05/24/2010 1345	05/25/2010 0928
680-57937-4	CPA-MW-04D-F(0.2)-0510	Water	05/24/2010 1345	05/25/2010 0928
680-57937-5TB	2010 LTM Trip Blank #3	Water	05/24/2010 0000	05/25/2010 0928
680-57973-1	BSA-MW-03D-0510	Water	05/25/2010 1520	05/26/2010 0905
680-57973-2	BSA-MW-03D-F(0.2)-0510	Water	05/25/2010 1520	05/26/2010 0905
680-57973-3	BSA-MW-03D-0510-FB	Water	05/25/2010 0920	05/26/2010 0905
680-57973-4	BSA-MW-02D-0510	Water	05/25/2010 1520	05/26/2010 0905
680-57973-5	BSA-MW-02D-F(0.2)-0510	Water	05/25/2010 1520	05/26/2010 0905
680-57973-6TB	2010 LTM Trip Blank #4	Water	05/25/2010 0000	05/26/2010 0905
680-58012-1	CPA-MW-03D-0510	Water	05/26/2010 1030	05/27/2010 0943
680-58012-2	CPA-MW-03D-F(0.2)-0510	Water	05/26/2010 1030	05/27/2010 0943
680-58012-3	2010 LTM Trip Blank #5	Water	05/26/2010 0000	05/27/2010 0943

JUN 15 2010

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SAMPLE RESULTS

Client: Solutia Inc.

Job Number: 680-57808-1
Seq Number: KPS067

Client Sample ID: **BSA-MW-01S-0510**

Lab Sample ID: 680-57808-1
Client Matrix: Water

Date Sampled: 05/19/2010 1020
Date Received: 05/20/2010 1002

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-169995	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	b0438.d
Dilution:	5000		Initial Weight/Volume:	5 mL
Date Analyzed	05/27/2010 1456		Final Weight/Volume:	5 mL
Date Prepared	05/27/2010 1456			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	840000		5000
Chlorobenzene	5000	U	5000
1,2-Dichlorobenzene	5000	U	5000
1,3-Dichlorobenzene	5000	U	5000
1,4-Dichlorobenzene	5000	U	5000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	104		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	115		75 - 120

JUN 15 2010 ER K

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57608-1
Sdg Number: KPS057

Client Sample ID: **2010 LTM Trip Blank #01**

Lab Sample ID: 680-57608-3
Client Matrix: Water

Date Sampled: 05/19/2010 0000
Date Received: 05/20/2010 1002

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170096	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0472.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	05/28/2010 1505		Final Weight/Volume:	5 mL
Date Prepared:	05/28/2010 1505			

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

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	107		75 - 120
Dibromofluoromethane	100		75 - 121
Toluene-d8 (Surr)	114		75 - 120

JUN 15 2010 EZK

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KP5057

Client Sample ID: CPA-MW-01D-0510

Lab Sample ID: 680-57081-1
Client Matrix: Water

Date Sampled: 05/20/2010 1050
Date Received: 05/21/2010 0905

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170157	Instrument ID	MSP2
Preparation:	5030B		Lab File ID	p0522.d
Dilution:	730		Initial Weight/Volume:	5 ml
Date Analyzed:	05/29/2010 2001		Final Weight/Volume:	5 mL
Date Prepared:	05/29/2010 2001			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	7200		230
Chlorobenzene	16000		230
1,2-Dichlorobenzene	16000		230
1,3-Dichlorobenzene	1400		230
1,4-Dichlorobenzene	11000		230

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	107		75 - 120
Dibromofluoromethane	95		75 - 121
Toluene-d8 (Surr)	115		75 - 120

JUN 15 2010 ZZK

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: CPA-NW-02D-0510

Lab Sample ID: 680-57861-3
Client Matrix: Water

Date Sampled: 05/20/2010 1400
Date Received: 05/21/2010 0906

8260B Volatile Organic Compounds (GC/MS)

Method	8260B	Analysis Batch: 680-170157	Instrument ID	MSF2
Preparation	5030B		Lab File ID:	b0524.d
Dilution:	200		Initial Weight/Volume:	5 mL
Date Analyzed	05/28/2010 2033		Final Weight/Volume:	5 mL
Date Prepared	05/28/2010 2031			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	200	U	200
Chlorobenzene	30000		200
1,2-Dichlorobenzene	440		200
1,3-Dichlorobenzene	290		200
1,4-Dichlorobenzene	8500		200

Surrogate	% Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	109		75 - 120
Dibromofluoromethane	99		75 - 121
Toluene-d8 (Surr)	114		75 - 120

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US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: CPA-MW-02D-0510-AO

Lab Sample ID: 680-57861-5FD
Client Matrix: Water

Date Sampled: 05/20/2010 1400
Date Received: 05/21/2010 0905

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170157	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0576.d
Dilution:	200		Initial Weight/Volume:	5 mL
Date Analyzed:	05/29/2010 2100		Final Weight/Volume:	5 mL
Date Prepared:	05/29/2010 2100			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	200	U	200
Chlorobenzene	30000		200
1,2-Dichlorobenzene	330		200
1,3-Dichlorobenzene	290		200
1,4-Dichlorobenzene	8500		200

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	103		75 - 120
Dibromofluoromethane	97		75 - 121
Toluene-d8 (Surr)	115		75 - 120

JUN 15 2010

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Client: Solutia Inc

Job Number: 680-57806-1
Sdg Number: KPS257

Client Sample ID: BSA-MW-04D-0510

Lab Sample ID: 680-57806-7
Client Matrix: Water

Date Sampled: 05/20/2010 1540
Date Received: 05/21/2010 0930

8260B Volatile Organic Compounds (GC/MS)

Method	8260B	Analysis Batch: 680-170157	Instrument ID:	MSP2
Preparation	5030B		Lab File ID:	p0528.d
Dilution	20		Initial Weight/Volume:	5 mL
Date Analyzed	05/29/2010 2129		Final Weight/Volume:	5 mL
Date Prepared	05/29/2010 2129			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	26		20
Chlorobenzene	2800		20
1,2-Dichlorobenzene	80		20
1,3-Dichlorobenzene	20	J	20
1,4-Dichlorobenzene	140		20

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	110		75 - 120
Dibromofluoromethane	93		75 - 121
Toluene-d8 (Surr)	114		75 - 120

JUN 15 2010

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Analytical Data

Client: Solutia Inc

Job Number: 680-57806-1
Sdg Number: KPS057

Client Sample ID: 2Q10 LTMTrip Blank #2

Lab Sample ID: 680-57806-1-TB
Client Matrix: Water

Date Sampled: 05/20/2010 0000
Date Received: 05/21/2010 0906

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170157	Instrument ID:	MSF2
Preparation:	5030B		Lab File ID:	p0520.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	05/29/2010 1932		Final Weight/Volume:	5 mL
Date Prepared:	05/29/2010 1932			

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

Surrogate	% Rec.	Qualifier	Acceptance Limits
4-Bromofluorobenzene	108		75 - 120
Dibromofluoromethane	101		75 - 121
Toluene-d8 (Surr)	115		75 - 120

JUN 16 2010

JUN 16 2010

Client: Solutia Inc

Job Number: 680-57806-1
Sdg Number: KPS057

Client Sample ID: BSA-MW-050-0510

Lab Sample ID: 680-57937-1
Client Matrix: Water

Date Sampled: 05/24/2010 1130
Date Received: 05/25/2010 0928

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170150	Instrument ID	MSP
Preparation:	5030B		Lab File ID	p0545.d
Dilution:	5.0		Initial Weight/Volume	5 mL
Date Analyzed:	05/30/2010 1642		Final Weight/Volume:	5 mL
Date Prepared:	05/30/2010 1642			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	8.9		5.0
Chlorobenzene	250		5.0
1,2-Dichlorobenzene	42		5.0
1,3-Dichlorobenzene	5.1		5.0
1,4-Dichlorobenzene	37		5.0

Surrogate	%Rec.	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	91		75 - 121
Toluene-d8 (Surr)	113		75 - 120

JUN 16 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 660-57837-1
Sdg Number: KPS057

Client Sample ID: CPA-MW-04D-0610

Lab Sample ID: 660-57837-3
Client Matrix: Water

Date Sampled: 05/24/2010 1345
Date Received: 05/25/2010 0923

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170190	Instrument ID	MSP
Preparation:	5030C		Lab File ID	p0547.d
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	05/30/2010 1717		Final Weight/Volume	5 mL
Date Prepared:	05/30/2010 1712			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	30		10
Chlorobenzene	920		10
1,2-Dichlorobenzene	42		10
1,3-Dichlorobenzene	10	J	10
1,4-Dichlorobenzene	40		10

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	86		75 - 121
Toluene-d8 (Surr)	113		75 - 120

JUN 15 2010

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US EPA ARCHIVE DOCUMENT

Client: Solube Inc

Job Number: 680-57608-1
Sdg Number: KPS067

Client Sample ID: 2Q10 LTM Trip Blank #3

Lab Sample ID: 680-57937-5TB
Client Matrix: Water

Date Sampled: 05/24/2010 0000
Date Received: 05/25/2010 0923

8260B Volatile Organic Compounds (GC/MS)

Method	8260B	Analysis Batch: 680-170190		Instrument ID:	MSP
Preparation:	5030B			Lab File ID:	p0543.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	06/30/2010 1613			Final Weight/Volume:	5 mL
Date Prepared:	06/30/2010 1613				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	91		75 - 120
Dibromofluoromethane	95		75 - 121
Toluene-d8 (Surr)	110		75 - 120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: **BSA MW-03D-0510**

Lab Sample ID: 680-57973-1
Client Matrix: Water

Date Sampled: 05/25/2010 1020
Date Received: 05/25/2010 0905

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-169995	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	pt464.d
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	05/27/2010 1853		Final Weight/Volume:	5 mL
Date Prepared:	05/27/2010 1853			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	94		10
Chlorobenzene	1500		10
1,2-Dichlorobenzene	71		10
1,3-Dichlorobenzene	31		10
1,4-Dichlorobenzene	580		10

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	114		75 - 120
Dibromofluoromethane	94		76 - 121
Toluene-d8 (Surr)	118		75 - 120

JUN 15 2010

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Client: Solutia Inc.

Job Number: 680-57906-1
Sdg Number: KPS057

Client Sample ID: BSA-MW-03D-0513-EB

Lab Sample ID: 680-57973-3
Client Matrix: Water

Date Sampled: 05/26/2010 0920
Date Received: 05/26/2010 0905

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-169995		Instrument ID:	MSP2
Preparation:	5030B			Lab File ID:	p3452.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed	05/27/2010 1824			Final Weight/Volume	5 mL
Date Prepared	05/27/2010 1824				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	107		75 - 130
Dibromofluoromethane	103		75 - 121
Toluene-d8 (Surr)	114		75 - 120

JUN 15 2010 ZLK

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57806-1
Sdg Number: KPS057

Client Sample ID: BSA-MW-02D-0510

Lab Sample ID: 680-57970-4
Client Matrix: Water

Date Sampled: 05/25/2010 1520
Date Received: 05/26/2010 0905

8260B Volatile Organic Compounds (GC/MS)

Method	8260B	Analysis Batch: 680-169895	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0456.d
Dilution	1000		Initial Weight/Volume	5 mL
Date Analyzed	05/27/2010 1923		Final Weight/Volume:	5 mL
Date Prepared	05/27/2010 1923			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	120000		1000
Chlorobenzene	1300		1000
1,2-Dichlorobenzene	1000	U	1000
1,3-Dichlorobenzene	1000	U	1000
1,4-Dichlorobenzene	1000	U	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	108		75 - 120
Dibromofluoromethane	97		75 - 120
Toluene-d8 (Surr)	111		75 - 120

JUN 16 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57828-1
Sdg Number: KPS05/

Client Sample ID: **2Q10 CTM Trip Blank #4**

Lab Sample ID: 680-57973-61 S
Client Matrix: Water

Date Sampled: 05/25/2010 0000
Date Received: 05/26/2010 0905

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170096		Instrument ID:	MSP2
Preparation:	5030B			Lab File ID:	p0470.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	05/28/2010 1435			Final Weight/Volume:	5 mL
Date Prepared:	05/28/2010 1435				

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

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	104		75 - 120
Dibromofluoromethane	105		75 - 120
Toluene-d8 (Surr)	100		75 - 120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS067

Client Sample ID: CPA-MW-03D-0610

Lab Sample ID: 680-58012-1
Client Matrix: Water

Date Sampled: 05/26/2010 1000
Date Received: 05/27/2010 0943

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170157	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0508.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed	05/29/2010 1834		Final Weight/Volume:	5 mL
Date Prepared	05/29/2010 1834			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	87		5.0
Chlorobenzene	560		5.0
1,2-Dichlorobenzene	55		5.0
1,3-Dichlorobenzene	5.6		5.0
1,4-Dichlorobenzene	55		5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	110		75 - 120
Dibromofluoromethane	97		75 - 121
Toluene-d8 (Surr)	117		75 - 120

JUN 16 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-67808-1
Sdg Number: KPS357

Client Sample ID: 2010 LTM Trip Blank #5

Lab Sample ID: 680-58012-3
Client Matrix: Water

Date Sampled: 05/28/2010 0000
Date Received: 05/27/2010 0943

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-170157	Instrument ID:	MSP2
Preparation:	5030B		Lab File ID:	p0510.d
Dilution:	1.0		Initial Weight/Volume:	5 ml
Date Analyzed:	05/29/2010 1704		Final Weight/Volume:	5 mL
Date Prepared:	05/29/2010 1704			

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

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	107		75 - 120
Dibromofluoromethane	97		75 - 121
Toluene-d8 (Surr)	113		75 - 120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: **BSA-MW-01S-0610**

Lab Sample ID: 680-57808-1
Client Matrix: Water

Date Sampled: 05/19/2010 1023
Date Received: 05/20/2010 1002

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-170184	Instrument ID:	VGUH02
Preparation:	N/A		Initial Weight/Volume:	17000 uL
Dilution:	1.0		Final Weight/Volume:	17 mL
Date Analyzed:	05/31/2010 1747		Injection Volume:	1 ml
Date Prepared:			Result Type:	PRIMARY

Analyte	Result (µg/L)	Qualifier	RL
Ethane	0.35	J	0.35
Ethylene	0.33	J	0.33

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID. **BSA-MW-01S-0510**

Lab Sample ID. 680-57808-1
Client Matrix Water

Date Sampled 05/19/2010 1020
Date Received 05/20/2010 1002

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: GBI 170196	Instrument ID:	VGUTCD1
Preparation:	N/A		Initial Weight/Volume:	17000 uL
Dilution:	1.0		Final Weight/Volume:	17 mL
Date Analyzed	05/31/2010 1747		Injection Volume:	1 uL
Date Prepared:			Result Type	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Methane	8400		0.19

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57668-1
Sdg Number: KP3057

Client Sample ID: CPA-MW-01D-0610

Lab Sample ID: 680-57861-1
Client Matrix: Water

Date Sampled: 05/20/2010 1050
Date Received: 05/21/2010 0906

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-170310	Instrument ID:	VGUFID2
Preparation:	N/A		Initial Weight/Volume:	17000 uL
Dilution:	1.0		Final Weight/Volume:	17 mL
Date Analyzed:	05/01/2010 1939		Injection Volume:	1 uL
Date Prepared:			Result Type:	PR MARY

Analyte	Result (ug/L)	Qualifier	RL
Ethane	34		0.35
Ethylene	0.33	U	0.33

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57608-1
Sdg Number: KPS257

Client Sample ID: CPA-MW-01D-0510

Lab Sample ID: 680-57861-1
Client Matrix: Water

Date Sampled: 05/20/2010 1050
Date Received: 05/21/2010 0900

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-170311	Instrument ID:	VGUTCD1
Preparation:	N/A		Initial Weight/Volume:	17.00 mL
Dilution:	1.0		Final Weight/Volume:	17 mL
Date Analyzed:	06/01/2010 1939		Injection Volume:	1 uL
Date Prepared:			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Methane	17000		0.19

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57809-1
Sdg Number: KPS057

Client Sample ID: BSA-MW-04D-0510

Lab Sample ID: 680-57861-7
Client Matrix: Water

Date Sampled: 05/20/2010 1640
Date Received: 05/21/2010 0906

RSK-175 Dissolved Gases (GC)

Method:	RSK 175	Analysis Batch: 680-17010	Instrument ID:	VOLF.02
Preparation:	N/A		Initial Weight/Volume:	17000 uL
Dilution:	1.0		Final Weight/Volume:	17 mL
Date Analyzed:	06/01/2010 1614		Injection Volume:	1 ml
Date Prepared:			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Ethane	3.7		0.35
Ethylene	0.33	J	0.33
Methane	80		0.19

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: BSA-MW-050-0510

Lab Sample ID: 680-57937-1
Client Matrix: Water

Date Sampled: 05/24/2010 1100
Date Received: 05/25/2010 0928

RSK-175 Dissolved Gases (GC)

Method	RSK-175	Analysis Batch 680-170475	Instrument ID:	VGUF 02
Preparation:	N/A		Initial Weight/Volume	17.000 uL
Dilution	1.0		Final Weight/Volume	17 mL
Date Analyzed	06/02/2010 1254		Injection Volume	1 uL
Date Prepared			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Ethane	6.8		0.35
Ethylene	0.33	J	0.33

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57806-1
Sdg Number: KPS057

Client Sample ID: **BSA-MW-06D-0510**

Lab Sample ID: 680-57937-1
Client Matrix: Water

Date Sampled: 05/24/2010 1130
Date Received: 05/25/2010 0926

RSK-175 Dissolved Gases (GC)

Method	RSK-175	Analysis Batch: 680-170476	Instrument ID:	VGJ7CD1
Preparation	N/A		Initial Weight/Volume:	17.000 uL
Dilution	1.0		Final Weight/Volume:	17 mL
Date Analyzed	06/02/2010 1754		Injection Volume:	1 uL
Date Prepared			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Methane	3500		0.19

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KP5057

Client Sample ID: CPA-MW-04D-0510

Lab Sample ID: 680-57837-3
Client Matrix: Water

Date Sampled: 05/24/2010 1345
Date Received: 05/25/2010 0928

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: GRD-170475	Instrument ID:	VOC FID2
Preparation:	N/A		Initial Weight/Volume:	17000 uL
Dilution:	1.0		Final Weight/Volume:	17 ml
Date Analyzed:	06/02/2010 1305		Injection Volume:	1 uL
Date Prepared:			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Ethane	12		0.35
Ethylene	2.5		0.33

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KP5057

Client Sample ID: CPA-MW-04D-0510

Lab Sample ID: 680-57927-3
Client Matrix: Water

Date Sampled: 05/24/2010 1345
Date Received: 05/25/2010 0928

RSK-175 Dissolved Gases (GC)

Method	RSK-175	Analysis Batch: 680-170475	Instrument ID:	VGUTCD1
Preparation	N/A		Initial Weight/Volume:	17000 uL
Dilution	1.0		Final Weight/Volume:	17 mL
Date Analyzed:	06/02/2010 1306		Injection Volume:	uL
Date Prepared:			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Methane	4000		0.19

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: **BSA-MW-03D-0510**

Lab Sample ID: 680-57973-1
Client Matrix: Water

Date Sampled: 05/25/2010 1020
Date Received: 05/26/2010 0935

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-170475	Instrument ID:	VGUF102
Preparation:	N/A		Initial Weight/Volume:	17000 ml
Dilution:	1.0		Final Weight/Volume:	17 mL
Date Analyzed:	06/02/2010 1527		Injection Volume:	1 ml
Date Prepared:			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Ethane	1.7		0.35
Ethylene	3.7		0.33

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: **BSA-MW-03D-0510**

Lab Sample ID: 680-57973-1
Client Matrix: Water

Date Sampled: 05/25/2010 1020
Date Received: 05/26/2010 0905

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-170476		Instrument ID:	VOUTC01
Preparation:	N/A			Initial Weight/Volume:	17000 uL
Dilution:	1.0			Final Weight/Volume:	17 mL
Date Analyzed:	06/02/2010 1577			Injection Volume:	1 uL
Date Prepared:				Result Type:	PRIMARY

Analyte	Result (ug/l)	Qualifier	RL
Methane	360		0.19

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57908-1
Sdg Number: KPS057

Client Sample ID: **BSA-MW-020-0510**

Lab Sample ID: 680-57573-4
Client Matrix: Water

Date Sampled: 05/25/2010 1520
Date Received: 05/26/2010 0905

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-170475	Instrument ID:	VGUF 02
Preparation:	N/A		Initial Weight/Volume:	17000 uL
Dilution:	1.0		Final Weight/Volume:	10 mL
Date Analyzed:	06/02/2010 1540		Injection Volume:	1 uL
Date Prepared:			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Ethane	12		0.35
Ethylene	0.33	U	0.33

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KP5057

Client Sample ID: BSA-MW-020-0510

Lab Sample ID: 680-57973-1
Client Matrix: Water

Date Sampled: 05/25/2010 1520
Date Received: 05/26/2010 0905

RSK-175 Dissolved Gases (GC)

Method	RSK-175	Analysis Batch: 680-173476		Instrument ID:	VOUTC01
Preparation:	N/A			Initial Weight/Volume:	17.000 uL
Dilution:	1.0			Final Weight/Volume:	17 mL
Date Analyzed:	06/02/2010 1543			Injection Volume:	1 uL
Date Prepared:				Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Methane	28000		0.19

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57906-1
Sdg Number: KPS067

Client Sample ID: CPA-MW-03D-0510

Lab Sample ID: 680-58012-1
Client Matrix: Water

Date Sampled: 05/26/2010 1000
Date Received: 05/27/2010 0943

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-170587	Instrument ID:	VGUH02
Preparation:	N/A		Initial Weight/Volume:	17000 uL
Dilution:	1.0		Final Weight/Volume:	17 mL
Date Analyzed:	06/03/2010 0952		Injection Volume:	1 uL
Date Prepared:			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Ethane	13		0.36
Ethylene	0.33	J	0.31

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: CPA-MW-03D-0510

Lab Sample ID: 680-58012-1
Client Matrix: Water

Date Sampled: 05/26/2010 1000
Date Received: 05/27/2010 0943

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-170588	Instrument ID:	VGUTCD1
Preparation:	N/A		Initial Weight/Volume:	17030 ul
Dilution:	1.0		Final Weight/Volume:	17 mL
Date Analyzed:	06/02/2010 0952		Injection Volume:	1 uL
Date Prepared:			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Methane	1500		0.19

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57908-1
Sdg Number: KPS567

Client Sample ID: BSA-MW-018-0510

Lab Sample ID: 680-57908-1
Client Matrix: Water

Date Sampled: 05/19/2010 1320
Date Received: 05/20/2010 1032

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Batch: 680-179209		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-169450		Lab File ID:	052510.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	05/27/2010 0032			Final Weight/Volume:	50 mL
Date Prepared:	05/23/2010 1517				

Analyte	Result (mg/L)	Qualifier	RL
Iron	1.0		0.050
Manganese	0.40		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Seq Number: KPS057

Client Sample ID: BSA-MW-01S-F(0.2)-0510

Lab Sample ID: 680-57808-2
Client Matrix: Water

Date Sampled: 05/19/2010 1020
Date Received: 05/20/2010 1302

6010B Metals (ICP)-Dissolved

Method	6010B	Analysis Batch: 680-171209		Instrument ID:	ICP0
Preparation:	3005A	Prep Batch: 680-169456		Lab File ID:	052610.chr
Dilution	1.0			Initial Weight/Volume:	50 ml
Date Analyzed:	05/27/2010 0048			Final Weight/Volume:	50 mL
Date Prepared:	05/23/2010 1517				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	1.6		0.050
Manganese, Dissolved	0.43		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57806-1
Sdg Number: KPS057

Client Sample ID: CPA-MW-01D-0510

Lab Sample ID: 680-57861-1
Client Matrix: Water

Date Sampled: 05/20/2010 1050
Date Received: 05/21/2010 0900

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Batch: 680-172708		Instrument ID:	ICP9
Preparation:	3005A	Prep Batch: 680-169570		Lab File ID:	052610.ch
Dilution:	1.0			Initial Weight/Volume:	50 ml
Date Analyzed:	05/27/2010 0121			Final Weight/Volume:	50 mL
Date Prepared:	05/25/2010 1328				

Analyte	Result (mg/L)	Qualifier	RL
Iron	1.2		0.050
Manganese	0.386		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: CPA-MW-01D-F(0.2)-0510

Lab Sample ID: 680-57811-2
Client Matrix: Water

Date Sampled: 05/20/2010 1050
Date Received: 05/21/2010 0906

6010B Metals (ICP)-Dissolved

Method	6010B	Analysis Batch: 680-170208		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-169673		Lab File ID:	052810.clv
Dilution:	1.0			Initial Weight/Volume:	50 ml
Date Analyzed:	05/27/2010 0127			Final Weight/Volume:	50 mL
Date Prepared:	05/25/2010 1338				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	4.1		0.050
Manganese, Dissolved	0.073		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Seq Number: 49P5057

Client Sample ID: **BSA-MW 040-0510**

Lab Sample ID: 680-57861-7
Client Matrix: Water

Date Sampled: 05/20/2010 1840
Date Received: 05/21/2010 0906

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Batch: 680-170208		Instrument ID:	ICP3
Preparation:	3005A	Prep Batch: 680-169670		Lab File ID:	052610.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	05/27/2010 0142			Final Weight/Volume:	50 mL
Date Prepared:	05/25/2010 1338				

Analyte	Result (mg/L)	Qualifier	RL
Iron	9.3		0.060
Manganese	0.72		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 660-57606-1
Sdg Number: KPS057

Client Sample ID: **BSA-MW-04D-F(0.2)-0510**

Lab Sample ID: 660-57661-8
Client Matrix: Water

Date Sampled: 05/20/2010 1640
Date Received: 05/21/2010 0906

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 660-170208		Instrument ID:	ICP0
Preparation:	3005A	Prep Batch: 660-169670		Lab File ID:	052610.dat
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	05/27/2010 0148			Final Weight/Volume:	50 mL
Date Prepared:	05/25/2010 1338				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	9.3		0.050
Manganese, Dissolved	0.60		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Scruba Inc.

Job Number: 680-57808-1
Seq Number: KPS007

Client Sample ID: **BSA-MW-09D-0510**

Lab Sample ID: 680-57837-1
Client Matrix: Water

Date Sampled: 05/24/2010 1130
Date Received: 05/25/2010 0928

6010B Metals (ICP)-Total Recoverable

Method	6010B	Analysis Batch:	680-170577	Instrument ID:	ICP3
Preparation	3005A	Prep Batch:	680-170341	Lab File ID:	da60310.chr
Dilution	1.0			Initial Weight/Volume:	50 ml
Date Analyzed	06/03/2010 2154			Final Weight/Volume:	50 mL
Date Prepared	06/02/2010 1145				

Analyte	Result (mg/L)	Qualifier	RL
Iron	17		0.050
Manganese	0.92		0.010

US EPA ARCHIVE DOCUMENT

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: BSA-MW-05D-F(0.2)-0510

Lab Sample ID: 680-57837-2
Client Matrix: Water

Date Sampled: 05/24/2010 1130
Date Received: 05/25/2010 0920

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 680-170577		Instrument ID:	ICP6
Preparation:	3005A	Prep Batch: 680-170341		Lab File ID:	da60210.prn
Dilution:	1.0			Initial Weight/Volume:	50 ml
Date Analyzed:	06/02/2010 2209			Final Weight/Volume:	50 mL
Date Prepared:	06/02/2010 1145				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	16		0.050
Manganese, Dissolved	0.01		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: So Jtia Inc

Job Number: 680-57806-1
Sdg Number: KPSD57

Client Sample ID: CPA-MW-040-0510

Lab Sample ID: 680-57837-3
Client Matrix: Water

Date Sampled: 05/24/2010 1345
Date Received: 05/25/2010 0828

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Date:	680-170577	Instrument ID:	CPD
Preparation:	3005A	Prep Batch:	680-170341	Lab File ID:	da50310.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/03/2010 2214			Final Weight/Volume:	50 mL
Date Prepared:	06/02/2010 1145				

Analyte	Result (mg/L)	Qualifier	RL
Iron	9.5		0.050
Manganese	0.24		0.010

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US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: CPA-MW-040-F10 21-0510

Lab Sample ID: 680-57937-4
Client Matrix: Water

Date Sampled: 05/24/2010 1345
Date Received: 05/25/2010 0920

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 680-170577		Instrument ID:	ICP0
Preparation:	3005A	Prep Batch: 680-170341		Lab File ID:	da60310.cir
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/03/2010 2219			Final Weight/Volume:	50 mL
Date Prepared:	06/02/2010 1145				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	9.1		0.050
Manganese, Dissolved	0.74		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: BSA-MW-03D-0510

Lab Sample ID: 680-57873-1
Client Matrix: Water

Date Sampled: 05/25/2010 1020
Date Received: 05/26/2010 0905

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Batch: 680-170577		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170341		Lab File ID:	ds60210.csv
Dilution:	1.0			Initial Weight/Volume:	50 ml
Date Analyzed:	06/03/2010 2244			Final Weight/Volume:	50 mL
Date Prepared:	06/03/2010 1059				

Analyte	Result (mg/L)	Qualifier	RL
Iron	11		0.050
Manganese	0.52		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: **BSA-MW-03D-F(0.2)-0510**

Lab Sample ID: 680-57970-2
Client Matrix: Water

Date Sampled: 05/26/2010 1020
Date Received: 05/26/2010 0905

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 680-170577		Instrument ID:	ICP3
Preparation:	3005A	Prep Batch: 680-170341		Lab File ID:	de60310.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/03/2010 2249			Final Weight/Volume:	50 mL
Date Prepared:	06/03/2010 1059				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	11		0.050
Manganese, Dissolved	0.53		0.010

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US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID	BSA-MW-02D-0510		
Lab Sample ID:	680-57973-4	Date Sampled:	05/25/2010 1520
Client Matrix:	Water	Date Received:	05/25/2010 0805

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Batch:	680-170577	Instrument ID	ICPD
Preparation	3005A	Prep Batch:	680-170341	Lab File ID	ea60310.cnr
Dilution:	1.0			Initial Weight/Volume	50 mL
Date Analyzed:	06/03/2010 2254			Final Weight/Volume:	50 mL
Date Prepared:	06/03/2010 1058				

Analyte	Result (mg/L)	Qualifier	R
Iron	3.2		0.050
Manganese	0.53		0.010

JUN 15 2010

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Analytical Data

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS067

Client Sample ID: BSA-MW-02D-F(0.2)-0510

Lab Sample ID: 680-57970-5
Client Matrix: Water

Date Sampled: 05/25/2010 1520
Date Received: 05/26/2010 0905

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 680-170577		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-170341		Lab File ID:	da6041D.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/03/2010 2226			Final Weight/Volume:	50 mL
Date Prepared:	06/03/2010 1059				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	3.0		0.150
Manganese, Dissolved	0.51		0.010

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: CPA-MW-09D-0510

Lab Sample ID: 680-58012-1
Client Matrix: Water

Date Sampled: 05/26/2010 1000
Date Received: 05/27/2010 0943

6010B Metals (ICP) - Total Recoverable

Method:	6010B	Analysis Batch: 680-171193		Instrument ID:	ICP1
Preparation:	3005A	Prep Batch: 680-171049		Lab File ID:	061010.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1348			Final Weight/Volume:	50 ml
Date Prepared:	06/09/2010 1639				

Analyte	Result (mg/l)	Qualifier	RL
Iron	14		0.050
Manganese	0.59		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Client Sample ID: CPA-MW-03D-FIO 21-0510

Lab Sample ID: 680-58112-2
Client Matrix: Water

Date Sampled: 05/26/2010 1000
Date Received: 05/27/2010 0043

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 680-171193		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171049		Lab File ID:	061010chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1453			Final Weight/Volume:	50 mL
Date Prepared:	06/08/2010 1608				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	12		0.050
Manganese, Dissolved	0.50		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

General Chemistry

Client Sample ID: BSA-MW-01S-0510

Lab Sample ID: 680-57808-1
Client Matrix: Water

Date Sampled: 05/19/2010 1020
Date Received: 05/20/2010 1032

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	100	J	mg/L	2.0	2.0	325.2
Analysis Batch: 680-169951	Date Analyzed: 05/27/2010 1132					
Nitrate as N	0.050	U	mg/L	0.050	1.0	353.2
Analysis Batch: 680-169418	Date Analyzed: 05/20/2010 1515					
Sulfate	5.0	J	mg/L	5.0	1.0	375.4
Analysis Batch: 680-169920	Date Analyzed: 05/27/2010 0853					
Total Organic Carbon	9.7		mg/L	1.0	1.0	415.1
Analysis Batch: 680-170097	Date Analyzed: 05/27/2010 1707					

Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	630		mg/L	5.0	1.0	310.1
Analysis Batch: 680-169314	Date Analyzed: 05/21/2010 1155					
Carbon Dioxide, Free	31		mg/l	5.0	1.0	310.1
Analysis Batch: 680-169314	Date Analyzed: 05/21/2010 1155					

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57828-1
Sdg Number: KPS057

General Chemistry

Client Sample ID: BSA-MW-018-F(0 2)-0510

Lab Sample ID: 680-57828-2
Client Matrix: Water

Date Sampled: 05/19/2010 1020
Date Received: 05/20/2010 1002

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon Dissolved	8 2		mg/L	1 0	1 0	415 1

Analysis Batch: 680-170764 Date Analyzed: 05/28/2010 1018

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

General Chemistry

Client Sample ID **CPA-MW-01D-0510**

Lab Sample ID: 680-57681-1
Client Matrix: Water

Date Sampled: 05/20/2010 1050
Date Received: 05/21/2010 0905

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	110		mg/L	2.0	2.0	325.2
Analysis Batch: 680-169811		Date Analyzed: 05/27/2010 1132				
Nitrate as N	0.50	U	mg/L	0.50	10	353.2
Analysis Batch: 680-169423		Date Analyzed: 05/27/2010 1552				
Sulfate	12		mg/L	5.0	1.0	375.4
Analysis Batch: 680-169923		Date Analyzed: 05/27/2010 0853				
Total Organic Carbon	12		mg/L	1.0	1.0	415.1
Analysis Batch: 680-170097		Date Analyzed: 05/27/2010 1723				

Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	1020		mg/L	5.0	1.0	310.1
Analysis Batch: 680-169587		Date Analyzed: 05/24/2010 1601				
Carbon Dioxide, Free	5.0	U	mg/L	5.0	1.0	310.1
Analysis Batch: 680-169587		Date Analyzed: 05/24/2010 1601				

JUN 15 2010

US EPA ARCHIVE DOCUMENT

General Chemistry

Client Sample ID: DPA-MW-01D-F(0.2)-0510

Lab Sample ID: 680-57808-2
Client Matrix: Water

Date Sampled: 05/20/2010 1050
Date Received: 05/21/2010 0900

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	11		mg/L	1.0	1.0	415.1

Analysis Batch: 680-172284 Date Analyzed: 05/28/2010 1018

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

General Chemistry

Client Sample ID: BSA-MW-04D-0610

Lab Sample ID: 680-57851-7
Client Matrix: Water

Date Sampled: 05/20/2010 1640
Date Received: 05/21/2010 0900

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	150		mg/l	2.0	2.0	325.2
Analysis Batch: 680-169961		Date Analyzed: 05/27/2010 1108				
Nitrate as N	0.050	U	mg/L	0.050	1.0	353.2
Analysis Batch: 680-169423		Date Analyzed: 05/21/2010 1555				
Sulfate	45		mg/l	25	5.0	375.4
Analysis Batch: 680-169873		Date Analyzed: 05/27/2010 0938				
Total Organic Carbon	4.9		mg/l	1.0	1.0	415.1
Analysis Batch: 680-170087		Date Analyzed: 05/27/2010 1810				

Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	550		mg/l	5.0	1.0	310.1
Analysis Batch: 680-169587		Date Analyzed: 05/24/2010 1633				
Carbon Dioxide, Free	36		mg/L	5.0	1.0	310.1
Analysis Batch: 680-169587		Date Analyzed: 05/24/2010 1633				

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 660-57868-1
Sdg Number: KPS067

General Chemistry

Client Sample ID: BSA-MW-04D-F(0 2)-0520

Lab Sample ID: 660-57861-8
Client Matrix: Water

Date Sampled: 05/20/2010 1640
Date Received: 05/21/2010 0906

Analyte	Result	Qual	Units	RL	DF	Method
Dissolved Organic Carbon Dissolved	4.1		mg/L	1.0	1.0	415.1

Analysis Batch: 660-170254 Date Analyzed: 05/28/2010 1616

JUN 15 2010

US EPA ARCHIVE DOCUMENT

General Chemistry

Client Sample ID: 95A-MW-050-0510

Lab Sample ID: 680-57837-1
Client Matrix: Water

Date Sampled: 05/24/2010 1130
Date Received: 05/25/2010 0928

Analyte	Result	Qual	Units	RL	DF	Method
Chloride	190		mg/L	2.0	2.0	325.2
Analysis Batch: 680-159962	Date Analyzed: 05/27/2010 1239					
Nitrate as N	0.050	U	mg/L	0.050	1.0	353.2
Analysis Batch: 680-170135	Date Analyzed: 06/25/2010 1603					
Sulfate	5.0	U	mg/L	5.0	1.0	375.4
Analysis Batch: 680-170234	Date Analyzed: 06/01/2010 1510					
Total Organic Carbon	4.9		mg/L	1.0	1.0	415.1
Analysis Batch: 680-170087	Date Analyzed: 05/27/2010 1829					

Analyte	Result	Qual	Units	RL	DF	Method
Alkalinity	5.0	U	mg/L	5.0	1.0	310.1
Analysis Batch: 680-165756	Date Analyzed: 05/25/2010 1853					
Carbon Dioxide, Free	5.0	U	mg/L	5.0	1.0	310.1
Analysis Batch: 680-165756	Date Analyzed: 05/25/2010 1853					

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS257

General Chemistry

Client Sample ID: BSA-MW-050-F(0.2)-0510

Lab Sample ID: 680-57337-7
Client Matrix: Water

Date Sampled: 05/24/2010 1130
Date Received: 05/25/2010 0928

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	4.0		mg/L	1.0	1.0	415.1

Analysis Batch: 680-173264 Date Analyzed: 05/28/2010 1018

JUN 15 2010

US EPA ARCHIVE DOCUMENT

General Chemistry

Client Sample ID: CPA-MW-04D-0510

Lab Sample ID: 680-57937-3
Client Matrix: Water

Date Sampled: 05/24/2010 1345
Date Received: 05/25/2010 0928

Analyte	Result	Qual	Units	RL	DL	Method
Chloride	270		mg/l	5.0	5.0	325.2
Analysis Batch: 680-169562	Date Analyzed: 05/27/2010 1251					
Nitrate as N	0.050	U	mg/L	0.050	1.0	353.2
Analysis Batch: 680-170135	Date Analyzed: 05/26/2010 1604					
Sulfate	5.0	U	mg/l	5.0	1.0	375.4
Analysis Batch: 680-170294	Date Analyzed: 06/01/2010 1510					
Total Organic Carbon	5.0		mg/L	1.0	1.0	415.1
Analysis Batch: 680-170387	Date Analyzed: 05/27/2010 1845					

Analyte	Result	Qual	Units	RL	DL	Method
Alkalinity	5.0	U	mg/L	5.0	1.0	310.1
Analysis Batch: 680-169756	Date Analyzed: 05/25/2010 1915					
Carbon Dioxide, Free	5.0	U	mg/L	5.0	1.0	310.1
Analysis Batch: 680-169756	Date Analyzed: 05/25/2010 1915					

JUN 15 2010

US EPA ARCHIVE DOCUMENT

General Chemistry

Client Sample ID: CPA-MW-04D-F(0.2)-0510

Lab Sample ID: 680-57937-4
Client Matrix: Water

Date Sampled: 05/24/2010 1345
Date Received: 05/25/2010 0920

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	5.8		mg/l	1.0	1.0	415.1

Analysis Batch: 680-170264 Date Analyzed: 05/28/2010 1019

JUN 15 2010

US EPA ARCHIVE DOCUMENT

General Chemistry

Client Sample ID: BSA-MW-03D-0510

Lab Sample ID: 680-57573-1
Client Matrix: Water

Date Sampled: 05/26/2010 1020
Date Received: 05/26/2010 0815

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	72		mg/L	1.0	1.0	325.2
Analysis Batch: 680-170400		Date Analyzed: 06/02/2010 1558				
Nitrate as N	0.050	U	mg/L	0.050	1.0	353.2
Analysis Batch: 680-169936		Date Analyzed: 05/28/2010 1624				
Sulfate	260		mg/L	100	20	375.4
Analysis Batch: 680-170294		Date Analyzed: 06/01/2010 1558				
Total Organic Carbon	3.6		mg/L	1.0	1.0	415.1
Analysis Batch: 680-170067		Date Analyzed: 05/27/2010 1901				

Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	ND		mg/L	5.0	1.0	310.1
Analysis Batch: 680-170401		Date Analyzed: 06/02/2010 1206				
Carbon Dioxide, Free	34		mg/L	5.0	1.0	310.1
Analysis Batch: 680-170401		Date Analyzed: 06/02/2010 1206				

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

General Chemistry

Client Sample ID: BSA-MW-03D-F(0.2)-0510

Lab Sample ID: 680-57973-2
Client Matrix: Water

Date Sampled: 05/25/2010 1020
Date Received: 05/26/2010 0905

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	4.2		mg/l	1.0	1.0	415.1

Analysis Batch: 680-170264 Date Analyzed: 05/28/2010 1019

JUN 15 2010

US EPA ARCHIVE DOCUMENT

General Chemistry

Client Sample ID: BSA-MW-02D-0510

Lab Sample ID: 680-57973-4
Client Matrix: Water

Date Sampled: 05/25/2010 1520
Date Received: 05/26/2010 0905

Analyte	Result	Qual	Units	RL	DL	Method
Chloride	52		mg/L	2.0	2.0	325.2
Analysis Batch: 680-170400		Date Analyzed: 06/02/2010 1708				
Nitrate as N	0.050	U	mg/L	0.0511	1.0	353.2
Analysis Batch: 680-169535		Date Analyzed: 05/26/2010 1618				
Sulfate	5.0	U	mg/L	5.0	1.0	375.4
Analysis Batch: 680-170294		Date Analyzed: 06/01/2010 1518				
Total Organic Carbon	5.5		mg/L	1.0	1.0	415.1
Analysis Batch: 680-170267		Date Analyzed: 05/27/2010 1918				

Analyte	Result	Qual	Units	RL	DL	Method
Alkalinity	720		mg/L	5.0	1.0	310.1
Analysis Batch: 680-170401		Date Analyzed: 06/02/2010 1217				
Carbon Dioxide, Free	68		mg/L	5.0	1.0	310.1
Analysis Batch: 680-170401		Date Analyzed: 06/02/2010 1217				

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

General Chemistry

Client Sample ID: BSA-MW-020-F(0.2)-0510

Lab Sample ID: 680-57973-5
Client Matrix: Water

Date Sampled: 05/25/2010 1520
Date Received: 05/26/2010 0905

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	4.4		mg/L	1.0	1.0	415.1

Analysis Batch: 680-170264 Date Analyzed: 05/28/2010 1019

JUN 15 2010

US EPA ARCHIVE DOCUMENT

General Chemistry

Client Sample ID: CPA-MW-030-0510

Lab Sample ID: 680-58012-1
Client Matrix: Water

Date Sampled: 05/26/2010 1030
Date Received: 05/27/2010 0943

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	160		mg/L	2.0	2.0	325.2
Analysis Batch: 680-170400		Date Analyzed: 06/02/2010 1704				
Nitrate as N	0.053	U	mg/L	0.053	1.0	353.2
Analysis Batch: 680-170162		Date Analyzed: 05/27/2010 1539				
Sulfate	5.0	U	mg/L	5.0	1.0	375.4
Analysis Batch: 680-170294		Date Analyzed: 06/01/2010 1518				
Total Organic Carbon	1[illegible]		mg/L	1.0	1.0	415.1
Analysis Batch: 680-170270		Date Analyzed: 05/28/2010 1714				

Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	610		mg/L	5.0	1.0	310.1
Analysis Batch: 680-170401		Date Analyzed: 06/02/2010 1227				
Carbon Dioxide, Free	68		mg/L	5.0	1.0	310.1
Analysis Batch: 680-170401		Date Analyzed: 06/02/2010 1227				

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Seq Number: KPS057

General Chemistry

Client Sample ID: CPA-MW-03D-F(0.2)-D510

Lab Sample ID: 680-58012-2
Client Matrix: Water

Date Sampled: 05/26/2010 1000
Date Received: 05/27/2010 0943

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	10		mg/L	1.0	1.0	415.1

Analysis Batch: 680-170264 Date Analyzed: 05/28/2010 1018

JUN 15 2010

US EPA ARCHIVE DOCUMENT

DATA REPORTING QUALIFIERS

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Indicates the analyte was analyzed for but not detected
	F	MS or MSD exceeds the control limits
GC VOA		
	U	Indicates the analyte was analyzed for but not detected
Metals		
	U	Indicates the analyte was analyzed for but not detected
General Chemistry		
	U	Indicates the analyte was analyzed for but not detected
	F	MS or MSD exceeds the control limits

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QUALITY CONTROL RESULTS

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch 680-169995					
LCS 680-169995/9	Lab Control Sample	T	Water	8260B	
LCSD 680-169995/10	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-169995/12	Method Blank	T	Water	8260B	
680-57808-1	BSA-MW-015-0510	T	Water	8260B	
680-57973-1	BSA-MW-030-0510	T	Water	8260B	
680-57973-3	BSA-MW-030-0510-FB	T	Water	8260B	
680-57973-4	BSA-MW-020-0510	T	Water	8260B	
Analysis Batch:680-170096					
LCS 680-170096/4	Lab Control Sample	T	Water	8260B	
LCSD 680-170096/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170096/9	Method Blank	T	Water	8260B	
680-57906-3	2010 LTM Trip Blank #11	T	Water	8260B	
680-57973-6TB	2010 LTM Trip Blank #4	T	Water	8260B	
Analysis Batch:680-170157					
LCS 680-170157/4	Lab Control Sample	T	Water	8260B	
LCSD 680-170157/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170157/7	Method Blank	T	Water	8260B	
680-57861-1	CPA-MW-010-0510	T	Water	8260B	
680-57861-3	CPA-MW-020-0510	T	Water	8260B	
680-57861-5FD	CPA-MW-020-0510-AD	T	Water	8260B	
680-57861-7	BSA-MW-040-0510	T	Water	8260B	
680-57861-9TB	2010 LTM Trip Blank #2	T	Water	8260B	
680-58012-1	CPA-MW-030-0510	T	Water	8260B	
680-58012-3	2010 LTM Trip Blank #5	T	Water	8260B	
Analysis Batch:680-170190					
LCS 680-170190/4	Lab Control Sample	T	Water	8260B	
LCSD 680-170190/5	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-170190/7	Method Blank	T	Water	8260B	
680-57937-1	BSA-MW-050-0510	T	Water	8260B	
680-57937-1MS	Matrix Spike	T	Water	8260B	
680-57937-1MSD	Matrix Spike Duplicate	T	Water	8260B	
680-57937-3	CPA-MW-040-0510	T	Water	8260B	
680-57937-5TB	2010 LTM Trip Blank #3	T	Water	8260B	

Report Basis
T = Total

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Analysis Batch:680-170184					
LCS 680-170184/22	Lab Control Sample	T	Water	RSK-175	
LCSD 680-170184/23	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-170184/24	Method Blank	T	Water	RSK-175	
680-57808-1	BSA-MW-01S-0510	T	Water	RSK-175	
Analysis Batch:680-170186					
LCS 680-170186/4	Lab Control Sample	T	Water	RSK-175	
LCSD 680-170186/5	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-170186/6	Method Blank	T	Water	RSK-175	
680-57808-1	BSA-MW-01S-0510	T	Water	RSK-175	
Analysis Batch:680-170310					
LCS 680-170310/19	Lab Control Sample	T	Water	RSK-175	
LCSD 680-170310/20	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-170310/21	Method Blank	T	Water	RSK-175	
680-57661-1	CPA-MW-01D-0510	T	Water	RSK-175	
680-57661-7	BSA-MW-04D-0510	T	Water	RSK-175	
Analysis Batch:680-170311					
LCS 680-170311/5	Lab Control Sample	T	Water	RSK-175	
LCSD 680-170311/6	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-170311/7	Method Blank	T	Water	RSK-175	
680-57661-1	CPA-MW-01D-0510	T	Water	RSK-175	
Analysis Batch:680-170475					
LCS 680-170475/20	Lab Control Sample	T	Water	RSK-175	
MB 680-170475/21	Method Blank	T	Water	RSK-175	
680-57937-1	BSA-MW-05D-0510	T	Water	RSK-175	
680-57937-3	CPA-MW-04D-0510	T	Water	RSK-175	
680-57973-1	BSA-MW-03D-0510	T	Water	RSK-175	
680-57973-4	BSA-MW-02D-0510	T	Water	RSK-175	
Analysis Batch:680-170476					
LCS 680-170476/10	Lab Control Sample	T	Water	RSK-175	
LCSD 680-170476/12	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-170476/11	Method Blank	T	Water	RSK-175	
680-57937-1	BSA-MW-05D-0510	T	Water	RSK-175	
680-57937-3	CPA-MW-04D-0510	T	Water	RSK-175	
680-57973-1	BSA-MW-03D-0510	T	Water	RSK-175	
680-57973-4	BSA-MW-02D-0510	T	Water	RSK-175	

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57608-1
Sdg Number: KPS057

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Analysis Batch:680-170587					
LCS 680-170587/23	Lab Control Sample	T	Water	RSK-175	
LCSD 680-170587/24	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-170587/22	Method Blank	T	Water	RSK-175	
680-58012-1	CPA-MW-030-0510	T	Water	RSK-175	
Analysis Batch:680-170688					
LCS 680-170688/8	Lab Control Sample	T	Water	RSK-175	
LCSD 680-170688/10	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-170688/9	Method Blank	T	Water	RSK-175	
680-58012-1	CPA-MW-030-0510	T	Water	RSK-175	

Report Basis
T = Total

US EPA ARCHIVE DOCUMENT

Client: Souba inc

Job Number: 680-57808-1
Sag Number: KPS057

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 680-169456					
LCS 680-169456/22-A	Lab Control Sample	R	Water	3005A	
MB 680-169456/21-A	Method Blank	R	Water	3005A	
680-57808-1	BSA-MW-01S-0510	R	Water	3005A	
680-57808-2	BSA-MW-01S-F(0.2)-0510	D	Water	3005A	
Prep Batch: 680-169670					
LCS 680-169670/17-A	Lab Control Sample	R	Water	3005A	
MB 680-169670/16-A	Method Blank	R	Water	3005A	
680-57861-1	CPA-MW-01D-0510	R	Water	3005A	
680-57861-2	CPA-MW-01D-F(0.2)-0510	D	Water	3005A	
680-57861-7	BSA-MW-04D-0510	R	Water	3005A	
680-57861-8	BSA-MW-04D-F(0.2)-0510	D	Water	3005A	
Analysis Batch:680-170208					
LCS 680-169456/22-A	Lab Control Sample	R	Water	6010B	680-169456
MB 680-169456/21-A	Method Blank	R	Water	6010B	680-169456
LCS 680-169670/17-A	Lab Control Sample	R	Water	6010B	680-169670
MB 680-169670/16-A	Method Blank	R	Water	6010B	680-169670
680-57808-1	BSA-MW-01S-0510	R	Water	6010B	680-169456
680-57808-2	BSA-MW-01S-F(0.2)-0510	D	Water	6010B	680-169456
680-57861-1	CPA-MW-01D-0510	R	Water	6010B	680-169670
680-57861-2	CPA-MW-01D-F(0.2)-0510	D	Water	6010B	680-169670
680-57861-7	BSA-MW-04D-0510	R	Water	6010B	680-169670
680-57861-8	BSA-MW-04D-F(0.2)-0510	D	Water	6010B	680-169670
Prep Batch: 680-170341					
LCS 680-170341/15-A	Lab Control Sample	R	Water	3005A	
MB 680-170341/14-A	Method Blank	R	Water	3005A	
680-57937-1	BSA-MW-05D-0510	R	Water	3005A	
680-57937-2	BSA-MW-05D-F(0.2)-0510	D	Water	3005A	
680-57937-3	CPA-MW-04D-0510	R	Water	3005A	
680-57937-4	CPA-MW-04D-F(0.2)-0510	D	Water	3005A	
680-57973-1	BSA-MW-02D-0510	R	Water	3005A	
680-57973-2	BSA-MW-02D-F(0.2)-0510	D	Water	3005A	
680-57973-4	BSA-MW-02D-0510	R	Water	3005A	
680-57973-5	BSA-MW-02D-F(0.2)-0510	D	Water	3005A	

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57906-1
Sdg Number: KPS057

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:680-170577					
LCS 680-170341/15-A	Lab Control Sample	R	Water	6010B	680-170341
MB 680-170341/14-A	Method Blank	R	Water	6010B	680-170341
680-57937-1	BSA-MW-05D-0510	R	Water	6010B	680-170341
680-57937-2	BSA-MW-05D-F(0.2)-0510	D	Water	6010B	680-170341
680-57937-3	CPA-MW-04D-0510	R	Water	6010B	680-170341
680-57937-4	CPA-MW-04D-F(0.2)-0510	D	Water	6010B	680-170341
680-57973-1	BSA-MW-03D-0510	R	Water	6010B	680-170341
680-57973-2	BSA-MW-03D-F(0.2)-0510	D	Water	6010B	680-170341
680-57973-4	BSA-MW-02D-0510	R	Water	6010B	680-170341
680-57973-5	BSA-MW-02D-F(0.2)-0510	D	Water	6010B	680-170341
Prep Batch: 680-171049					
LCS 680-171049/19-A	Lab Control Sample	R	Water	3005A	
MB 680-171049/18-A	Method Blank	R	Water	3005A	
680-58012-1	CPA-MW-03D-0510	R	Water	3005A	
680-58012-2	CPA-MW-03D-F(0.2)-0510	D	Water	3005A	
Analysis Batch 680-171193					
LCS 680-171049/19-A	Lab Control Sample	R	Water	6010B	680-171049
MB 680-171049/18-A	Method Blank	R	Water	6010B	680-171049
680-58012-1	CPA-MW-03D-0510	R	Water	6010B	680-171049
680-58012-2	CPA-MW-03D-F(0.2)-0510	D	Water	6010B	680-171049

Report Basis
D = Dissolved
R = Total Recoverable

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KP5057

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:680-169314					
LCS 680-169314/3	Lab Control Sample	T	Water	310.1	
MB 680-169314/2	Method Blank	T	Water	310.1	
680-57808-1	BSA-MW-01S-0510	T	Water	310.1	
680-57808-1DU	Duplicate	T	Water	310.1	
Analysis Batch:680-169418					
LCS 680-169418/2	Lab Control Sample	T	Water	353.2	
MB 680-169418/1	Method Blank	T	Water	353.2	
680-57806-1	BSA-MW-01S-0510	T	Water	353.2	
680-57806-1MS	Matrix Spike	T	Water	353.2	
680-57806-1MSD	Matrix Spike Duplicate	T	Water	353.2	
Analysis Batch:680-169423					
LCS 680-169423/2	Lab Control Sample	T	Water	353.2	
MB 680-169423/1	Method Blank	T	Water	353.2	
680-57851-1	CPA-MW-01D-0510	T	Water	353.2	
680-57851-7	BSA-MW-04D-0510	T	Water	353.2	
Analysis Batch:680-169587					
LCS 680-169587/3	Lab Control Sample	T	Water	310.1	
MB 680-169587/2	Method Blank	T	Water	310.1	
680-57851-1	CPA-MW-01D-0510	T	Water	310.1	
680-57851-7	BSA-MW-04D-0510	T	Water	310.1	
Analysis Batch:680-169756					
LCS 680-169756/3	Lab Control Sample	T	Water	310.1	
MB 680-169756/2	Method Blank	T	Water	310.1	
680-57937-1	BSA-MW-09D-0510	T	Water	310.1	
680-57937-3	CPA-MW-04D-0510	T	Water	310.1	
680-57937-3DU	Duplicate	T	Water	310.1	
Analysis Batch:680-169923					
LCS 680-169923/2	Lab Control Sample	T	Water	375.4	
MB 680-169923/1	Method Blank	T	Water	375.4	
680-57808-1	BSA-MW-01S-0510	T	Water	375.4	
680-57851-1	CPA-MW-01D-0510	T	Water	375.4	
680-57851-7	BSA-MW-04D-0510	T	Water	375.4	
Analysis Batch:680-169936					
LCS 680-169936/2	Lab Control Sample	T	Water	353.2	
MB 680-169936/1	Method Blank	T	Water	353.2	
680-57973-1	BSA-MW-03D-0510	T	Water	353.2	
680-57973-4	BSA-MW-07D-0510	T	Water	353.2	

US EPA ARCHIVE DOCUMENT

Client Solutia Inc.

Job Number 680-57808-1
Sdg Number KPS007

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch 680-169961					
LCS 680-169961/1	Lab Control Sample	T	Water	325.2	
MB 680-169961/3	Method Blank	T	Water	325.2	
680-57808-1	BSA-MW-01S-0510	T	Water	325.2	
680-57808-1MS	Matrix Spike	T	Water	325.2	
680-57808-1MSD	Matrix Spike Duplicate	T	Water	325.2	
680-57861-1	CPA-MW-01D-0510	T	Water	325.2	
680-57861-7	BSA-MW-04D-0510	T	Water	325.2	
Analysis Batch 680-169962					
LCS 680-169962/3	Lab Control Sample	T	Water	325.2	
MB 680-169962/1	Method Blank	T	Water	325.2	
680-57937-1	BSA-MW-05D-0510	T	Water	325.2	
680-57937-1MS	Matrix Spike	T	Water	325.2	
680-57937-1MSD	Matrix Spike Duplicate	T	Water	325.2	
680-57937-3	CPA-MW-04D-0510	T	Water	325.2	
Analysis Batch:680-170087					
LCS 680-170087/4	Lab Control Sample	T	Water	415.1	
MB 680-170087/2	Method Blank	T	Water	415.1	
680-57808-1	BSA-MW-01S-0510	T	Water	415.1	
680-57861-1	CPA-MW-01D-0510	T	Water	415.1	
680-57861-7	BSA-MW-04D-0510	T	Water	415.1	
680-57937-1	BSA-MW-05D-0510	T	Water	415.1	
680-57937-3	CPA-MW-04D-0510	T	Water	415.1	
680-57973-1	BSA-MW-03D-0510	T	Water	415.1	
680-57973-4	BSA-MW-02D-0510	T	Water	415.1	
Analysis Batch:680-170135					
LCS 680-170135/2	Lab Control Sample	T	Water	353.2	
MB 680-170135/1	Method Blank	T	Water	353.2	
680-57937-1	BSA-MW-05D-0510	T	Water	353.2	
680-57937-3	CPA-MW-04D-0510	T	Water	353.2	
Analysis Batch 680-170182					
LCS 680-170182/2	Lab Control Sample	T	Water	353.2	
MB 680-170182/1	Method Blank	T	Water	353.2	
680-58012-1	CPA-MW-03D-0510	T	Water	353.2	
680-58012-1MS	Matrix Spike	T	Water	353.2	
680-58012-1MSD	Matrix Spike Duplicate	T	Water	353.2	

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS067

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:680-170264					
LCS 680-170264/2	Lab Control Sample	D	Water	415.1	
MB 680-170264/1	Method Blank	D	Water	415.1	
680-57808-2	BSA-MW-01S-F(0.2)-0510	D	Water	415.1	
680-57861-7	CPA-MW-01D-F(0.2)-0510	D	Water	415.1	
680-57861-6	BSA-MW-04D-F(0.2)-0510	D	Water	415.1	
680-57937-2	BSA-MW-05D-F(0.2)-0510	D	Water	415.1	
680-57937-4	CPA-MW-04D-F(0.2)-0510	D	Water	415.1	
680-57973-2	BSA-MW-02D-F(0.2)-0510	D	Water	415.1	
680-57973-2DUP	Duplicate	D	Water	415.1	
680-57973-5	BSA-MW-02D-F(0.2)-0510	D	Water	415.1	
680-55012-2	CPA-MW-03D-F(0.2)-0510	D	Water	415.1	
Analysis Batch:680-170270					
LCS 680-170270/3	Lab Control Sample	T	Water	415.1	
MB 680-170270/4	Method Blank	T	Water	415.1	
680-55012-1	CPA-MW-03D-0510	T	Water	415.1	
Analysis Batch:680-170294					
LCS 680-170294/2	Lab Control Sample	T	Water	375.4	
MB 680-170294/1	Method Blank	T	Water	375.4	
680-57937-1	BSA-MW-05D-0510	T	Water	375.4	
680-57937-1DU	Duplicate	T	Water	375.4	
680-57937-3	CPA-MW-04D-0510	T	Water	375.4	
680-57973-1	BSA-MW-03D-0510	T	Water	375.4	
680-57973-4	BSA-MW-02D-0510	T	Water	375.4	
680-55012-1	CPA-MW-03D-0510	T	Water	375.4	
Analysis Batch:680-170400					
LCS 680-170400/2	Lab Control Sample	T	Water	325.2	
MB 680-170400/1	Method Blank	T	Water	325.2	
680-57973-1	BSA-MW-03D-0510	T	Water	325.2	
680-57973-4	BSA-MW-02D-0510	T	Water	325.2	
680-55012-1	CPA-MW-03D-0510	T	Water	325.2	
Analysis Batch:680-170401					
LCS 680-170401/2	Lab Control Sample	T	Water	310.1	
MB 680-170401/1	Method Blank	T	Water	310.1	
680-57973-1	BSA-MW-03D-0510	T	Water	310.1	
680-57973-4	BSA-MW-02D-0510	T	Water	310.1	
680-55012-1	CPA-MW-03D-0510	T	Water	310.1	

Report Basis
D = Dissolved
T = Total

US EPA ARCHIVE DOCUMENT

Client: Solute Inc.

Job Number: 680-57806-1
Sdg Number: KPS057

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-57806-1	BSA MW-01S 0510	104	99	115
680-57806-3	2Q10 LTM Trip Blank #1	107	100	114
680-57861-1	CPA MW-01D 0510	107	95	115
680-57861-3	CPA-MW-02D-0510	109	98	114
680-57861-5	CPA-MW-02D 0510-A D	103	97	115
680-57861-7	BSA MW-04D 0510	110	93	114
680-57861-9	2Q10 LTM Trip Blank #2	108	101	115
680-57937-1	BSA MW-05D 0510	97	91	113
680-57937-3	CPA-MW-04D-0510	95	96	113
680-57937-5	2Q10 LTM Trip Blank #3	97	96	110
680-57973-1	BSA-MW-03D-0510	114	94	116
680-57973-3	BSA-MW-03D-0510-D B	107	100	114
680-57973-4	BSA MW-02D-0510	108	97	111
680-57973-6	2Q10 LTM Trip Blank #4	104	108	120
680-58012-1	CPA MW-03D 0510	113	91	117
680-58012-3	2Q10 LTM Trip Blank #5	107	97	113
MB 680-169995/12		106	101	113
MB 680-170396/9		109	104	115
MB 680-170157/7		108	101	95
MB 680-170150/7		95	105	111
LCS 680-169995/8		107	103	107
LCS 680-170396/4		106	105	105
LCS 680-170157/4		108	106	109
LCS 680-170150/4		109	101	113
LCSD 680-169995/10		108	106	106

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57838-1
Sdg Number: KPS057

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
LCSD 680-170093/5		109	105	107
LCSD 680-170157/5		111	106	111
LCSD 680-170190/5		109	105	108
680-57937-1 MS	BSA-MW-05D-0513 MS	109	56	113
680-57937-1 MSD	BSA-MW-05D-0513 MSD	109	66	113

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Method Blank - Batch: 680-169995

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-169995/17	Analysis Batch:	680-169995	Instrument ID:	MSP2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	pq370.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	05/27/2010 1225			Final Weight/Volume:	5 mL
Date Prepared:	05/27/2010 1229				

Analyte	Result	Qual	RL
Benzene	1.0	U	1.0
Chlorobenzene	1.0	U	1.0
1,2-Dichlorobenzene	1.0	U	1.0
1,3-Dichlorobenzene	1.0	U	1.0
1,4-Dichlorobenzene	1.0	U	1.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	106	75 - 120
Dibromofluoromethane	101	75 - 121
Toluene-d8 (Surr)	113	75 - 120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

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Quality Control Results

Client: Solutia Inc

Job Number: 680-57809-1
Sdg Number: KPS357

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-169995

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-169995/9	Analysis Batch:	680-169995	Instrument ID:	MSP2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	pq312.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	05/27/2010 1030			Final Weight/Volume:	5 mL
Date Prepared:	05/27/2010 1030				

LCSD Lab Sample ID:	LCSD 680-169995/10	Analysis Batch:	680-169995	Instrument ID:	MSP2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	pq314.d
Dilution:	1.0	Units:	ug/l	Initial Weight/Volume:	5 mL
Date Analyzed:	05/27/2010 1100			Final Weight/Volume:	5 mL
Date Prepared:	05/27/2010 1100				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	107	109	77 - 119	1	30		
Chlorobenzene	103	110	85 - 118	1	30		
1,2-Dichlorobenzene	109	108	79 - 124	1	30		
1,3-Dichlorobenzene	109	109	78 - 125	0	30		
1,4-Dichlorobenzene	109	108	81 - 122	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	107	108	75 - 120
Dibromofluoromethane	103	106	75 - 121
Toluene-d8 (Surr)	107	108	75 - 120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc

Job Number: 680-97809-1
Seq Number: KPS057

Method Blank - Batch: 680-170096

Method: 8260B
Preparation: 5030B

Lab Sample ID	MB 680-170096/6	Analysis Batch	680-170096	Instrument ID	MSP2
Client Matrix	Water	Prep Batch	N/A	Lab File ID	pq334.d
Dilution	1.0	Units	ug/L	Initial Weight/Volume	5 mL
Date Analyzed	05/28/2010 1229			Final Weight/Volume	5 ml
Date Prepared	05/28/2010 1229				

Analyte	Result	Qual	RL
Benzene	1.0	U	1.0
Chlorobenzene	1.0	U	1.0
1,2-Dichlorobenzene	1.0	U	1.0
1,3-Dichlorobenzene	1.0	U	1.0
1,4-Dichlorobenzene	1.0	U	1.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	109	75 - 120
Dibromofluoromethane	104	75 - 121
Toluene-d8 (Surr)	112	75 - 120

JUN 15 2010 ERL

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-170096

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-170096/4	Analysis Batch:	680-170096	Instrument ID:	MSP2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	pq326.d
Dilution:	1.0	Units:	ug/l	Initial Weight/Volume	5 mL
Date Analyzed:	05/28/2010 1031			Final Weight/Volume	5 mL
Date Prepared:	05/28/2010 1031				

LCSD Lab Sample ID:	LCSD 680-170096/5	Analysis Batch:	680-170096	Instrument ID:	MSP2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	pq328.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume	5 mL
Date Analyzed:	05/28/2010 1130			Final Weight/Volume	5 mL
Date Prepared:	05/28/2010 1130				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	108	106	77 - 110	1	30		
Chlorobenzene	108	106	85 - 110	1	30		
1,2-Dichlorobenzene	105	104	79 - 124	0	30		
1,3-Dichlorobenzene	107	105	79 - 125	2	30		
1,4-Dichlorobenzene	107	107	81 - 122	0	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	106	105	75 - 120
Dibromofluoromethane	105	105	75 - 127
Toluene-d8 (Surr)	106	107	75 - 120

JUN 15 2010 ZZK

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Method Blank - Batch: 680-170157

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-170157/7	Analysis Batch:	680-170157	Instrument ID:	MSP2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	pq348.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	05/29/2010 1337			Final Weight/Volume:	5 mL
Date Prepared:	05/29/2010 1337				

Analyte	Result	Qual	RL
Benzene	1.0	J	1.0
Chlorobenzene	1.0	J	1.0
1,2-Dichlorobenzene	1.0	J	1.0
1,3-Dichlorobenzene	1.0	J	1.0
1,4-Dichlorobenzene	1.0	J	1.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	108	75 - 120
Dibromofluoromethane	101	75 - 121
Toluene-d8 (Surr)	98	75 - 120

JUN 15 2010 CZK

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc

Job Number: 680-57908-1
Sdg Number: KPS057

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-170157

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-170157/4	Analysis Batch:	680-170157	Instrument ID:	MSF2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	pq340.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	05/29/2010 1123			Final Weight/Volume:	5 mL
Date Prepared:	05/29/2010 1123				

LCSD Lab Sample ID:	LCSD 680-170157/5	Analysis Batch:	680-170157	Instrument ID:	MSF2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	pq342.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	05/29/2010 1159			Final Weight/Volume:	5 mL
Date Prepared:	05/29/2010 1123				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	111	108	77 - 119	3	30		
Chlorobenzene	109	111	85 - 116	2	30		
1,2-Dichlorobenzene	109	110	79 - 124	1	30		
1,3-Dichlorobenzene	109	111	78 - 125	2	30		
1,4-Dichlorobenzene	110	112	81 - 122	2	30		

Surrogate	LCS % Rec.	LCSD % Rec.	Acceptance Limits
4-Bromofluorobenzene	108	111	75 - 120
Dibromofluoromethane	106	100	75 - 121
Toluene-d8 (Surr)	100	111	75 - 120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc.

Job Number: 680-67808-1
Sdg Number: KPS257

Method Blank - Batch: 680-170190

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-170190/7	Analysis Batch:	680-170190	Instrument ID:	MSF
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	pq361.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	05/30/2010 1213			Final Weight/Volume:	5 mL
Date Prepared:	05/30/2010 1213				

Analyte	Result	Qual	RL
Benzene	1.0	U	1.0
Chlorobenzene	1.0	U	1.0
1,2-Dichlorobenzene	1.0	U	1.0
1,3-Dichlorobenzene	1.0	U	1.0
1,4-Dichlorobenzene	1.0	U	1.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	95	75 - 120
Dibromofluoromethane	106	75 - 121
Toluene-d8 (Surr)	111	75 - 120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Sauba Inc

Job Number 680-57808-1
Sdg Number KPS057

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-170190

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-170190/4	Analysis Batch:	680-170190	Instrument ID:	MSP
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	pq355.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	05/30/2010 1012			Final Weight/Volume:	5 mL
Date Prepared:	05/30/2010 1012				

LCSD Lab Sample ID:	LCSD 680-170190/5	Analysis Batch:	680-170190	Instrument ID:	MSP
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	pq356.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	05/30/2010 1042			Final Weight/Volume:	5 mL
Date Prepared:	05/30/2010 1042				

	% Rec						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	113	107	77 - 118	3	30		
Chlorobenzene	112	111	85 - 116	1	30		
1,2-Dichlorobenzene	111	107	79 - 124	4	30		
1,3-Dichlorobenzene	115	113	78 - 125	3	30		
1,4-Dichlorobenzene	109	107	81 - 122	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	109	108	75 - 120
Dibromofluoromethane	101	105	75 - 121
Toluene-d8 (Surr)	113	109	75 - 120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Soluba Inc

Job Number: 680-57808-1
Sdg Number: KP5057

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-170190

Method: 8260B
Preparation: 5030B

MS Lab Sample ID	680-57937-1	Analysis Batch: 680-170190	Instrument ID: MSP
Client Matrix	Water	Prep Batch: N/A	Lab File ID: p0556.d
Dilution	5.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/30/2010 1910		Final Weight/Volume: 5 mL
Date Prepared:	05/30/2010 1910		

MSD Lab Sample ID	680-57937-1	Analysis Batch: 680-170190	Instrument ID: MSP
Client Matrix	Water	Prep Batch: N/A	Lab File ID: p0557.d
Dilution	5.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/30/2010 1939		Final Weight/Volume: 5 mL
Date Prepared:	05/30/2010 1939		

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene	108	107	77 - 119	1	30		
Chlorobenzene	84	86	85 - 116	1	30	F	
1,2-Dichlorobenzene	116	118	79 - 124	1	30		
1,3-Dichlorobenzene	116	115	78 - 125	0	30		
1,4-Dichlorobenzene	114	115	81 - 122	0	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	109	109	75 - 120
Dibromofluoromethane	98	98	75 - 121
Toluene-d8 (Surr)	113	113	75 - 120

JUN 15 2010 EJK

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KP5057

Method Blank - Batch: 680-170184

Method: RSK-175
Preparation: N/A

Lab Sample ID	MB 680-170184/24	Analysis Batch:	680-170184	Instrument ID:	VGUFID2
Client Matrix	Water	Prep Batch:	N/A	Lab File ID:	UQ442.D
Dilution	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed	05/31/2010 1505			Final Weight/Volume:	17 mL
Date Prepared	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

Analyte	Result	Qual	RL
Ethane	0.35	U	0.35
Ethylene	0.33	U	0.33
Methane	0.19	U	0.19

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-170184

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID	LCS 680-170184/22	Analysis Batch:	680-170184	Instrument ID:	VGUFID2
Client Matrix	Water	Prep Batch:	N/A	Lab File ID:	UQ440.D
Dilution	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed	05/31/2010 1359			Final Weight/Volume:	17 mL
Date Prepared	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID	LCSD 680-170184/23	Analysis Batch:	680-170184	Instrument ID:	VGUFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ441.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	05/31/2010 1446			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limits	RPD	RPD Limit	LCS Qual	LCSD Qual
Ethane	94	84	75 - 125	11	30		
Ethylene	93	84	75 - 125	9	30		
Methane	82	81	75 - 125	1.2	30		

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 580-57808-1
Sdg Number: KPS057

Method Blank - Batch: 680-170186

Method: RSK-175
Preparation: N/A

Lab Sample ID:	MB 680-170186/6	Analysis Batch:	680-170186	Instrument ID:	VGUTCD1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ442 D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	05/31/2010 1506			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

Analyte	Result	Qual	RL
Methane	0.19	J	0.19

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-170186

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID:	LCS 680-170186/4	Analysis Batch:	680-170186	Instrument ID:	VGUTCD1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ436 D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	05/31/2010 1303			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-170186/5	Analysis Batch:	680-170186	Instrument ID:	VGUTCD1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ437 D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	05/31/2010 1321			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methane	89	80	75 - 125	10	30		

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-97809-1
Sdg Number: KPSC57

Method Blank - Batch: 680-170310

Method: RSK-175
Preparation: N/A

Lab Sample ID	MB 680-170310/21	Analysis Batch:	680-170310	Instrument ID:	VGUFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ458.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/01/2010 1514			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

Analyte	Result	Qual	RL
Ethane	0.35	U	0.35
Ethylene	0.33	U	0.33
Methane	0.19	U	0.19

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-170310

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID:	LCS 680-170310/19	Analysis Batch:	680-170310	Instrument ID:	VGUFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ456.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/01/2010 1449			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-170310/20	Analysis Batch:	680-170310	Instrument ID:	VGUFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ457.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/01/2010 1502			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ethane	94	95	75 - 125	1	30		
Ethylene	90	91	75 - 125	1	30		
Methane	93	95	75 - 125	2	30		

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Method Blank - Batch: 680-170311

Method: RSK-175
Preparation: N/A

Lab Sample ID: MB 680-170311/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/01/2010 1514
Date Prepared: N/A

Analysis Batch: 680-170311
Prep Batch: N/A
Units: ug/L

Instrument ID: VGC7CD1
Lab File ID: UQ456.D
Initial Weight/Volume: 17.000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
Methane	0.19	U	0.19

Lab Control Sample
Lab Control Sample Duplicate Recovery Report - Batch: 680-170311

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID: LCS 680-170311/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/01/2010 1410
Date Prepared: N/A

Analysis Batch: 680-170311
Prep Batch: N/A
Units: ug/L

Instrument ID: VGC7CD1
Lab File ID: UQ454.D
Initial Weight/Volume: 17.000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 680-170311/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/01/2010 1422
Date Prepared: N/A

Analysis Batch: 680-170311
Prep Batch: N/A
Units: ug/l

Instrument ID: VGC7CD1
Lab File ID: UQ455.D
Initial Weight/Volume: 17.000 uL
Final Weight/Volume: 17 ml
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methane	89	93	75 - 125	4	30		

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57838-1
Sdg Number: KP5057

Method Blank - Batch: 680-170475

Method: RSK-175
Preparation: N/A

Lab Sample ID:	MB 680-170475/21	Analysis Batch:	680-170475	Instrument ID:	VGUFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ468.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 ml
Date Analyzed:	06/02/2010 1010			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

Analyte	Result	Qual	RL
Ethane	0.35	U	0.35
Ethylene	0.33	U	0.33
Methane	0.19	U	0.19

Lab Control Sample - Batch: 680-170475

Method: RSK-175
Preparation: N/A

Lab Sample ID:	LCS 680-170475/20	Analysis Batch:	680-170475	Instrument ID:	VGUFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ467.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 ml
Date Analyzed:	06/02/2010 0945			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 ul
				Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limits	Qual
Ethane	262	260	99	75 - 125	
Ethylene	271	264	97	75 - 125	
Methane	153	148	97	75 - 125	

JUN 15 2010

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 580-57628-1
Seq Number: KPS057

Method Blank - Batch: 680-170476

Method: RSK-175
Preparation: N/A

Lab Sample ID: MB 680-170476/11
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/02/2010 1010
Date Prepared: N/A

Analysis Batch: 680-170476
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUTCD1
Lab File ID: LQ468.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
Methane	0.19	U	0.19

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-170476

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID: LCS 680-170476/13
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/02/2010 0919
Date Prepared: N/A

Analysis Batch: 680-170476
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUTCD1
Lab File ID: LQ464.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 680-170476/12
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/02/2010 1553
Date Prepared: N/A

Analysis Batch: 680-170476
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUTCD1
Lab File ID: LQ469.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methane	84	92	75 - 125	10	30		

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Method Blank - Batch: 680-170587

Method: RSK-175
Preparation: N/A

Lab Sample ID	MB 680-170587/22	Analysis Batch:	680-170587	Instrument ID:	VGJFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ474.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/02/2010 1857			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

Analyte	Result	Qual	RL
Ethane	0.35	U	0.35
Ethylene	0.33	U	0.33
Methane	0.19	U	0.19

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-170587

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID:	LCS 680-170587/23	Analysis Batch:	680-170587	Instrument ID:	VGJFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ475.D
Dilution:	1.0	Units:	ug/l	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/02/2010 0745			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-170587/24	Analysis Batch:	680-170587	Instrument ID:	VGJFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ476.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/03/2010 0757			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ethane	87	90	75 - 125	3	30		
Ethylene	82	85	75 - 125	3	30		
Methane	87	90	75 - 125	3	30		

JUN 16 2010

Client: Solutia Inc

Job Number: 580-57808-1
Sdg Number: KPS057

Method Blank - Batch: 680-170588

Method: RSK-175
Preparation: N/A

Lab Sample ID	MB 680-170588/9	Analysis Batch:	680-170588	Instrument ID:	VGUTCD1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UC474.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/02/2010 1557			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

Analyte	Result	Qual	RL
Methane	0.13	U	0.19

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-170588

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID:	LCS 680-170588/8	Analysis Batch:	680-170588	Instrument ID:	VGUTCD1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UC475.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/02/2010 1606			Final Weight/Volume:	17 ml
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-170588/10	Analysis Batch:	680-170588	Instrument ID:	VGUTCD1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UC477.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/03/2010 1233			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

	% Rec						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methane	89	82	75 - 125	8	30		

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57838-1
Seq Number: KPS057

Method Blank - Batch: 680-169456

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID	MB 680-169456/21-A	Analysis Batch:	680-170208	Instrument ID:	ICPD
Client Matrix	Water	Prep Batch:	680-169456	Lab File ID:	052610.chr
Dilution	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	05/26/2010 2213			Final Weight/Volume:	50 mL
Date Prepared:	05/23/2010 1517				

Analyte	Result	Qual	RL
Iron	0.050	U	0.050
Iron, Dissolved	0.050	U	0.050
Manganese	0.010	U	0.010
Manganese, Dissolved	0.010	U	0.010

Lab Control Sample - Batch: 680-169456

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 680-169456/22-A	Analysis Batch:	680-170208	Instrument ID:	ICPD
Client Matrix:	Water	Prep Batch:	680-169456	Lab File ID:	052610.chr
Dilution:	1.0	Units:	mg/l	Initial Weight/Volume:	50 mL
Date Analyzed:	05/26/2010 2219			Final Weight/Volume:	50 mL
Date Prepared:	05/23/2010 1517				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	1.00	0.977	98	75 - 125	
Iron, Dissolved	1.00	0.977	98	75 - 125	
Manganese	0.500	0.500	100	75 - 125	
Manganese, Dissolved	0.500	0.500	100	75 - 125	

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KP5057

Method Blank - Batch: 680-169670

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID: MB 680-169670/10-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/27/2010 0055
Date Prepared: 05/25/2010 1338

Analysis Batch: 680-170208
Prep Batch: 680-169670
Units: mg/L

Instrument ID: ICP0
Lab File ID: 052610.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Iron	0.050	U	0.050
Iron, Dissolved	0.050	U	0.050
Manganese	0.010	U	0.010
Manganese, Dissolved	0.010	U	0.010

Lab Control Sample - Batch: 680-169670

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID: LCS 680-169670/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/27/2010 0100
Date Prepared: 05/25/2010 1338

Analysis Batch: 680-170208
Prep Batch: 680-169670
Units: mg/L

Instrument ID: ICP0
Lab File ID: 052610.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	1.00	0.994	99	75 - 125	
Iron, Dissolved	1.00	0.994	99	75 - 125	
Manganese	0.500	0.503	101	75 - 125	
Manganese, Dissolved	0.500	0.503	101	75 - 125	

JUN 15 2010 EJK

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc

Job Number: 680-57908-1
Sdg Number: KI5057

Method Blank - Batch: 680-170341

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 680-170341/14-A	Analysis Batch:	680-170577	Instrument ID:	ICPD
Client Matrix:	Water	Prep Batch:	680-170341	Lab File ID:	da60310.chr
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	06/03/2010 2144			Final Weight/Volume:	50 mL
Date Prepared:	06/03/2010 1059				

Analyte	Result	Qual	RL
Iron	0.050	U	0.050
Iron, Dissolved	0.050	U	0.050
Manganese	0.010	U	0.010
Manganese, Dissolved	0.010	U	0.010

Lab Control Sample - Batch: 680-170341

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 680-170341/15-A	Analysis Batch:	680-170577	Instrument ID:	ICPD
Client Matrix:	Water	Prep Batch:	680-170341	Lab File ID:	da60310.chr
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	06/03/2010 2149			Final Weight/Volume:	50 mL
Date Prepared:	06/03/2010 1059				

Analyte	Spike Amount	Result	% Rec	Limit	Qual
Iron	1.00	1.01	101	75 - 125	
Iron, Dissolved	1.00	1.01	101	75 - 125	
Manganese	0.500	0.510	102	75 - 125	
Manganese, Dissolved	0.500	0.510	102	75 - 125	

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc

Job Number: 680-67808-1
Sdg Number: KPS257

Method Blank - Batch: 680-171049

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 680-171049/19-A	Analysis Batch:	680-171193	Instrument ID:	ICPO
Client Matrix:	Water	Prep Batch:	680-171049	Lab File ID:	061010.chr
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1338			Final Weight/Volume:	50 mL
Date Prepared:	06/09/2010 1628				

Analyte	Result	Qual	R
Iron	0.050	U	0.050
Iron, Dissolved	0.050	U	0.050
Manganese	0.010	U	0.010
Manganese, Dissolved	0.010	U	0.010

Lab Control Sample - Batch: 680-171049

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 680-171049/19-A	Analysis Batch:	680-171193	Instrument ID:	ICPO
Client Matrix:	Water	Prep Batch:	680-171049	Lab File ID:	061010.chr
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1343			Final Weight/Volume:	50 mL
Date Prepared:	06/09/2010 1628				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	1.00	0.979	98	75 - 125	
Iron, Dissolved	1.00	0.979	98	75 - 125	
Manganese	0.500	0.485	97	75 - 125	
Manganese, Dissolved	0.500	0.485	97	75 - 125	

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS257

Method Blank - Batch: 680-169314

Method: 310.1
Preparation: N/A

Lab Sample ID	MB 680-169314/2	Analysis Batch:	680-169314	Instrument ID:	MANTECH
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	alk052110b.TXT
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	25 mL
Date Analyzed:	05/21/2010 1107			Final Weight/Volume:	25 mL
Date Prepared:	N/A				

Analyte	Result	Qual	RL
Alkalinity	5.0	U	5.0
Carbon Dioxide, Free	5.0	U	5.0

Lab Control Sample - Batch: 680-169314

Method: 310.1
Preparation: N/A

Lab Sample ID:	LCS 680-169314/3	Analysis Batch:	680-169314	Instrument ID:	MANTECH
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	alk052110b.TXT
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	25 mL
Date Analyzed:	05/21/2010 1118			Final Weight/Volume:	25 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Alkalinity	570	561	97	80 - 120	

Duplicate - Batch: 680-169314

Method: 310.1
Preparation: N/A

Lab Sample ID:	680-57808-1	Analysis Batch:	680-169314	Instrument ID:	MANTECH
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	alk052110b.TXT
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	25 mL
Date Analyzed:	05/21/2010 1208			Final Weight/Volume:	25 mL
Date Prepared:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity	930	912	2	30	
Carbon Dioxide, Free	31	29.7	6	30	

JUN 15 2010 ERC

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc.

Job Number: 680-57809-1
Sdg Number: KPS057

Method Blank - Batch: 680-169587

Method: 310.1
Preparation: N/A

Lab Sample ID: MB 680-169587/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/24/2010 1535
Date Prepared: N/A

Analysis Batch: 680-169587
Prep Batch: N/A
Units: mg/L

Instrument ID: MANTECH
Lab File ID: alk052410b.TXT
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result	Qual	RL
Alkalinity	5.0	U	5.0
Carbon Dioxide, Free	5.0	U	5.0

Lab Control Sample - Batch: 680-169587

Method: 310.1
Preparation: N/A

Lab Sample ID: LCS 680-169587/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/24/2010 1547
Date Prepared: N/A

Analysis Batch: 680-169587
Prep Batch: N/A
Units: mg/L

Instrument ID: MANTECH
Lab File ID: alk052410b.TXT
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Spike Amount	Result	% Rec	Limit	Qual
Alkalinity	575	566	98	80 - 120	

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57806-1
Seq Number: KPS057

Method Blank - Batch: 680-169756

Method: 310.1
Preparation: N/A

Lab Sample ID: MB 680-169756/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/25/2010 1729
Date Prepared: N/A

Analysis Batch: 680-169755
Prep Batch: N/A
Units: mg/l

Instrument ID: MANTECH
Lab File ID: alk052510a.TXT
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result	Qual	RL
Alkalinity	5.0	U	5.0
Carbon Dioxide, Free	5.0	U	5.0

Lab Control Sample - Batch: 680-169756

Method: 310.1
Preparation: N/A

Lab Sample ID: LCS 680-169756/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/25/2010 1739
Date Prepared: N/A

Analysis Batch: 680-169756
Prep Batch: N/A
Units: mg/L

Instrument ID: MANTECH
Lab File ID: alk052510a.TXT
Initial Weight/Volume: 25 ml
Final Weight/Volume: 25 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Alkalinity	576	572	99	80 - 120	

Duplicate - Batch: 680-169756

Method: 310.1
Preparation: N/A

Lab Sample ID: 680-57937-3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/25/2010 1940
Date Prepared: N/A

Analysis Batch: 680-169756
Prep Batch: N/A
Units: mg/L

Instrument ID: MANTECH
Lab File ID: alk052510a.TXT
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Alkalinity	5.0	U	5.0	NC	30	U
Carbon Dioxide, Free	5.0	U	5.0	NC	30	U

JUN 15 2010 ZZ/C

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Method Blank - Batch: 680-170401

Method: 310.1
Preparation: N/A

Lab Sample ID	MB 680-170401/1	Analysis Batch:	680-170401	Instrument ID	MANTECH
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID	060210alk.TXT
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	1.0 mL
Date Analyzed:	06/02/2010 1132			Final Weight/Volume:	1.0 mL
Date Prepared:	N/A				

Analyte	Result	Qual	RL
Alkalinity	5.0	U	5.0
Carbon Dioxide, Free	5.0	U	5.0

Lab Control Sample - Batch: 680-170401

Method: 310.1
Preparation: N/A

Lab Sample ID:	LCS 680-170401/2	Analysis Batch:	680-170401	Instrument ID:	MANTECH
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	060210alk.TXT
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	1.0 mL
Date Analyzed:	06/02/2010 1142			Final Weight/Volume:	1.0 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Alkalinity	576	565	98	80 - 120	

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Method Blank - Batch: 680-169961

Method: 325.2
Preparation: N/A

Lab Sample ID: MB 680-169961/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/27/2010 1008
Date Prepared: N/A

Analysis Batch: 680-169961
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE1052701CLA.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Chloride	1.0	U	1.0

Lab Control Sample - Batch: 680-169961

Method: 325.2
Preparation: N/A

Lab Sample ID: LCS 680-169961/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/27/2010 1002
Date Prepared: N/A

Analysis Batch: 680-169961
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE1052701CLA.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec	Limit	Qual
Chloride	50.0	50.2	100	85 - 115	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-169961

Method: 325.2
Preparation: N/A

MS Lab Sample ID: 680-57808-1
Client Matrix: Water
Dilution: 2.0
Date Analyzed: 05/27/2010 1022
Date Prepared: N/A

Analysis Batch: 680-169961
Prep Batch: N/A

Instrument ID: KONELAB1
Lab File ID: KONE1052701CLA.xls
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 680-57808-1
Client Matrix: Water
Dilution: 2.0
Date Analyzed: 05/27/2010 1022
Date Prepared: N/A

Analysis Batch: 680-169961
Prep Batch: N/A

Instrument ID: KONELAB1
Lab File ID: KONE1052701CLA.xls
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	77	77	85 - 115	0	20	F	F

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Southern Inc

Job Number: 680-57938-1
Seq Number: KPS057

Method Blank - Batch: 680-169962

Method: 325.2
Preparation: N/A

Lab Sample ID:	MB 680-169962/1	Analysis Batch:	680-169962	Instrument ID:	KONELAB1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	KONE1052710CL5.xls
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	2 mL
Date Analyzed:	05/27/2010 1145			Final Weight/Volume:	2 mL
Date Prepared:	N/A				

Analyte	Result	Qual	RL
Chloride	1.5	U	1.0

Lab Control Sample - Batch: 680-169962

Method: 325.2
Preparation: N/A

Lab Sample ID:	LCS 680-169962/3	Analysis Batch:	680-169962	Instrument ID:	KONELAB1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	KONE1052710CLB.xls
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	2 mL
Date Analyzed:	05/27/2010 1147			Final Weight/Volume:	2 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	50.0	50.5	101	85 - 115	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-169962

Method: 325.2
Preparation: N/A

MS Lab Sample ID:	680-57937-1	Analysis Batch:	680-169962	Instrument ID:	KONELAB1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	KONE1052710CLD.xls
Dilution:	5.0			Initial Weight/Volume:	10 mL
Date Analyzed:	05/27/2010 1239			Final Weight/Volume:	10 mL
Date Prepared:	N/A				

MSD Lab Sample ID:	680-57937-1	Analysis Batch:	680-169962	Instrument ID:	KONELAB1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	KONE1052710CLE.xls
Dilution:	5.0			Initial Weight/Volume:	10 mL
Date Analyzed:	05/27/2010 1239			Final Weight/Volume:	10 mL
Date Prepared:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	103	102	85 - 115	0	30		

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutis Inc.

Job Number: 680-57808-1
Sdg Number: KPSC57

Method Blank - Batch: 680-170400

Method: 325.2
Preparation: N/A

Lab Sample ID: MB 680-170400/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/02/2010 1623
Date Prepared: N/A

Analysis Batch: 680-170400
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE1060201CLA.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Chloride	1.0	U	1.0

Lab Control Sample - Batch: 680-170400

Method: 325.2
Preparation: N/A

Lab Sample ID: LCS 680-170400/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/02/2010 1624
Date Prepared: N/A

Analysis Batch: 680-170400
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE1060201CLA.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	50.0	51.7	103	85 - 115	

JUN 15 2010

Client: Solutia Inc

Job Number: 680-57828-1
Sdg Number: KPS057

Method Blank - Batch: 680-169418

Method: 353.2
Preparation: N/A

Lab Sample ID: MB 680-169418/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/20/2010 1515
Date Prepared: N/A

Analysis Batch: 680-169418
Prep Batch: N/A
Units: mg/L

Instrument ID: Lachat 2
Lab File ID: N/A
Initial Weight/Volume: 7 mL
Final Weight/Volume: 7 mL

Analyte	Result	Qual	RL
Nitrate as N	0.050	U	0.050
Nitrate Nitrite as N	0.050	U	0.050
Nitrite as N	0.050	U	0.050

Lab Control Sample - Batch: 680-169418

Method: 353.2
Preparation: N/A

Lab Sample ID: LCS 680-169418/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/20/2010 1515
Date Prepared: N/A

Analysis Batch: 680-169418
Prep Batch: N/A
Units: mg/L

Instrument ID: Lachat 2
Lab File ID: N/A
Initial Weight/Volume: 7 mL
Final Weight/Volume: 7 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N	0.500	0.509	102	90 - 110	
Nitrate Nitrite as N	1.00	1.01	101	90 - 110	
Nitrite as N	0.500	0.498	100	90 - 110	

JUN 15 2010

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-169418

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	680-57808-1	Analysis Batch:	680-169418	Instrument ID:	Lachat 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	05/20/2010 1515			Final Weight/Volume:	25 mL
Date Prepared:	N/A				

MSD Lab Sample ID:	680-57808-1	Analysis Batch:	680-169418	Instrument ID:	Lachat 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	05/20/2010 1515			Final Weight/Volume:	25 mL
Date Prepared:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate as N	105	105	90 - 110	0	10		
Nitrate Nitrite as N	103	103	90 - 110	0	10		
Nitrite as N	100	101	90 - 110	0	10		

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57806-1
Sdg Number: KPS057

Method Blank - Batch: 680-169423

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 680-169423/1	Analysis Batch:	680-169423	Instrument ID:	Lachat 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	7 mL
Date Analyzed:	05/21/2010 1544			Final Weight/Volume:	7 mL
Date Prepared:	N/A				

Analyte	Result	Qual	RL
Nitrate as N	0.050	U	0.050
Nitrate Nitrite as N	0.050	U	0.050
Nitrite as N	0.050	U	0.050

Lab Control Sample - Batch: 680-169423

Method: 353.2
Preparation: N/A

Lab Sample ID:	LCS 680-169423/2	Analysis Batch:	680-169423	Instrument ID:	Lachat 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	7 mL
Date Analyzed:	05/21/2010 1546			Final Weight/Volume:	7 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limits	Qual
Nitrate as N	0.500	0.500	100	90 - 110	
Nitrate Nitrite as N	1.00	0.998	100	90 - 110	
Nitrite as N	0.500	0.498	100	90 - 110	

JUN 15 2010 EZ, K.

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Solutia Inc

Job Number: 680-57808-1
Seq Number: KPS057

Method Blank - Batch: 680-169936

Method: 353.2
Preparation: N/A

Lab Sample ID	MB 680-169936/1	Analysis Batch:	680-169936	Instrument ID	Latchat 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	7 mL
Date Analyzed:	05/26/2010 1604			Final Weight/Volume:	7 mL
Date Prepared:	N/A				

Analyte	Result	Qual	RL
Nitrate as N	0.050	U	0.050
Nitrate Nitrite as N	0.050	U	0.050
Nitrite as N	0.050	U	0.050

Lab Control Sample - Batch: 680-169936

Method: 353.2
Preparation: N/A

Lab Sample ID:	LCS 680-169936/2	Analysis Batch:	680-169936	Instrument ID:	Latchat 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	7 mL
Date Analyzed:	05/26/2010 1605			Final Weight/Volume:	7 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec	Limits	Qual
Nitrate as N	0.500	0.508	102	90 - 110	
Nitrate Nitrite as N	1.00	1.00	100	90 - 110	
Nitrite as N	0.500	0.497	99	90 - 110	

JUN 15 2010 ETK

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Scuba Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Method Blank - Batch: 680-170135

Method: 353.2
Preparation: N/A

Lab Sample ID:	MB 680-170135/1	Analysis Batch:	680-170135	Instrument ID:	Latchat 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	7 mL
Date Analyzed:	05/25/2010 1549			Final Weight/Volume:	7 mL
Date Prepared:	N/A				

Analyte	Result	Qual	RL
Nitrite as N	0.050	U	0.050
Nitrate Nitrite as N	0.050	U	0.050
Nitrite as N	0.050	U	0.050

Lab Control Sample - Batch: 680-170135

Method: 353.2
Preparation: N/A

Lab Sample ID:	LCS 680-170135/2	Analysis Batch:	680-170135	Instrument ID:	Latchat 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	7 mL
Date Analyzed:	05/25/2010 1549			Final Weight/Volume:	7 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec	Limit	Qual
Nitrite as N	0.500	0.504	101	90 - 110	
Nitrate Nitrite as N	1.00	1.00	100	90 - 110	
Nitrite as N	0.500	0.500	100	90 - 110	

JUN 15 2010

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Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KP8057

Method Blank - Batch: 680-170182

Method: 353.2
Preparation: N/A

Lab Sample ID	MB 680-170182/1	Analysis Batch:	680-170182	Instrument ID	Latchat 2
Client Matrix	Water	Prep Batch:	N/A	Lab File ID	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	7 mL
Date Analyzed:	05/27/2010 1538			Final Weight/Volume:	7 mL
Date Prepared:	N/A				

Analyte	Result	Qual	RL
Nitrate as N	0.050	U	0.050
Nitrate Nitrite as N	0.050	U	0.050
Nitrite as N	0.050	U	0.050

Lab Control Sample - Batch: 680-170182

Method: 353.2
Preparation: N/A

Lab Sample ID:	LCS 680-170182/2	Analysis Batch:	680-170182	Instrument ID:	Latchat 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	7 mL
Date Analyzed:	05/27/2010 1538			Final Weight/Volume:	7 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec	Limit	Qual
Nitrate as N	0.500	0.509	102	90 - 110	
Nitrate Nitrite as N	1.00	1.00	100	90 - 110	
Nitrite as N	0.500	0.493	99	90 - 110	

JUN 15 2010 EZL

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS067

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-170182

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	680-58012-1	Analysis Batch:	680-170182	Instrument ID:	Latchat 2
Client Matrix	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution	1.0			Initial Weight/Volume:	25 mL
Date Analyzed:	05/27/2010 1540			Final Weight/Volume:	25 mL
Date Prepared:	N/A				

MSD Lab Sample ID	680-58012-1	Analysis Batch:	680-170182	Instrument ID:	Latchat 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	25 ml
Date Analyzed:	05/27/2010 1541			Final Weight/Volume:	25 mL
Date Prepared:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate as N	105	105	90 - 110	0	10		
Nitrate Nitrite as N	101	101	90 - 110	0	10		
Nitrite as N	99	99	90 - 110	0	10		

JUN 15 2010

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

Client: Saluba Inc

Job Number 680-6780B-1
Sdg Number: KPS057

Method Blank - Batch: 680-169923

Method: 375.4
Preparation: N/A

Lab Sample ID	MB 680-169923/1	Analysis Batch:	680-169923	Instrument ID:	KONELAB1
Client Matrix	Water	Prep Batch:	N/A	Lab File ID:	KONE10527101SO4.xls
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume	2 mL
Date Analyzed:	05/27/2010 0853			Final Weight/Volume:	2 mL
Date Prepared:	N/A				

Analyte	Result	Qual	RL
Sulfate	5.0	U	5.0

Lab Control Sample - Batch: 680-169923

Method: 375.4
Preparation: N/A

Lab Sample ID	LCS 680-169923/2	Analysis Batch:	680-169923	Instrument ID:	KONELAB1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	KONE10527101SO4.xls
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume	2 mL
Date Analyzed:	05/27/2010 0853			Final Weight/Volume:	2 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	20.0	20.6	103	75 - 125	

JUN 15 2010

Quality Control Results

Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KPS057

Method Blank - Batch: 680-170294

Method: 375.4
Preparation: N/A

Lab Sample ID:	MB 680-170294/1	Analysis Batch:	680-170294	Instrument ID:	KONELAB1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	KONE10601101SO4.xls
Dilution:	1.0	Units:	mg/l	Initial Weight/Volume:	2 mL
Date Analyzed:	06/01/2010 1510			Final Weight/Volume:	2 mL
Date Prepared:	N/A				

Analyte	Result	Qual	RL
Sulfate	5.0	U	5.0

Lab Control Sample - Batch: 680-170294

Method: 375.4
Preparation: N/A

Lab Sample ID:	LCS 680-170294/2	Analysis Batch:	680-170294	Instrument ID:	KONELAB1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	KONE10601101SO4.xls
Dilution:	1.0	Units:	mg/l	Initial Weight/Volume:	2 mL
Date Analyzed:	06/01/2010 1510			Final Weight/Volume:	2 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec	Limit	Qual
Sulfate	20.0	19.6	98	75 - 125	

Duplicate - Batch: 680-170294

Method: 375.4
Preparation: N/A

Lab Sample ID:	680-57937-1	Analysis Batch:	680-170294	Instrument ID:	KONELAB1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	KONE10601101SO4.xls
Dilution:	1.0	Units:	mg/l	Initial Weight/Volume:	2 mL
Date Analyzed:	06/01/2010 1510			Final Weight/Volume:	2 mL
Date Prepared:	N/A				

Analyte	Sample Result	Qual	Result	RPD	Limit	Qual
Sulfate	5.0	U	5.0	NC	30	U

JUN 15 2010 Ezli

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Quality Control Results

Client: Solutia Inc.

Job Number: 680-57806-1
Sdg Number: KPS057

Method Blank - Batch: 680-170087

Method: 415.1
Preparation: N/A

Lab Sample ID:	MB 680-170087/2	Analysis Batch:	680-170087	Instrument ID:	TOC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	TOC052710.txt
Dilution:	1.0	Units:	mg/l	Initial Weight/Volume:	25 mL
Date Analyzed:	05/27/2010 1116			Final Weight/Volume:	25 mL
Date Prepared:	N/A				

Analyte	Result	Qual	RL
Total Organic Carbon	1.0	U	1.0

Lab Control Sample - Batch: 680-170087

Method: 415.1
Preparation: N/A

Lab Sample ID:	LCS 680-170087/4	Analysis Batch:	680-170087	Instrument ID:	TOC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	TOC052710.txt
Dilution:	1.0	Units:	mg/l	Initial Weight/Volume:	25 mL
Date Analyzed:	05/27/2010 1146			Final Weight/Volume:	25 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Organic Carbon	20.0	19.3	97	80 - 120	

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Client: Solutia Inc

Job Number: 680-57808-1
Sdg Number: KPS057

Method Blank - Batch: 680-170264

Method: 415.1
Preparation: N/A

Lab Sample ID: MB 680-170264/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1018
Date Prepared: N/A

Analysis Batch: 680-170264
Prep Batch: N/A
Units: mg/L

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

Analyte	Result	Qual	RL
Dissolved Organic Carbon-Dissolved	1.0	U	1.0

Lab Control Sample - Batch: 680-170264

Method: 415.1
Preparation: N/A

Lab Sample ID: LCS 680-170264/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1018
Date Prepared: N/A

Analysis Batch: 680-170264
Prep Batch: N/A
Units: mg/L

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

Analyte	Spike Amount	Result	% Rec	Limit	Qual
Dissolved Organic Carbon-Dissolved	20.0	19.1	96	80 - 120	

Duplicate - Batch: 680-170264

Method: 415.1
Preparation: N/A

Lab Sample ID: 680-57973-2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1018
Date Prepared: N/A

Analysis Batch: 680-170264
Prep Batch: N/A
Units: mg/L

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

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Dissolved Organic Carbon-Dissolved	4.2	4.1	2	30	

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Client: Solutia Inc.

Job Number: 680-57808-1
Sdg Number: KP5057

Method Blank - Batch: 680-170270

Method: 415.1
Preparation: N/A

Lab Sample ID	MB 680-170270/14	Analysis Batch:	680-170270	Instrument ID	TOC3
Client Matrix	Water	Prep Batch:	N/A	Lab File ID	TOC052810.txt
Dilution	1.0	Units	mg/L	Initial Weight/Volume	25 mL
Date Analyzed	05/28/2010 1344			Final Weight/Volume	25 mL
Date Prepared	N/A				

Analyte	Result	Qual	R.
Total Organic Carbon	1.0	U	1.0

Lab Control Sample - Batch: 680-170270

Method: 415.1
Preparation: N/A

Lab Sample ID:	LCS 680-170270/23	Analysis Batch:	680-170270	Instrument ID	TOC3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	TOC052810.txt
Dilution:	1.0	Units	mg/L	Initial Weight/Volume	25 mL
Date Analyzed:	05/28/2010 1604			Final Weight/Volume	25 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Organic Carbon	20.0	19.2	96	80 - 120	

JUN 15 2010

US EPA ARCHIVE DOCUMENT

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: Nathan McNurlan	Date: 5/19/10	COC No: 3
URS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gulitis	Carrier: FedEx	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 24662401.00003
St. Louis, MO 63110	Calendar (C) or Work Days (W)			
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks			SDG No.
Project Name: 2010 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.	Sample Specific Notes:
BSA MW-015-0510 ✓	5/19/10	1020	G	Water	12	
BSA MW-015-F(0.2)-0510 ✓	5/19/10	1020	G	Water	2	
2010 LTM Trip Blank #01	5/19/10	0000	---	Water	3	

Sample Identification	VOCs by 8260	Total Pr/Mn by 6010B	Alk/CO3 by 310.1	Chloride by 325.3/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
BSA MW-015-0510	3	2	1	1	3	2	1		
BSA MW-015-F(0.2)-0510	X							1	1
2010 LTM Trip Blank #01	3								
Preservation Used: 1=Ice, 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other	2	1	4	1	1	1	3.2	2	4

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 0.4

680-57808

Relinquished by:	Company	Date/Time	Received by:	Company	Date/Time
[signature]	URS	5/19/10 1200	Susan O Daughtry	TA SAV	5-20-10 1002
Relinquished by:	Company	Date/Time	Received by:	Company	Date/Time
Relinquished by:	Company	Date/Time	Received by:	Company	Date/Time

JUN 15 2010 [signature]

Savannah
5102 LaRoche Avenue
Savannah, GA 31404
phone 912.354.7858 fax 912.353.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Nathan McNurlen	Date: 5/20/10	COC No: 1
URS Corporation	Tel/Fax: (314) 743-4229	Lab Contact: Lidya Gulich	Carrier:	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No
St. Louis, MO 63146	Calendar (C) or Work Days (W)			21562401.00003
(314) 429-0100 Phone	TAT if different from Below Supplied			
(314) 429-0457 FAX	☐ 2 weeks			SDG No.
Project Name: 2Q10 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		VOCs by 8260	Total Fe/Mn by 6010B	Alk/CO2 by 310.1	Chloride by 325.2/Sulfate by 315.4	Methane by RSK 175	Nitrate by 353.2	TOC by 415.1	Dissolved Fe/Mn by 6010B	DOC by 415.1	Sample Specific Notes:
CPA-MW-01D-0510	5/20/10	1050	G	Water	12		3	1	1	1	3	2	1			
CPA-MW-01D-F(0.2)-0510	5/20/10	1050	G	Water	2	X								1	1	
CPA-MW-02D-0510	5/20/10	1400	G	Water	12		3	1	1	1	3	2	1			
CPA-MW-02D-F(0.2)-0510	5/20/10	1400	G	Water	2	X								1	1	
CPA-MW-02D-0510-AD	5/20/10	1400	G	Water	12		3	1	1	1	3	2	1			
CPA-MW-02D-F(0.2)-0510-AD	5/20/10	1400	G	Water	2	X								1	1	
BSA-MW-04D-0510	5/20/10	1640	G	Water	12		3	1	1	1	3	2	1			
BSA-MW-04D-F(0.2)-0510	5/20/10	1640	G	Water	2	X								1	1	
2Q10 LTM Trip Blank # 5				Water	3		3									
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other							2	1	4	1	1	1	3,3	2	4	3

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 1 Data Package

2.8°C 680-57861

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
[signature]	URS	5/20/10 1800	[signature]	TA	5/20/10 1800
[signature]	TA	5/20/10 1820			
			George K Conner	TASN	5/21/10 0906

JUN 15 2010 EZK

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: Nathan McNurlen	Date: 5/24/10	COC No.
URS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gulicia	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)			21582401.00003
(314) 429-0100 Phone	TAT if different from Below Standard			SDG No
(314) 429-0462 FAX	☐ 2 weeks			
Project Name: 2010 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	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-05D-0510	5/24/10	1130	G	Water	12		3	1	1	2	3	2	1			
BSA-MW-05D-0510-0510		1130	G	Water	2	X								1	1	
BSA-MW-05D-0510-MS		1130	G	Water	3		3									
BSA-MW-05D-0510-MSD		1130	G	Water	3		3									
CPA-MW-04D-0510		1345	G	Water	12		3	1	1	1	3	2	1			
CPA-MW-04D-F(0.2)-0510		1345	G	Water	2	X								1	1	
2010 LTM Trip Blank # 3	5/24/10	—	G	Water	3		3									
Preservation Used: 1=Ice; 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other _____							2	3	4	1	1	3	5.1	2	4	3

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 4.6

680-57937

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	5/24/10 1600	[signature]	TASAV	5-25-10 0928
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

JUN 15 2010 [signature]

US EPA ARCHIVE DOCUMENT

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phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Nathan McNurlen	Date: 5/25/10	COC No:
URS Corporation	Tel/Fax: (314) 743-4728	Lab Contact: Lidya Gelizis	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)			21502401.00003
(314) 429-0100 Phone	TAT if different from below: Standard			SDS No
(314) 429-0462 FAX	☐ 2 weeks			
Project Name: 2Q10 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	Total Fe/Mn by 6010B	Alk/CO2 by 310.1	Chloride by 325.3/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-03D-0510	5/25/10	1020	G	Water	12		3	1	1	1	3	2	1			
BSA MW-03D-F(0.2)-0510		1020	G	Water	2	X								1	1	
BSA-MW-03D-0510-EB		0920	G	Water	3		3									
BSA-MW-02D-0510		1520	G	Water	12		3*	1	1	1	3	2	1			*VOC samples
BSA-MW-02D-F(0.2)-0510		1520	G	Water	2									1	1	unpreserved due
																to effervescent
																reaction to HCl.
2Q10 LTM Trip Blank # 4	5/25/10	—	G	Water	3		3									
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other							2	1	4	3	1	1	3,7	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 2.8
680-57973

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	5/25/10 1700	Ruth A Daughtry	MSAV	5-26-10 0905
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

JUN 15 2010 [signature]

US EPA ARCHIVE DOCUMENT

Savannah
5102 LaRoche Avenue
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phone 912.354.7858 fax 912.353.0165

TestAmerica

Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Nathan McNurlen	Date: 5/26/10	COC No
URS Corporation	Tel/Fax: (314) 748-4228	Lab Contact: Lidya Gubela	Carrier: FedEx	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No
St. Louis, MO 63110	Calendar (C) or Work Days (W)			21562401 00003
(314) 429-0100 Phone	TAT if different from Below Quoted			
(314) 429-0462 FAX	☐ 2 weeks			SDG No
Project Name: 2Q10 LTM GW Sampling	☐ 1 week			
Site: Solutia WG Krumrich Facility	☐ 2 days			
P.O.#	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Cont. Unit	Filtered Sample	VOCs by 8260	Total Fe/Mn by 6020B	Alk/CO2 by 1983	Chloride by 425.2/Sulfate by 375.4	Methane by RSK 175	Nitrate by 353.2	SOC by 415.1	Dissolved Fe/Mn by 6010B	DOC by 415.1									Sample Specific Notes
CPA MW 03D 0510	5/26/10	1000	G	Water	12		3	1	1	1	3	2	1											VOC samples
CPA MW 03D 5(6.2) 0510	5/26/10	1000	G	Water	2	X								1	1									unpreserved due
																								to effervescent
																								reaction with HCl
2Q10 LTM Trip Bank # 5	5/26/10	—	G	Water	4		3																	
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 1 Data Package

2.6°C 680-58012

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
[signature]	URS	5/26/10 1400	[signature]	TUSN	5/27/10 0443
Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by	Company	Date/Time	Received by	Company	Date/Time

JUN 15 2010 [signature]

Login Sample Receipt Check List

Client: JRS Corporation

Job Number: 680-57808-1
SDG Number: KPS057

Login Number: 57808
Creator: Daugherty, Beth
List Number: 1

List Source: TestAmerica Savannah

Question	T/F/NA	Comment
Radioactivity either was not measured or if measured is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with	True	
Samples were received on ice	True	
Cooler Temperature is acceptable	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible	True	
COC is filled out with all pertinent information	True	
There are no discrepancies between the sample IDs on the containers and the COC	True	
Samples are received within Holding Time	True	
Sample containers have legible labels	True	
Containers are not broken or leaking	True	
Sample collection date/times are provided	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present	N/A	
Samples do not require splitting or compositing	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	

TestAmerica Savannah

JUN 15 2010

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Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-57808-1
SDG Number: KPS057

Login Number: 57861
Creator: Conner, Kristen
List Number: 1

List Source: TestAmerica Savannah

Question	T / F / N/A	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact	True	
The cooler or samples do not appear to have been compromised or tampered with	True	
Samples were received on ice	True	
Cooler Temperature is acceptable	True	
Cooler Temperature is recorded	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time	True	
Sample containers have legible labels	True	
Containers are not broken or leaking	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
There is sufficient vol. for all requested analyses, incl any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubbles >6mm (1/4") in diameter	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing	N/A	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	

JUN 16 2010

US EPA ARCHIVE DOCUMENT

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-57008-1
SDG Number: KP5057

Login Number: 57937
Creator: Daughtry, Beth
List Number: 1

List Source: TestAmerica Savannah

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.6 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs.	True	
VOA sample vials do not have headspace or bubble a >6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs.	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	True	

TestAmerica Savannah

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-57808-1
SDG Number: KPS057

Login Number: 57973
Creator: Daughtry, Beth
List Number: 1

List Source: TestAmerica Savannah

Question	T / F / N/A	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	1 cooler rec'd on ice
Cooler Temperature is acceptable	True	
Cooler Temperature is recorded	True	2.8 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
There are no discrepancies between the sample IDs on the containers and the COC	True	
Samples are received within Holding Time	True	
Sample containers have legible labels	True	
Containers are not broken or leaking	True	
Sample collection date/times are provided	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	MS/MSD not requested in client SDG (no additional volume provided).
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	

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JUN 15 2010

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Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-57808-1
SDG Number: KP5057

Login Number: 58012
Creator: Conner, Keaton
List Number: 1

List Source: TestAmerica Savannah

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded	True	2.5 C
COC is present	True	
COC is filled out in ink and legible	True	
COC is filled out with all pertinent information	True	
There are no discrepancies between the sample IDs on the containers and the COC	True	
Samples are received within Holding Time	True	
Sample containers have legible labels	True	
Containers are not broken or leaking	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	MS/MSD not requested (no additional volume provided)
VOA sample vials do not have headspace or bubble is <6 mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	

JUN 15 2010

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SDG KPS058

Results of Samples from Monitoring Well:

CPA-MW-5D

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Solutia Krummrich Data Review
WGK LTM 2Q10

Laboratory SDG: KPS058

Reviewer: Elizabeth Kunkel

Date Reviewed: 6/16/2010

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

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

Sample Identification
CPA-MW-05D-0610
CPA-MW-05D-F(0.2)-0610
2Q10 LTM Trip Blank #6

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?

Although not indicated in the laboratory case narrative samples were diluted due to high levels of VOCs, chloride, and sulfate. This issue will be 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

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6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples reported as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

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

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

12.0 Additional Qualifications

Were additional qualifications applied?

No

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-58262-1

SDG Number: KPS058

Job Description: WGK Long Term Monitoring 2Q10 June 2010

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

Attention: Mr. Jerry Rinaldi

Lidya Gulizia

Lidya Guliz'a
Project Manager I
lidya.gulizia@testamericainc.com
06/15/2010

Reviewed on JUN 15 2010 EZK

cc: Mr. Bob Bilman
Dave Palmer

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

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TestAmerica Laboratories, Inc.
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Job Narrative
680-58282-1 | SDG KPS056

Receipt
All samples were received in good condition within temperature requirements

GC/MS VOA
No analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

Metals
Method(s) 6010B. Due to the high concentration of iron the matrix spike / matrix spike duplicate (MS/MSD) for batch 680-171050 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria

No other analytical or quality issues were noted

General Chemistry
No analytical or quality issues were noted

VOA Prep
No analytical or quality issues were noted

Comments
No additional comments.

JUN 15 2010

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METHOD SUMMARY

Client: Solutia Inc.

Job Number: 580-58262-1
Sdg Number: KPS058

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

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

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

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

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

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METHOD / ANALYST SUMMARY

Client: Soluba Inc

Job Number: 680-58262-1
Sdg Number: XPS058

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
HSK HSK 175	Mondrief, Amy J	AJM
SW846 6010B	Bland, Brian	BCB
MCAWW 310.1	Vasquez, Juana	JV
MCAWW 325.2	Ross, Jon	JR
MCAWW 353.2	Ross, Jon	JR
MCAWW 375.4	Ross, Jon	JR
MCAWW 415.1	Blackshear, Kim	KB

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SAMPLE SUMMARY

Client: Solutis Inc

Job Number: 680-58262-1
Sdg Number: KPS058

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-58262-1	CPA-MW-05D-0610	Water	06/03/2010 1520	06/04/2010 0941
680-58262-2	CPA-MW-05D-FIELD-0610	Water	06/03/2010 1520	06/04/2010 0941
680-58262-3TB	2010 LTM Trip Blank #6	Water	06/03/2010 0000	06/04/2010 0941

JUN 15 2010 EM

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SAMPLE RESULTS

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

Analytical Data

Client: Solutia Inc.

Job Number: 680-58252-1
Sdg Number: KPS050

Client Sample ID: CPA-MW-050-0610

Lab Sample ID: 680-58252-1
Client Matrix: Water

Date Sampled: 06/03/2010 1620
Date Received: 06/04/2010 0941

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-71033	Instrument ID:	MSD
Preparation:	5030B		Lab File ID:	d0034.d
Dilution:	5.0		Initial Weight/Volume:	5 ml
Date Analyzed:	06/09/2010 1556		Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1556			

Analyte	Result (ug/L)	Qualifier	RL
Benzene	5.0	U	5.0
* ~~Chlorobenzene~~	~~1800~~	~~E~~	~~5.0~~
1,2-Dichlorobenzene	18		5.0
1,3-Dichlorobenzene	5.0	U	5.0
1,4-Dichlorobenzene	21		5.0

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

JUN 15 2010

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* "Use these results only. All other data was reported from the 5.0 X dilution analysis."

Analytical Data

Client: Solutia Inc

Job Number: 680-58262-1
Sdg Number: KPS058

Client Sample ID: CPA-MW-050-0510

Lab Sample ID: 680-58262-1
Client Matrix: Water

Date Sampled: 06/03/2010 1520
Date Received: 06/04/2010 0941

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171185		Instrument ID:	MSC
Preparation:	5030B			Lab File ID:	e3071.d
Dilution:	10			Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1434	Run Type:	DI	Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1434				

Analyte	Result (ug/L)	Qualifier	RL
~~Benzene~~	~~19~~	~~J~~	~~49~~
* Chlorobenzene	150D	J	10
~~1,2-Dichlorobenzene~~	~~20~~	~~J~~	~~19~~
~~1,3-Dichlorobenzene~~	~~10~~	~~J~~	~~19~~
~~1,4-Dichlorobenzene~~	~~21~~	~~J~~	~~19~~

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	94		75 - 121
Toluene-d8 (Surr)	105		75 - 120

JUN 15 2010 EJK

Client: Solutia Inc.

Job Number: 680-58262-1
Sdg Number: KPS058

Client Sample ID: **2010 LTM Trip Blank #6**

Lab Sample ID: 680-58262-31B
Client Matrix: Water

Date Sampled: 06/03/2010 0000
Date Received: 06/04/2010 0941

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-171033	Instrument ID:	MS0
Preparation:	5030B		Lab File ID:	ms0027.n
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	06/06/2010 1330		Final Weight/Volume:	5 mL
Date Prepared:	06/06/2010 1330			

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

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	95		75 - 120
Dibromofluoromethane	100		75 - 121
Toluene-d8 (Surr)	105		75 - 120

JUN 15 2010

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Client: Solutia Inc.

Job Number: 680-58262-1
Sdg Number: KPS058

Client Sample ID: CPA-MW-050-0510

Lab Sample ID: 680-58262-1
Client Matrix: Water

Date Sampled: 06/03/2010 1520
Date Received: 06/04/2010 0941

RSK-175 Dissolved Gases (GC)

Method	RSK-175	Analysis Batch: 680-170723	Instrument ID:	VGUHD2
Preparation:	N/A		Initial Weight/Volume:	17000 ul
Dilution	1.0		Final Weight/Volume	17 mL
Date Analyzed	06/07/2010 1246		Injection Volume	1 uL
Date Prepared			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Ethane	3.0		0.39
Ethylene	0.33	U	0.33
Methane	13		0.15

JUN 15 2010

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Client: Solutia Inc

Job Number: 680-58262-1
Sdg Number: KPS058

Client Sample ID: CPA-MW-05D-0610

Lab Sample ID: 680-58262-1
Client Matrix: Water

Date Sampled: 06/03/2010 1570
Date Received: 06/04/2010 0941

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Batch: 680-171193		Instrument ID:	ICP3
Preparation:	3005A	Prep Batch: 680-171060		Lab File ID:	061010.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1638			Final Weight/Volume:	50 mL
Date Prepared:	06/09/2010 1631				

Analyte	Result (mg/L)	Qualifier	RL
Iron	71		0.050
Manganese	2.4		0.010

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-58262-1
Sdg Number: KPS058

Client Sample ID: CPA-MW-05D-F(0.2)-0610

Lab Sample ID: 680-58262-2
Client Matrix: Water

Date Sampled: 06/03/2010 1520
Date Received: 06/04/2010 0941

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 680-171193		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-171050		Lab File ID:	061010.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1653			Final Weight/Volume:	50 mL
Date Prepared:	06/09/2010 1631				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	31		0.050
Manganese, Dissolved	2.5		0.010

JUN 15 2010

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General Chemistry

Client Sample ID: CPA-MW-06D-0610

Lab Sample ID: 680-58282-1
Client Matrix: Water

Date Sampled: 06/03/2010 1520
Date Received: 06/04/2010 0841

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	290		mg/L	5.0	5.0	325.2
Analysis Batch: 680-171304		Date Analyzed: 06/08/2010 1140				
Nitrate as N	0.058		mg/L	0.050	1.0	353.2
Analysis Batch: 680-171115		Date Analyzed: 06/04/2010 1432				
Sulfate	1800		mg/L	500	100	375.4
Analysis Batch: 680-171005		Date Analyzed: 06/09/2010 1245				
Total Organic Carbon	3.8		mg/L	1.0	1.0	415.1
Analysis Batch: 680-171280		Date Analyzed: 06/10/2010 1914				

Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	320		mg/L	5.0	1.0	310.1
Analysis Batch: 680-170986		Date Analyzed: 06/08/2010 1210				
Carbon Dioxide, Free	130		mg/l	5.0	1.0	310.1
Analysis Batch: 680-170986		Date Analyzed: 06/08/2010 1210				

JUN 15 2010

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General Chemistry

Client Sample ID: CPA-MW-05D-F(0.2)-0610

Lab Sample ID: 680-58262-2
Client Matrix: Water

Date Sampled: 06/03/2010 1520
Date Received: 06/04/2010 0941

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	3.1		mg/L	1.0	1.0	415.1

Analysis Batch: 680-171294 Date Analyzed: 06/10/2010 1438

JUN 15 2010

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DATA REPORTING QUALIFIERS

Client: Solutia Inc

Job Number: 680-58262-1
Sdg Number: KPS059

Lab Section	Qualifier	Description
GC/MS VOA		
	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		
	U	Indicates the analyte was analyzed for but not detected
Metals		
	U	Indicates the analyte was analyzed for but not detected.
General Chemistry		
	U	Indicates the analyte was analyzed for but not detected.

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QUALITY CONTROL RESULTS

Client: Solute Inc

Job Number 680-58252-1
Sdg Number KPS058

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:680-171033					
LCS 680-171033/12	Lab Control Sample	T	Water	8260B	
LCSD 680-171033/13	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171033/19	Method Blank	T	Water	8260B	
680-58252-1	CPA-MW-05D-0610	T	Water	8260B	
680-58252-3TB	2C10 LTM Trip Blank #6	T	Water	8260B	
Analysis Batch:680-171185					
LCS 680-171185/11	Lab Control Sample	T	Water	8260B	
LCSD 680-171185/12	Lab Control Sample Duplicate	T	Water	8260B	
MB 680-171185/14	Method Blank	T	Water	8260B	
680-58252-1D	CPA-MW-05D-0610	T	Water	8260B	

Report Basis
T = Total

GC VOA

Analysis Batch:680-170720					
LCS 680-170720/6	Lab Control Sample	T	Water	RSK-175	
LCSD 680-170720/7	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-170720/8	Method Blank	T	Water	RSK-175	
680-58252-1	CPA-MW-05D-0610	T	Water	RSK-175	

Report Basis
T = Total

Metals

Prep Batch: 680-171050					
LCS 680-171050/21-A	Lab Control Sample	R	Water	3005A	
MB 680-171050/20-A	Method Blank	R	Water	3005A	
680-58252-1	CPA-MW-05D-0610	R	Water	3005A	
680-58252-2	CPA-MW-05D-FD-0210-0610	D	Water	3005A	
Analysis Batch:680-171190					
LCS 680-171050/21-A	Lab Control Sample	R	Water	6010B	680-171050
MB 680-171050/20-A	Method Blank	R	Water	6010B	680-171050
680-58252-1	CPA-MW-05D-0610	R	Water	6010B	680-171050
680-58252-2	CPA-MW-05D-FD-0210-0610	D	Water	6010B	680-171050

Report Basis
D = Dissolved
R = Total Recoverable

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Client: Solutia Inc.

Job Number: 680-58262-1
Sdg Number: KPS058

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:680-170986					
LCS 680-170986/6	Lab Control Sample	T	Water	310.1	
MB 680-170986/5	Method Blank	T	Water	310.1	
680-58262-1	CPA-MW-05D-0610	T	Water	310.1	
Analysis Batch:680-171004					
LCS 680-171004/1	Lab Control Sample	T	Water	325.2	
MB 680-171004/3	Method Blank	T	Water	325.2	
680-58262-1	CPA-MW-05D-0610	T	Water	325.2	
Analysis Batch:680-171005					
LCS 680-171005/2	Lab Control Sample	T	Water	375.4	
MB 680-171005/1	Method Blank	T	Water	375.4	
680-58262-1	CPA-MW-05D-0610	T	Water	375.4	
Analysis Batch:680-171115					
LCS 680-171115/2	Lab Control Sample	T	Water	353.2	
MB 680-171115/1	Method Blank	T	Water	353.2	
680-58262-1	CPA-MW-05D-0610	T	Water	353.2	
Analysis Batch:680-171289					
LCS 680-171289/4	Lab Control Sample	T	Water	415.1	
MB 680-171289/2	Method Blank	T	Water	415.1	
680-58262-1	CPA-MW-05D-0610	T	Water	415.1	
Analysis Batch:680-171294					
LCS 680-171294/2	Lab Control Sample	D	Water	415.1	
MB 680-171294/1	Method Blank	D	Water	415.1	
680-58262-2	CPA-MW-05D-F(0.2)-0610	D	Water	415.1	

Report Basis
D = Dissolved
T = Total

US EPA ARCHIVE DOCUMENT

Client: Sotuha Inc.

Job Number: 680-58262-1
Sdg Number: KPS058

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-58262-1	CPA-MW-05D-0610	91	91	107
680-58262-1 DL	CPA-MW-05D-0610 DL	95	94	105
680-58262-3	2Q10 LTM Trip Blank #6	95	100	105
MB 680-171033/16		95	101	105
MB 680-171185/14		94	98	105
LCS 680-171033/12		96	98	99
LCS 680-171185/11		97	97	102
LCSD 680-171033/13		103	101	106
LCSD 680-171185/12		95	94	101

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120

JUN 15 2010 22K

US EPA ARCHIVE DOCUMENT

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Quality Control Results

Client: Solutia Inc

Job Number: 680-59262-1
Sdg Number: KPS058

Method Blank - Batch: 680-171033

Method: 8260B
Preparation: 5030B

Lab Sample ID	MB 680-171033/16	Analysis Batch:	680-171033	Instrument ID:	MSD
Client Matrix	Water	Prep Batch:	N/A	Lab File ID:	oc284.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/08/2010 1135			Final Weight/Volume:	5 ml
Date Prepared:	06/08/2010 1135				

Analyte	Result	Qual	RL
Benzene	1.0	J	1.0
Chlorobenzene	1.0	J	1.0
1,2-Dichlorobenzene	1.0	J	1.0
1,3-Dichlorobenzene	1.0	J	1.0
1,4-Dichlorobenzene	1.0	J	1.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	96	75 - 120
Dibromofluoromethane	101	75 - 121
Toluene-d8 (Surr)	105	75 - 120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-50262-1
Sdg Number: KP5056

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-171033

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-171033/12	Analysis Batch:	680-171033	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq779.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 0951			Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 0951				

LCSD Lab Sample ID:	LCSD 680-171033/13	Analysis Batch:	680-171033	Instrument ID:	MSO
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq780.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/09/2010 1012			Final Weight/Volume:	5 mL
Date Prepared:	06/09/2010 1012				

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	100	107	77 - 119	7	30		
Chlorobenzene	95	100	85 - 116	4	30		
1,2-Dichlorobenzene	100	104	79 - 124	4	30		
1,3-Dichlorobenzene	99	105	78 - 125	6	30		
1,4-Dichlorobenzene	96	102	81 - 122	5	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	98	103	75 - 120
Dibromofluoromethane	95	101	75 - 121
Toluene-d8 (Surr)	99	106	75 - 120

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-98262-1
Sdg Number: KP5056

Method Blank - Batch: 680-171185

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-171185/14	Analysis Batch:	680-171185	Instrument ID:	MS0
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	ou299.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1122			Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 1122				

Analyte	Result	Qual	RL
Benzene	1.0	U	1.0
Chlorobenzene	1.0	U	1.0
1,2-Dichlorobenzene	1.0	U	1.0
1,3-Dichlorobenzene	1.0	U	1.0
1,4-Dichlorobenzene	1.0	U	1.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	94	75 - 120
Dibromofluoromethane	90	75 - 121
Toluene-d8 (Surr)	105	75 - 120

JUN 15 2010 ZZ

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Quality Control Results

Client: Solutia Inc.

Job Number: 680-58262-1
Seq Number: KPS058

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-171185

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID	LCS 680-171185/11	Analysis Batch:	680-171185	Instrument ID:	MSD
Client Matrix	Water	Prep Batch:	N/A	Lab File ID	aq295.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 ml
Date Analyzed:	06/10/2010 0959			Final Weight/Volume:	5 mL
Date Prepared:	06/10/2010 0959				

LCSD Lab Sample ID:	LCSD 680-171185/12	Analysis Batch:	680-171185	Instrument ID:	MSD
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	aq295.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/10/2010 1019			Final Weight/Volume:	5 ml
Date Prepared:	06/10/2010 1019				

Analyte	% Rec LCS	% Rec LCSD	% Rec Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	101	102	77 - 119	1	30		
Chlorobenzene	94	93	85 - 116	0	30		
1,2-Dichlorobenzene	97	96	79 - 124	1	30		
1,3-Dichlorobenzene	99	98	79 - 125	1	30		
1,4-Dichlorobenzene	95	93	81 - 122	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	97	95	75 - 120
Dibromofluoromethane	97	94	75 - 121
Toluene-d8 (Surr)	102	101	75 - 120

JUN 15 2010

US EPA ARCHIVE DOCUMENT

Quality Control Results

Client: Scotia Inc

Job Number: 680-58262-1
Sdg Number: KPS058

Method Blank - Batch: 680-170720

Method: RSK-175
Preparation: N/A

Lab Sample ID:	MB 680-170720/9	Analysis Batch:	680-170720	Instrument ID:	VGUFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ497.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/07/2010 1800			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

Analyte	Result	Qual	RL
Ethane	0.35	U	0.35
Ethylene	0.33	U	0.33
Methane	0.19	U	0.19

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-170720

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID:	LCS 680-170720/6	Analysis Batch:	680-170720	Instrument ID:	VGUFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ494.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/07/2010 0921			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-170720/7	Analysis Batch:	680-170720	Instrument ID:	VGUFID2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ495.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/07/2010 0934			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ethane	81	93	75 - 125	13	30		
Ethylene	83	91	75 - 125	13	30		
Methane	83	91	75 - 125	13	30		

JUN 15 2010 2212

Client: Solutia Inc

Job Number: 680-58262-1
Sog Number: KPS058

Method Blank - Batch: 680-171050

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID	MB 680-171050/20-A	Analysis Batch:	680-171193	Instrument ID:	ICPO
Client Matrix:	Water	Prep Batch:	680-171050	Lab File ID:	061010.chr
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1628			Final Weight/Volume:	50 mL
Date Prepared:	06/09/2010 1631				

Analyte	Result	Qual	RL
Iron	0.050	U	0.050
Iron, Dissolved	0.050	U	0.050
Manganese	0.010	U	0.010
Manganese, Dissolved	0.010	U	0.010

Lab Control Sample - Batch: 680-171050

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 680-171050/21-A	Analysis Batch:	680-171193	Instrument ID:	ICPO
Client Matrix:	Water	Prep Batch:	680-171050	Lab File ID:	061010.chr
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	06/10/2010 1633			Final Weight/Volume:	50 mL
Date Prepared:	06/09/2010 1631				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	1.00	1.05	105	75 - 125	
Iron, Dissolved	1.00	1.05	105	75 - 125	
Manganese	0.500	0.534	107	75 - 125	
Manganese, Dissolved	0.500	0.534	107	75 - 125	

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US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number 580-50262-1
Sdg Number KPS059

Method Blank - Batch: 680-170986

Method: 310.1
Preparation: N/A

Lab Sample ID: MB 680-170986/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/08/2010 1050
Date Prepared: N/A

Analysis Batch: 680-170986
Prep Batch: N/A
Units: mg/L

Instrument ID: MANTECH
Lab File ID: 0608 10alk.TXT
Initial Weight/Volume: 25 mL
Final Weight/Volume: 100 mL

Analyte	Result	Qual	RL
Alkalinity	5.0	U	5.0
Carbon Dioxide, Free	5.0	U	5.0

Lab Control Sample - Batch: 680-170986

Method: 310.1
Preparation: N/A

Lab Sample ID: LCS 680-170986/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/08/2010 1059
Date Prepared: N/A

Analysis Batch: 680-170986
Prep Batch: N/A
Units: mg/L

Instrument ID: MANTECH
Lab File ID: 0608 10alk.TXT
Initial Weight/Volume: 25 mL
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec	Limit	Qual
Alkalinity	514	493	96	80 - 120	

JUN 15 2010 ZK

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Client: Sputa Inc

Job Number: 680-50252-1
Sdg Number: KPS058

Method Blank - Batch: 680-171004

Method: 325.2
Preparation: N/A

Lab Sample ID: MB 680-171004/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/09/2010 1110
Date Prepared: N/A

Analysis Batch: 680-171004
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE10609101C.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Chloride	1.0	U	1.0

Lab Control Sample - Batch: 680-171004

Method: 325.2
Preparation: N/A

Lab Sample ID: LCS 680-171004/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/09/2010 1108
Date Prepared: N/A

Analysis Batch: 680-171004
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE10609101C.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qua
Chloride	50.0	53.0	102	85 - 115	

JUN 15 2010

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Quality Control Results

Client: Solutia Inc.

Job Number: 680-58262-1
Sog Number: KPS058

Method Blank - Batch: 680-171115

Method: 353.2
Preparation: N/A

Lab Sample ID: MB 680-171115/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/04/2010 1344
Date Prepared: N/A

Analysis Batch: 680-171115
Prep Batch: N/A
Units: mg/L

Instrument ID: Lachat 2
Lab File ID: N/A
Initial Weight/Volume: 7 mL
Final Weight/Volume: 7 mL

Analyte	Result	Qual	RL
Nitrate as N	0.050	U	0.050
Nitrate Nitrite as N	0.050	U	0.050
Nitrite as N	0.050	U	0.050

Lab Control Sample - Batch: 680-171115

Method: 353.2
Preparation: N/A

Lab Sample ID: LCS 680-171115/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/04/2010 1345
Date Prepared: N/A

Analysis Batch: 680-171115
Prep Batch: N/A
Units: mg/L

Instrument ID: Lachat 2
Lab File ID: N/A
Initial Weight/Volume: 7 mL
Final Weight/Volume: 7 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N	0.500	0.492	98	90 - 110	
Nitrate Nitrite as N	1.00	0.998	99	90 - 110	
Nitrite as N	0.500	0.496	99	90 - 110	

JUN 15 2010

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Client: Solutia Inc.

Job Number: 680-58262-1
Sdg Number: KPS058

Method Blank - Batch: 680-171005

Method: 375.4
Preparation: N/A

Lab Sample ID: MB 680-171005/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/09/2010 1208
Date Prepared: N/A

Analysis Batch: 680-171005
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE10609101S04.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Sulfate	5.0	U	5.0

Lab Control Sample - Batch: 680-171005

Method: 375.4
Preparation: N/A

Lab Sample ID: LCS 680-171005/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/09/2010 1209
Date Prepared: N/A

Analysis Batch: 680-171005
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE10609101S04.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec	Limit	Qual
Sulfate	20.0	20.0	100	75 - 125	

JUN 15 2010

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Quality Control Results

Client: Solutia Inc

Job Number: 680-58262-1
Sdg Number: KPS058

Method Blank - Batch: 680-171289

Method: 415.1
Preparation: N/A

Lab Sample ID: MB 680-171289/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/10/2010 1129
Date Prepared: N/A

Analysis Batch: 680-171289
Prep Batch: N/A
Units: mg/L

Instrument ID: TOC3
Lab File ID: TOC061010.txt
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result	Qual	RL
Total Organic Carbon	1.0	U	1.0

Lab Control Sample - Batch: 680-171289

Method: 415.1
Preparation: N/A

Lab Sample ID: LCS 680-171289/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/10/2010 1200
Date Prepared: N/A

Analysis Batch: 680-171289
Prep Batch: N/A
Units: mg/L

Instrument ID: TOC3
Lab File ID: TOC061010.txt
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Organic Carbon	20.0	19.4	97	80 - 120	

JUN 15 2010

Client: Solutia Inc

Job Number: 680-58262-1
Sdg Number: KIPS058

Method Blank - Batch: 680-171294

Method: 415.1
Preparation: N/A

Lab Sample ID: MB 680-171294/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/10/2010 1438
Date Prepared: N/A

Analysis Batch: 680-171294
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 25 mL

Analyte	Result	Qual	RL
Dissolved Organic Carbon-Dissolved	1.0	U	1.0

Lab Control Sample - Batch: 680-171294

Method: 415.1
Preparation: N/A

Lab Sample ID: LCS 680-171294/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/10/2010 1433
Date Prepared: N/A

Analysis Batch: 680-171294
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 25 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dissolved Organic Carbon-Dissolved	20.0	19.4	97	80 - 120	

JUN 15 2010

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Savannah
5102 LaRoche Avenue
Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

TestAmerica

Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Nathan McNurlen	Date: 6/3/10	COC No.
URS Corporation	Tel/Fax: (314) 343-4225	Lab Contact: Lidya Galiria	Carrier: FedEx	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562401.00005
St. Louis, MO 63110	Calendar (C) or Work Days (W)			
(314) 429-0100 Phone	TAT if different from Below (Standard)			SDG No.
(314) 429-0462 FAX	☐ 2 weeks			
Project Name: 2Q10 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	Total Fe/Mn by 6010B	Alk/CO2 by 3.0.1	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
CPA MW-05D 0610	6/3/10	1520	G	Water	12		3	1	1	1	3	2	1			
CPA MW-05D 0610	6/3/10	1520	G	Water	2	X								1	1	
2Q10 LTM Trip Blank # 6	6/3/10	—	—	Water	3		3									
							2	1	4	2	1	1	2,1	2	4	2

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

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

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

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

Temp 3.2

680-58262

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	6/3/10 1730	Bertha Daughtry	TASAV	6/4/10 0941
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

JUN 15 2010 [initials]

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-59262-1
SDG Number: KPS058

Login Number: 59262
Creator: Daughtry, Beth
List Number: 1

List Source: TestAmerica Savannah

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	1 cooler rec'd on ice
Cooler Temperature is acceptable	True	
Cooler Temperature is recorded	True	3.2 C
COC is present	True	
COC is filled out in ink and legible	True	
COC is filled out with all pertinent information	True	
There are no discrepancies between the sample IDs on the containers and the COC	True	
Samples are received within Holding Time	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking	True	
Sample collection date/times are provided	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	MS/MSD received previously for client SDG
VOA sample vials do not have headspace or bubble is <5mm (1/4") in diameter	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphase samples are not present	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	

JUN 1 5 2010

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SDG KPS059

Results of Samples from Monitoring Well:

CPA-MW-2D

US EPA ARCHIVE DOCUMENT

Solutia Krummrich Data Review
WGK LTM 2Q10

Laboratory SDG: KPS059

Reviewer: Elizabeth Kunkel

Date Reviewed: 6/22/2010

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

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

Sample Identification
CPA-MW-02D-0510
CPA-MW-02D-F(0.2)-0510

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?

The cooler receipt form did not indicate any problems; however, MNA parameters for sample CPA-MW-02D-0510 were interpreted by the laboratory as cancelled. URS had the laboratory reactivate analysis of these parameters upon review of the preliminary data from analyses completed as part of SDG KPS057. As a result, this SDG was created in order to report analysis of MNA parameters for reactivated samples.

Yes, the laboratory case narrative indicated that dissolved gases were run outside of holding time criteria. MS/MSD recoveries for sulfate were outside evaluation criteria in sample CPA-MW-02D-0510. Sample CPA-MW-02D-0510 was diluted due to high levels of chloride. These issues are addressed further in the appropriate sections below.

3.0 Holding Times

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

No, sample CPA-MW-02D-0510 was analyzed 12 days outside holding time criteria (14 days) for dissolved gases. Professional judgment was used to qualify but not reject methane and ethane results because these gases were detected. The ethylene result was rejected because ethylene was not detected in sample CPA-MW-02D-0510.

Sample ID	Parameter	Analyte	Qualification
CPA-MW-02D-0510	Dissolved gases	Methane	**J**
CPA-MW-02D-0510	Dissolved gases	Ethane	**J**
CPA-MW-02D-0510	Dissolved gases	Ethylene	**R**

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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?

No

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Samples were analyzed for dissolved gases, metals, and general chemistry parameters; surrogates are not required for these analyses.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

No

Sample ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
CPA-MW-02D-0510	General chemistry	Sulfate	**51/52**	0	75-125/30

Analytical data that required qualification based on MS/MSD are included in the table below.

Sample ID	Parameter	Analyte	Qualification
CPA-MW-02D-0510	General chemistry	Sulfate	**UJ**

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Samples were analyzed for dissolved gases, metals, and general chemistry parameters; there is no internal standard data for review.

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?

No

11.0 Sample Dilutions

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

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

12.0 Additional Qualifications

Were additional qualifications applied?

No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-57861-2

SDG Number: KPS059

Job Description: WGK LTM 2Q10 MAY 2010 - CPA-MW-02D MNA

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

Attention: Mr. Jerry Rinaldi

Lidya Gulizia

Lidya Gulizia
Project Manager I
lidya.gulizia@testamericainc.com
06/22/2010

Reviewed on

JUN 22 2010 EZK

cc: Mr. Bob Billman
Dave Palmer

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

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TestAmerica Laboratories, Inc.
TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404
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Job Narrative
680-57861-2 / SDG KPS059

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

GC VOA
Method(s) RSK-175: The following sample was analyzed outside the method defined holding time because the request for the test was made after the holding time for the sample expired: CPA-MW-02D-0510 (680-57861-3)

No other analytical or quality issues were noted.

Metals
Method(s) 6010B: Due to the high concentration of iron, the matrix spike / matrix spike duplicate (MS/MSD) for batch 680-171606 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-171606 were outside control limits for manganese. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 6010B: Due to the high concentration of manganese, the matrix spike / matrix spike duplicate (MS/MSD) for batch 680-159670 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

No other analytical or quality issues were noted.

General Chemistry
Method(s) 375.4: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 171483 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Comments
Per the sampler's instruction, all parameters (excluding volatiles) were cancelled on May 24, 2010 for parent sample CPA-MW-02D-0510. Following the issue of a preliminary report to the client review team, these analyses were re-activated for lab analysis within and outside of holding time. These analyses are logged under job number 680-57861-2 and are reported under laboratory SDG KPS059.

JUN 22 2010

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METHOD SUMMARY

Client: Solutia Inc

Job Number: 680-57961-2
Sdg Number: KPS059

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Dissolved Gases (GC)	TAL SAV	RSK RSK 175	
Metals (ICP)	TAL SAV	SW846 6010B	
Sample Filtration, Field	TAL SAV		FIELD_FLTRD
Preparation, Total Recoverable or Dissolved Metals	TAL SAV		SW846 3005A
Alkalinity	TAL SAV	MCAWW 310.1	
Chloride	TAL SAV	MCAWW 325.2	
Nitrogen, Nitrate-Nitrite	TAL SAV	MCAWW 353.2	
Sulfate	TAL SAV	MCAWW 375.4	
TOC	TAL SAV	MCAWW 415.1	
DOC	TAL SAV	MCAWW 415.1	
Sample Filtration, Field	TAL SAV		FIELD_FLTRD

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

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

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

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

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METHOD / ANALYST SUMMARY

Client: Solutia Inc.

Job Number: 680-57891-2
Sdg Number: KPS059

Method	Analyst	Analyst ID
RSK: RSK-175	Moncrief, Amy J	AJM
SW846: 6010B	Bland, Brian	BCB
SW846: 6010B	Robertson, Bryn	BR
MCAWW: 310.1	Vasquez, Juana	JV
MCAWW: 325.2	Ross, Jon	JR
MCAWW: 353.2	Ross, Jon	JR
MCAWW: 375.4	Ross, Jon	JR
MCAWW: 415.1	Blackshear, Kim	KB

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SAMPLE SUMMARY

Client: Southern Company

Job Number: 680-57861-2
Sdg Number: KPS059

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-57861-3	CPA-MW-02D-0510	Water	05/20/2010 1400	05/21/2010 0906
680-57861-4	CPA-MW-02D-F(0.2)-0510	Water	05/20/2010 1400	05/21/2010 0906

JUN 22 2010 EZK

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SAMPLE RESULTS

Client: Solutia Inc.

Job Number: 680-57861-2
Sdg Number: KPS059

Client Sample ID: CPA-MW-02D-0510

Lab Sample ID: 680-57861-3
Client Matrix: Water

Date Sampled: 05/20/2010 1400
Date Received: 05/21/2010 0906

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-171725	Instrument ID:	VGUF D2
Preparation:	N/A		Initial Weight/Volume:	17000 uL
Dilution:	1.0		Final Weight/Volume:	17 ml
Date Analyzed:	06/15/2010 1609		Injection Volume:	1 uL
Date Prepared:			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Ethane	3.3	~~H~~ "J"	0.35
Ethylene	0.33	~~UH~~ "R"	0.33

JUN 22 2010 [illegible]

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Analytical Data

Client: Solutia Inc

Job Number: 680-57861-2
Sdg Number: KP5059

Client Sample ID CPA-MW-02D-0510

Lab Sample ID: 680-57861-3
Client Matrix: Water

Date Sampled: 05/20/2010 1400
Date Received: 05/21/2010 0906

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-171728	Instrument ID:	VGUTCD1
Preparation:	N/A		Initial Weight/Volume:	17000 uL
Dilution:	1.0		Final Weight/Volume:	17 mL
Date Analyzed:	06/15/2010 1609		Injection Volume:	1 uL
Date Prepared:			Result Type	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Methane	1800		0.19

JUN 22 2010

Client: Solutia Inc.

Job Number: 680-57861-2
Sdg Number: KPS259

Client Sample ID: CPA-MW-02D-0510

Lab Sample ID: 680-57861-3
Client Matrix: Water

Date Sampled: 05/20/2010 1430
Date Received: 05/21/2010 0900

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Batch: 680-171908		Instrument ID:	ICP0
Preparation:	3005A	Prep Batch: 680-171606		Lab File ID:	061710.chr
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	06/18/2010 0232			Final Weight/Volume:	50 mL
Date Prepared:	06/15/2010 1553				

Analyte	Result (mg/L)	Qualifier	RL
Iron	5.0		0.350
Manganese	0.32		0.010

JUN. 22 2010 EZK

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Client: Solutia Inc.

Job Number: 680-57861-2
Sdg Number: KHS069

Client Sample ID: CPA-MW-02D-F(0.2)-0510

Lab Sample ID: 680-57861-4
Client Matrix: Water

Date Sampled: 05/20/2010 1400
Date Received: 05/21/2010 0930

6010B Metals (ICP)-Dissolved

Method	6010B	Analysis Batch: 680-170208		Instrument ID:	ICPD
Preparation	3005A	Prep Batch: 680-169870		Lab File ID:	052610.chr
Dilution	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	05/27/2010 0132			Final Weight/Volume:	50 mL
Date Prepared:	05/25/2010 1338				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	4.7		0.050
Manganese, Dissolved	0.32		0.010

JUN 22 2010 EZ/C

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Client: Solutia Inc.

Job Number: 680-578613
Sdg Number: KPS059

General Chemistry

Client Sample ID: CPA-MW-02D-0510

Lab Sample ID: 680-578613
Client Matrix: Water

Date Sampled: 05/20/2010 1400
Date Received: 05/21/2010 0908

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	76		mg/L	2.0	2.0	325.2
Analysis Batch: 680-171451	Date Analyzed: 06/14/2010 1233					
Nitrate as N	0.050	U	mg/l	0.050	1.0	353.2
Analysis Batch: 680-169423	Date Analyzed: 05/21/2010 1553					
Sulfate	5.0	[illegible]	mg/L	5.0	1.0	375.4
Analysis Batch: 680-171463	Date Analyzed: 06/14/2010 1334					
Total Organic Carbon	12		mg/L	1.0	1.0	415.1
Analysis Batch: 680-171709	Date Analyzed: 06/15/2010 1640					

Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	610		mg/L	5.0	1.0	310.1
Analysis Batch: 680-169587	Date Analyzed: 05/24/2010 1612					
Carbon Dioxide, Free	32		mg/L	5.0	1.0	310.1
Analysis Batch: 680-169587	Date Analyzed: 05/24/2010 1612					

JUN 22 2010

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General Chemistry

Client Sample ID: CPA-MW-02D-F(0.2)-0510

Lab Sample ID: 680-57861-4
Client Matrix: Water

Date Sampled: 05/20/2010 1400
Date Received: 05/21/2010 0900

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	1		mg/L	1.0	1.0	415.1

Analysis Batch: 680-171701 Date Analyzed: 06/15/2010 1149

JUN 22 2010

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DATA REPORTING QUALIFIERS

Client: Solutia Inc

Job Number 680-57861-2
Sdg Number. KPS059

Lab Section	Qualifier	Description
GC VOA		
	U	Indicates the analyte was analyzed for but not detected.
	H	Sample was prepped or analyzed beyond the specified holding time
Metals		
	U	Indicates the analyte was analyzed for but not detected
General Chemistry		
	U	Indicates the analyte was analyzed for but not detected
	F	MS or MSD exceeds the control limits

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QUALITY CONTROL RESULTS

Client: Solutia Inc.

Job Number: 680-57861-2
Sdg Number: KPS059

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC VOA					
Analysis Batch:680-171725					
LCS 680-171725/21	Lab Control Sample	T	Water	RSK-175	
LCSD 680-171725/22	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-171725/23	Method Blank	T	Water	RSK-175	
680-57861-3	CPA-MW-02D-0510	T	Water	RSK-175	
Analysis Batch:680-171728					
LCS 680-171728/9	Lab Control Sample	T	Water	RSK-175	
LCSD 680-171728/7	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-171728/6	Method Blank	T	Water	RSK-175	
680-57861-3	CPA-MW-02D-0510	T	Water	RSK-175	

Report Basis
T = Total

Metals

Prep Batch: 680-169670					
LCS 680-169670/17-A	Lab Control Sample	R	Water	3005A	
MB 680-169670/16-A	Method Blank	R	Water	3005A	
680-57861-4	CPA-MW-02D-F(0.2)-0510	D	Water	3005A	
Analysis Batch:680-170208					
LCS 680-169670/17-A	Lab Control Sample	R	Water	6010B	680-169670
MB 680-169670/16-A	Method Blank	R	Water	6010B	680-169670
680-57861-4	CPA-MW-02D-F(0.2)-0510	D	Water	6010B	680-169670
Prep Batch: 680-171606					
LCS 680-171606/20-A	Lab Control Sample	R	Water	3005A	
MB 680-171606/19-A	Method Blank	R	Water	3005A	
680-57861-3	CPA-MW-02D-0510	R	Water	3005A	
Analysis Batch:680-171938					
LCS 680-171606/20-A	Lab Control Sample	R	Water	6010B	680-171606
MB 680-171606/19-A	Method Blank	R	Water	6010B	680-171606
680-57861-3	CPA-MW-02D-0510	R	Water	6010B	680-171606

Report Basis
D = Dissolved
R = Total Recoverable

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57861-2
Sdg Number: KPS059

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:680-169423					
LCS 680-169423/2	Lab Control Sample	T	Water	353.2	
MB 680-169423/1	Method Blank	T	Water	353.2	
680-57861-3	CPA-MW-02D-0510	T	Water	353.2	
Analysis Batch:680-169587					
LCS 680-169587/3	Lab Control Sample	T	Water	310.1	
MB 680-169587/2	Method Blank	T	Water	310.1	
680-57861-3	CPA-MW-02D-0510	T	Water	310.1	
Analysis Batch:680-171451					
LCS 680-171451/23	Lab Control Sample	T	Water	325.2	
MB 680-171451/1	Method Blank	T	Water	325.2	
680-57861-3	CPA-MW-02D-0510	T	Water	325.2	
680-57861-3MS	Matrix Spike	T	Water	325.2	
680-57861-3MSD	Matrix Spike Duplicate	T	Water	325.2	
Analysis Batch:680-171463					
LCS 680-171463/2	Lab Control Sample	T	Water	375.4	
MB 680-171463/1	Method Blank	T	Water	375.4	
680-57861-3	CPA-MW-02D-0510	T	Water	375.4	
680-57861-3MS	Matrix Spike	T	Water	375.4	
680-57861-3MSD	Matrix Spike Duplicate	T	Water	375.4	
Analysis Batch:680-171701					
LCS 680-171701/2	Lab Control Sample	D	Water	415.1	
MB 680-171701/1	Method Blank	D	Water	415.1	
680-57861-4	CPA-MW-02D-F(0.2)-0510	D	Water	415.1	
Analysis Batch:680-171709					
LCS 680-171709/16	Lab Control Sample	T	Water	415.1	
MB 680-171709/13	Method Blank	T	Water	415.1	
680-57861-3	CPA-MW-02D-0510	T	Water	415.1	

Report Basis
D = Dissolved
T = Total

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Client: Solutia Inc.

Job Number: 680-57861-2
Sdg Number: KPS059

Method Blank - Batch: 680-171725

Method: RSK-175
Preparation: N/A

Lab Sample ID: MB 680-171725/23
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/15/2010 1203
Date Prepared: N/A

Analysis Batch: 680-171725
Prep Batch: N/A
Units: ug/l

Instrument ID: VGUFID2
Lab File ID: UQ517.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 ul
Column ID: PRIMARY

Analyte	Result	Qual	RL
Ethane	0.35	U	0.35
Ethylene	0.33	U	0.33
Methane	0.19	U	0.19

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-171725

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID: LCS 680-171725/21
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/15/2010 1125
Date Prepared: N/A

Analysis Batch: 680-171725
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUFID2
Lab File ID: UQ514.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 680-171725/22
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/15/2010 1136
Date Prepared: N/A

Analysis Batch: 680-171725
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUFID2
Lab File ID: UQ515.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	% Rec LCS	% Rec LCSD	% Rec Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ethane	98	87	75 - 125	12	30		
Ethylene	97	86	75 - 125	13	30		
Methane	96	86	75 - 125	11	30		

JUN 29 2010

US EPA ARCHIVE DOCUMENT

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Client: Solutia Inc

Job Number: 680-57851-2
Sdg Number: KPS059

Method Blank - Batch: 680-171728

Method: RSK-175
Preparation: N/A

Lab Sample ID	MB 680-171728/8	Analysis Batch:	680-171728	Instrument ID:	VGUTCD1
Client Matrix	Water	Prep Batch:	N/A	Lab File ID:	UQ517.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume	17000 uL
Date Analyzed	06/15/2010 1203			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume:	1 uL
				Column ID	PRIMARY

Analyte	Result	Qual	RL
Methane	0.19	U	0.15

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-171728

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID	LCS 680-171728/6	Analysis Batch:	680-171728	Instrument ID:	VGUTCD1
Client Matrix	Water	Prep Batch:	N/A	Lab File ID	UQ511.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	17000 uL
Date Analyzed:	06/15/2010 1046			Final Weight/Volume:	17 mL
Date Prepared:	N/A			Injection Volume	1 uL
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 680-171728/7	Analysis Batch:	680-171728	Instrument ID:	VGUTCD1
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	UQ512.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume	17000 uL
Date Analyzed	06/15/2010 1059			Final Weight/Volume:	17 mL
Date Prepared	N/A			Injection Volume:	1 uL
				Column ID	PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methane	87	91	75 - 125	13	30		

JUN 23 2010 EZK

Client: Solutia Inc

Job Number: 680-57861-2
Sdg Number: KPS059

Method Blank - Batch: 680-169670

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 680-169670/16-A	Analysis Batch:	680-170200	Instrument ID:	ICP0
Client Matrix:	Water	Prep Batch:	680-169670	Lab File ID:	062810.clr
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	06/27/2010 0055			Final Weight/Volume:	50 mL
Date Prepared:	06/25/2010 1330				

Analyte	Result	Qual	RL
Iron, Dissolved	0.050	U	0.050
Manganese, Dissolved	0.010	U	0.010

Lab Control Sample - Batch: 680-169670

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 680-169670/17-A	Analysis Batch:	680-170200	Instrument ID:	ICP0
Client Matrix:	Water	Prep Batch:	680-169670	Lab File ID:	062810.clr
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	06/27/2010 0100			Final Weight/Volume:	50 mL
Date Prepared:	06/25/2010 1330				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron, Dissolved	1.00	0.994	99	75 - 125	
Manganese, Dissolved	0.500	0.503	101	75 - 125	

JUN 22 2010

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Client: Solutia Inc

Job Number: 680-57661-2
Sdg Number: KPS059

Method Blank - Batch: 680-171606

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID: MB 680-171606/19-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/18/2010 0026
Date Prepared: 06/15/2010 1553

Analysis Batch: 680-171930
Prep Batch: 680-171606
Units: mg/L

Instrument ID: ICPO
Lab File ID: 061710.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Iron	0.050	U	0.050
Manganese	0.010	U	0.010

Lab Control Sample - Batch: 680-171606

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID: LCS 680-171606/20-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/18/2010 0031
Date Prepared: 06/15/2010 1553

Analysis Batch: 680-171930
Prep Batch: 680-171606
Units: mg/L

Instrument ID: ICPO
Lab File ID: 061710.chr
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	1.00	1.02	102	75 - 125	
Manganese	0.500	0.509	102	75 - 125	

JUN 22 2010

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Client: Solutis Inc

Job Number: 580-57861-2
Sdg Number: KPS059

Method Blank - Batch: 580-169587

Method: 310.1
Preparation: N/A

Lab Sample ID: MB 580-169587/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/24/2010 1536
Date Prepared: N/A

Analysis Batch: 580-169587
Prep Batch: N/A
Units: mg/L

Instrument ID: MANTECH
Lab File ID: alk052410b.TXT
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result	Qual	RL
Alkalinity	5.0	U	5.0
Carbon Dioxide, Free	5.0	U	5.0

Lab Control Sample - Batch: 580-169587

Method: 310.1
Preparation: N/A

Lab Sample ID: LCS 580-169587/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/24/2010 1547
Date Prepared: N/A

Analysis Batch: 580-169587
Prep Batch: N/A
Units: mg/L

Instrument ID: MANTECH
Lab File ID: alk052410b.TXT
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Spike Amount	Result	% Rec	Limit	Qual
Alkalinity	576	566	98	80 - 120	

JUN 22 2010 EJK

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57861-2
Sdg Number: KPS059

Method Blank - Batch: 680-171451

Method: 325.2
Preparation: N/A

Lab Sample ID: MB 680-171451/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/14/2010 1114
Date Prepared: N/A

Analysis Batch: 680-171451
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE1061410D1CLA.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Chloride	1.0	U	1.0

Lab Control Sample - Batch: 680-171451

Method: 325.2
Preparation: N/A

Lab Sample ID: LCS 680-171451/23
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/14/2010 1116
Date Prepared: N/A

Analysis Batch: 680-171451
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE1061410B1CLA.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	50.0	51.1	102	85 - 115	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-171451

Method: 325.2
Preparation: N/A

MS Lab Sample ID: 680-57861-3
Client Matrix: Water
Dilution: 2.0
Date Analyzed: 06/14/2010 1230
Date Prepared: N/A

Analysis Batch: 680-171451
Prep Batch: N/A

Instrument ID: KONELAB1
Lab File ID: KONE1061410B1CLA.xls
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 680-57861-3
Client Matrix: Water
Dilution: 2.0
Date Analyzed: 06/14/2010 1230
Date Prepared: N/A

Analysis Batch: 680-171451
Prep Batch: N/A

Instrument ID: KONELAB1
Lab File ID: KONE1061410B1CLA.xls
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	89	86	85 - 115	0	30		

JUN 22 2010

Client: Solutia Inc

Job Number: 680-57861-2
Sdg Number: KPS059

Method Blank - Batch: 680-169423

Method: 353.2
Preparation: N/A

Lab Sample ID	MB 680-169423/1	Analysis Batch:	680-169423	Instrument ID	Latchat 2
Client Matrix	Water	Prep Batch:	N/A	Lab File ID	N/A
Dilution	1.0	Units:	mg/L	Initial Weight/Volume:	7 mL
Date Analyzed	05/21/2010 1544			Final Weight/Volume:	7 mL
Date Prepared	N/A				

Analyte	Result	Qual	RL
Nitrate as N	0.050	U	0.050
Nitrate Nitrite as N	0.050	U	0.050
Nitrite as N	0.050	U	0.050

Lab Control Sample - Batch: 680-169423

Method: 353.2
Preparation: N/A

Lab Sample ID:	LCS 680-169423/2	Analysis Batch:	680-169423	Instrument ID:	Latchat 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	7 mL
Date Analyzed:	05/21/2010 1546			Final Weight/Volume:	7 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec	Limits	Qual
Nitrate as N	0.500	0.500	100	90 - 110	
Nitrate Nitrite as N	1.00	0.986	100	90 - 110	
Nitrite as N	0.500	0.498	100	90 - 110	

JUN 22 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57861-2
Sdg Number: KP5059

Method Blank - Batch: 680-171463

Method: 375.4
Preparation: N/A

Lab Sample ID: MB 680-171463/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/14/2010 1334
Date Prepared: N/A

Analysis Batch: 680-171463
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE1061410B1SO4.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Sulfate	5.0	U	5.0

Lab Control Sample - Batch: 680-171463

Method: 375.4
Preparation: N/A

Lab Sample ID: LCS 680-171463/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/14/2010 1334
Date Prepared: N/A

Analysis Batch: 680-171463
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: KONE1061410B1SO4.xls
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	20.0	20.8	104	75 - 125	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-171463

Method: 375.4
Preparation: N/A

MS Lab Sample ID: 680-57861-3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/14/2010 1334
Date Prepared: N/A

Analysis Batch: 680-171463
Prep Batch: N/A

Instrument ID: KONELAB1
Lab File ID: KONE1061410B1SO4.xls
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 680-57861-3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/14/2010 1334
Date Prepared: N/A

Analysis Batch: 680-171463
Prep Batch: N/A

Instrument ID: KONELAB1
Lab File ID: KONE1061410B1SO4.xls
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Sulfate	51	52	75 - 125	0	30	F	F

JUN 22 2010

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc.

Job Number: 680-57861-2
Sdg Number: KPS056

Method Blank - Batch: 680-171701

Method: 415.1
Preparation: N/A

Lab Sample ID: MB 680-171701/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/15/2010 1149
Date Prepared: N/A

Analysis Batch: 680-171701
Prep Batch: N/A
Units: mg/L

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

Analyte	Result	Qual	RL
Dissolved Organic Carbon Dissolved	1.0	U	1.0

Lab Control Sample - Batch: 680-171701

Method: 415.1
Preparation: N/A

Lab Sample ID: LCS 680-171701/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/15/2010 1149
Date Prepared: N/A

Analysis Batch: 680-171701
Prep Batch: N/A
Units: mg/L

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

Analyte	Spike Amount	Result	% Rec	Limit	Qual
Dissolved Organic Carbon Dissolved	20.0	19.5	98	80 - 120	

JUN 22 2010 EZK

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

Client: Solutia Inc

Job Number: 680-57561-2
Sdg Number: KPS059

Method Blank - Batch: 680-171709

Method: 415.1
Preparation: N/A

Lab Sample ID: MB 680-171709/13
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/15/2010 1541
Date Prepared: N/A

Analysis Batch: 680-171709
Prep Batch: N/A
Units: mg/L

Instrument ID: TOC3
Lab File ID: TOC061510.txt
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result	Qual	RL
Total Organic Carbon	1.0	U	1.0

Lab Control Sample - Batch: 680-171709

Method: 415.1
Preparation: N/A

Lab Sample ID: LCS 680-171709/16
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/15/2010 1628
Date Prepared: N/A

Analysis Batch: 680-171709
Prep Batch: N/A
Units: mg/l

Instrument ID: TOC3
Lab File ID: TOC061510.txt
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Organic Carbon	20.0	19.7	98	80 - 120	

JUN 22 2010

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: Nathan McNurlen	Date: 5/20/10	COC No. 4
URS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gallois	Carrier:	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21652401.00003
St. Louis, MO 63110	Calendar (C) or Work Days (W)			
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0467 FAX	☐ 2 weeks			SDG No.
Project Name: 2Q10 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	Tot Cont		VOCs by 8260	Total Fe/Mn by 6010B	Alk/CO2 by 310.1	Chloride by 325.1/Sulfate by 375.4	Methane by RSK 175	Nitrate by 353.1	TOC by 415.1	Dissolved Fe/Mn by 6010B	DOC by 415.1	Sample Specific Notes
CPA-MW-010-0510	5/20/10	1050	G	Water	12		3	1	1	1	3	2	1			
CPA-MW-010-F(0.2)-0510	5/20/10	1050	G	Water	2	X								1	1	
CPA-MW-020-0510	5/20/10	1400	G	Water	12		3	1	1	1	5	2	1			
CPA-MW-020-F(0.2)-0510	5/20/10	1400	G	Water	2	X								1	1	
CPA-MW-020-0510-AD	5/20/10	1400	G	Water	12		3	1	1	1	3	2	1			
CPA-MW-020-F(0.2)-0510-AD	5/20/10	1400	G	Water	2	X								1	1	
BSA-MW-040-0510	5/20/10	1640	G	Water	12		3	1	1	1	3	2	1			
BSA-MW-040-F(0.2)-0510	5/20/10	1640	G	Water	2	X								1	1	
2Q10 LTM Trip Blank # 5				Water	3		3									
Preservation Cards: 1= Ice; 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other							2	1	4	1	1	1	3,1	2	4	3

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

2.8°C 680-57861

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	5/20/10 1800	[signature]	TA	5/20/10 1800
[signature]	TA	5/20/10 1820			
			[signature]	TASV	5/21/10 0906

JUN 22 2010 [signature]

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-57861-2
SDG Number: KPSD59

Login Number: 57861
Creator: Conner, Keaton
List Number: 1

List Source: TestAmerica Savannah

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable	True	
Cooler Temperature is recorded	True	
COC is present	True	
COC is filled out in ink and legible	True	
COC is filled out with all pertinent information	True	
There are no discrepancies between the sample IDs on the containers and the COC	True	
Samples are received within Holding Time	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking	True	
Sample collection date/times are provided	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	

JUN 22 2010

US EPA ARCHIVE DOCUMENT

Appendix E

Microbial Insights Data Package

US EPA ARCHIVE DOCUMENT

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: 058HE **Date Rec:** 05/20/2010 **Report Date:** 06/30/2010

Client Project #: 21562401.00003 **Client Project Name:** 2Q10 LTM CW

Purchase Order #:

Analysis Requested: PLFA, PLFA+SIP

Reviewed By:

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

PLFA

Client: **URS Corp**
Project: 2Q10 LTM CW

MI Project Number: **058HE**
Date Received: 05/20/2010

Sample Information

Sample Name:	**CPA-MW-04D-0510**	**BSA-MW-04D-0510**	**BSA-MW-05D-0510**	**BSA-MW-3D-0510**	**BSA-MW-02D-0510**
Sample Date:	05/19/2010	05/19/2010	05/19/2010	05/19/2010	05/19/2010
Sample Matrix:	beads	beads	beads	beads	beads
Analyst:	bj	bj	bj	bj	bj

Biomass Concentrations

Total Biomass (cells/bead)	**1.08E+05**	**4.56E+04**	**3.25E+04**	**3.76E+04**	**1.31E+05**

Community Structure (% total PLFA)

Firmicutes (TerBrSats)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Proteobacteria (Monos)	**78.13**	**70.49**	**73.65**	**61.30**	**68.63**
Anaerobic metal reducers (BrMonos)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
SRB/Actinomycetes (MidBrSats)	**0.00**	**0.00**	**0.00**	**1.76**	**0.00**
General (Nsats)	**17.43**	**21.19**	**21.29**	**33.71**	**28.59**
Eukaryotes (polyenoics)	**4.43**	**8.32**	**5.07**	**3.23**	**2.77**

Physiological Status (Proteobacteria only)

Slowed Growth	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Decreased Permeability	**0.17**	**0.37**	**0.00**	**0.00**	**0.39**

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: 2Q10 LTM CW

MI Project Number: **058HE**
Date Received: 05/20/2010

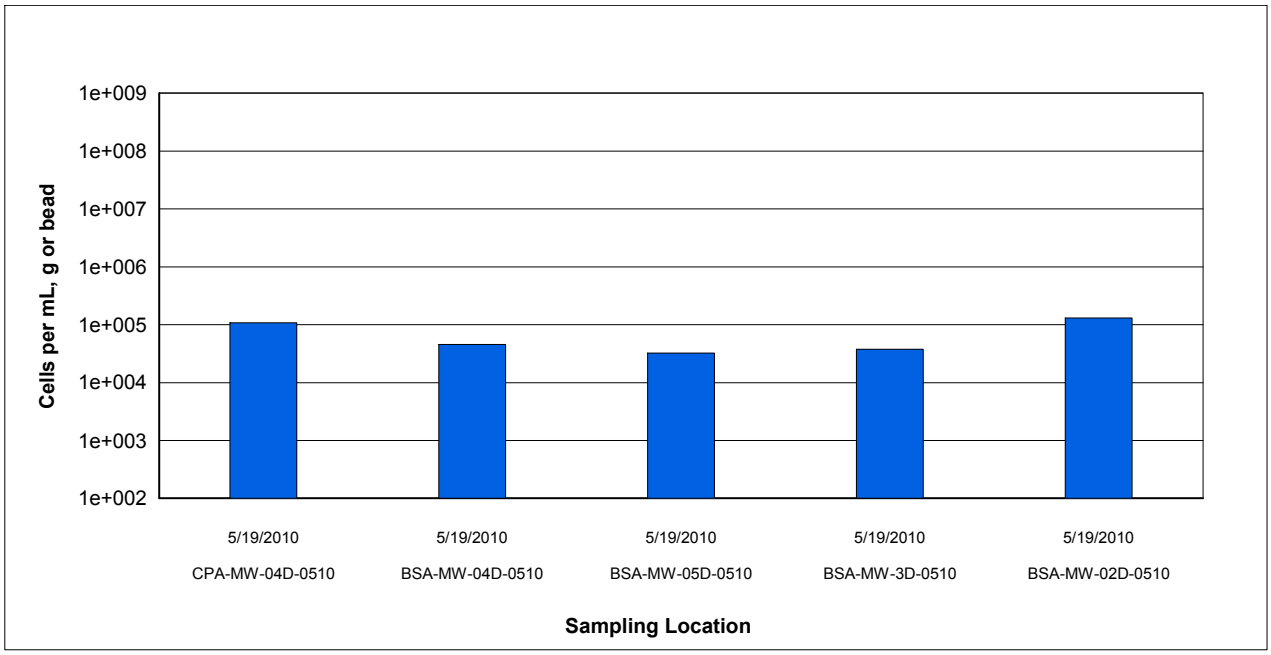

Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

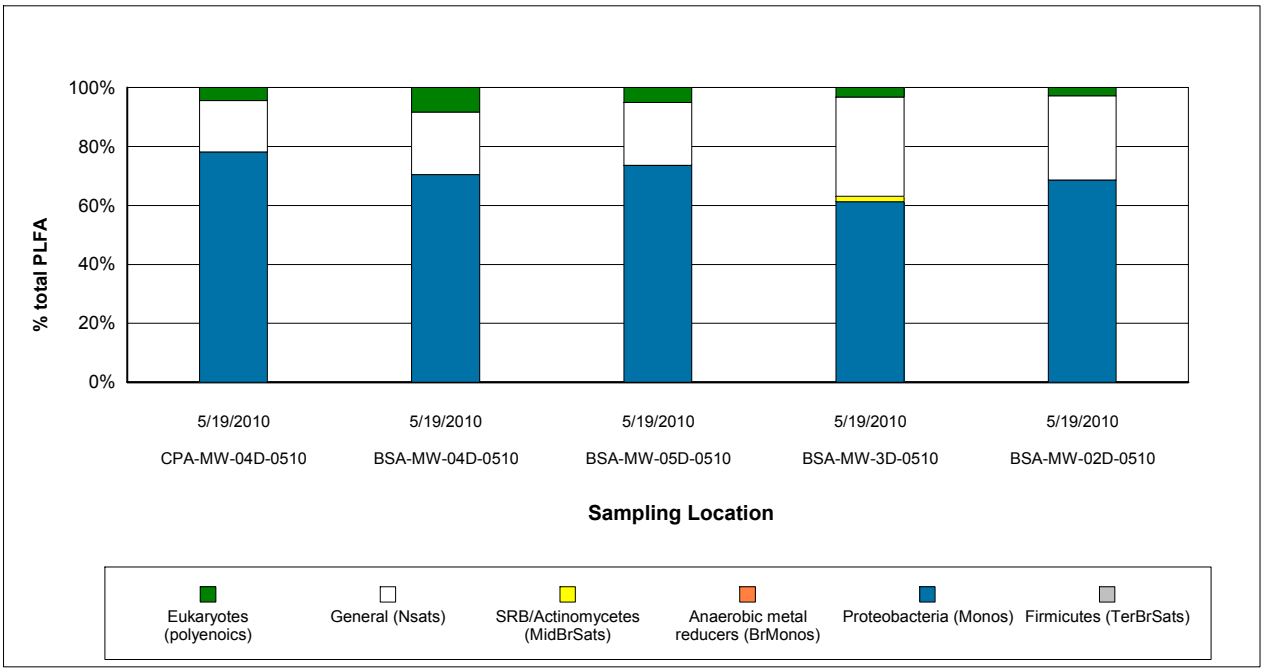

Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

PLFA

Client: **URS Corp**
Project: 2Q10 LTM CW

MI Project Number: **058HE**
Date Received: 05/20/2010

Sample Information

Sample Name:	**BSA-MW-02D-0510**	**CPA-MW-03D-0510**	**CPA-MW-03D-0510**	**BSA-MW-01S-0510**	**CPA-MW-02D-0510**
Sample Date:	05/19/2010	05/19/2010	05/19/2010	05/19/2010	05/19/2010
Sample Matrix:	beads	beads	beads	beads	beads
Analyst:	bj	bj	bj	bj	bj

Biomass Concentrations

Total Biomass (cells/bead)	**8.37E+04**	**6.56E+05**	**1.69E+05**	**1.20E+06**	**1.38E+05**

Community Structure (% total PLFA)

Firmicutes (TerBrSats)	**0.00**	**0.00**	**2.42**	**0.85**	**0.00**
Proteobacteria (Monos)	**58.31**	**66.25**	**72.60**	**46.76**	**78.06**
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)	**33.81**	**29.36**	**22.58**	**50.60**	**16.02**
Eukaryotes (polyenoics)	**7.89**	**4.39**	**2.41**	**1.78**	**5.93**

Physiological Status (Proteobacteria only)

Slowed Growth	**0.00**	**0.00**	**0.03**	**0.00**	**0.00**
Decreased Permeability	**0.31**	**0.19**	**0.21**	**0.66**	**0.34**

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: 2Q10 LTM CW

MI Project Number: **058HE**
Date Received: 05/20/2010

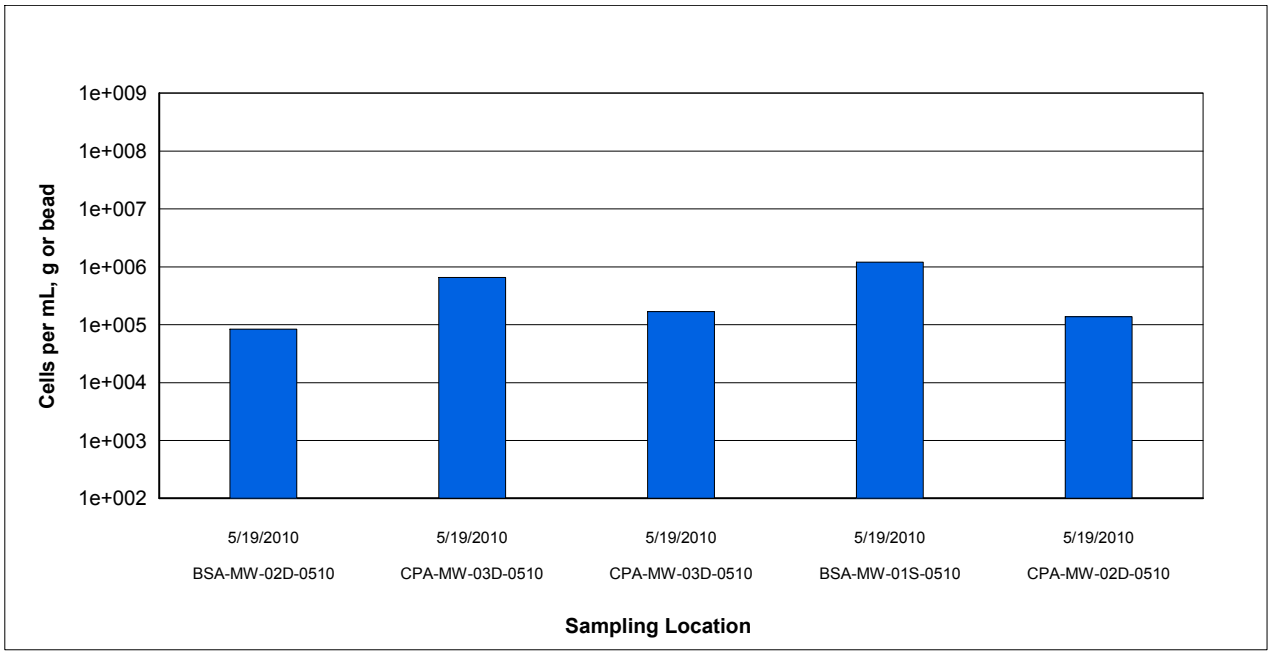

Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

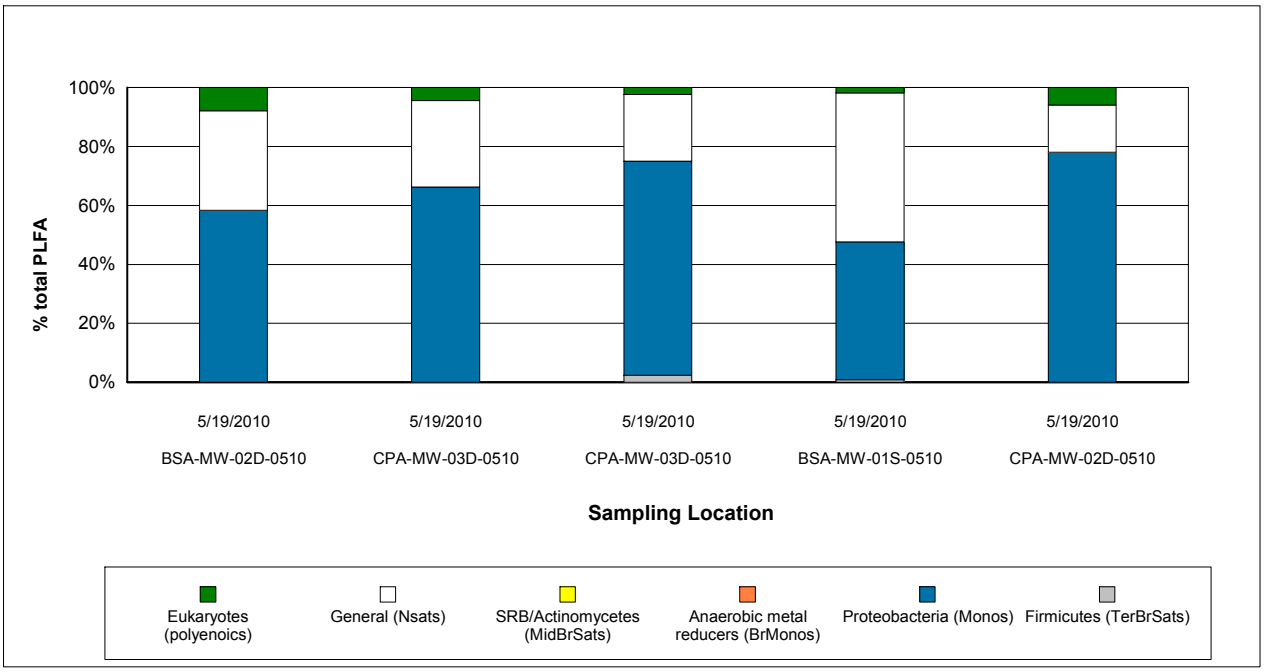

Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

PLFA

Client: **URS Corp**
Project: 2Q10 LTM CW

MI Project Number: **058HE**
Date Received: 05/20/2010

Sample Information

Sample Name:	**CPA-MW-01D-0510**	**CPAMW05D-0610**
Sample Date:	05/19/2010	06/03/2010
Sample Matrix:	beads	beads
Analyst:	bj	bj

Biomass Concentrations

Total Biomass (cells/bead)	**6.60E+04**	**4.84E+04**

Community Structure (% total PLFA)

Firmicutes (TerBrSats)	**0.00**	**0.00**
Proteobacteria (Monos)	**65.34**	**68.83**
Anaerobic metal reducers (BrMonos)	**0.00**	**0.00**
SRB/Actinomycetes (MidBrSats)	**2.39**	**0.00**
General (Nsats)	**28.91**	**27.65**
Eukaryotes (polyenoics)	**3.37**	**3.52**

Physiological Status (Proteobacteria only)

Slowed Growth	**0.00**	**0.20**
Decreased Permeability	**0.37**	**0.66**

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: 2Q10 LTM CW

MI Project Number: **058HE**
Date Received: 05/20/2010

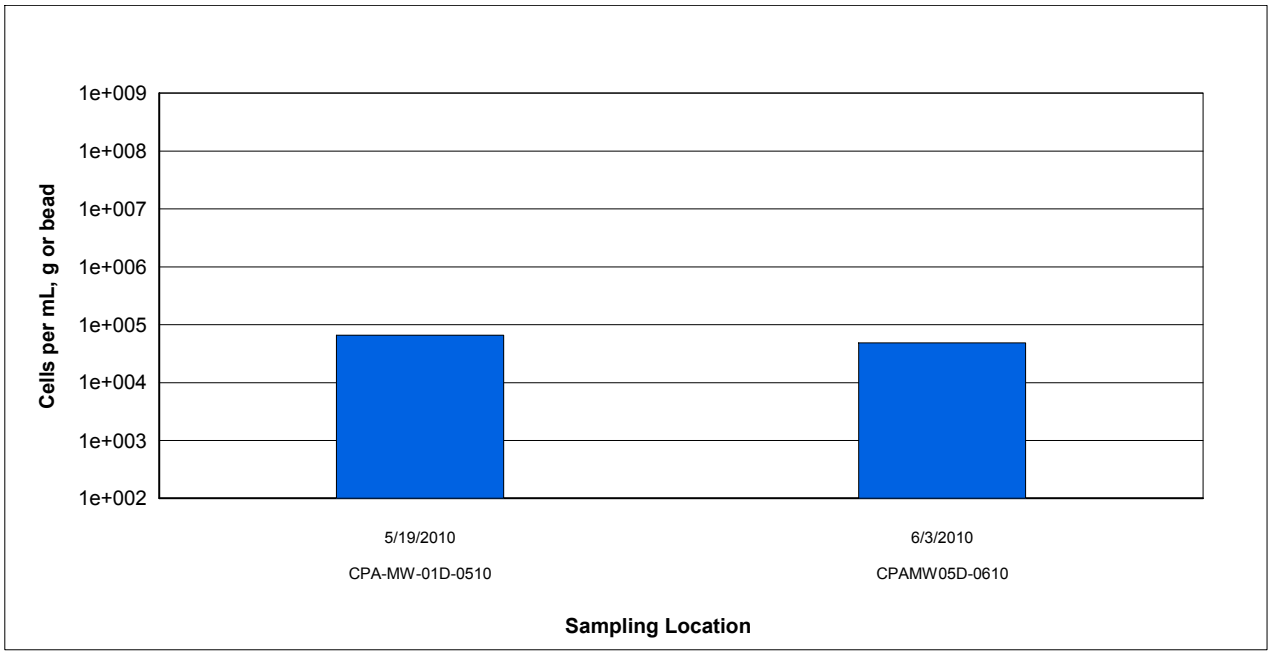

Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass

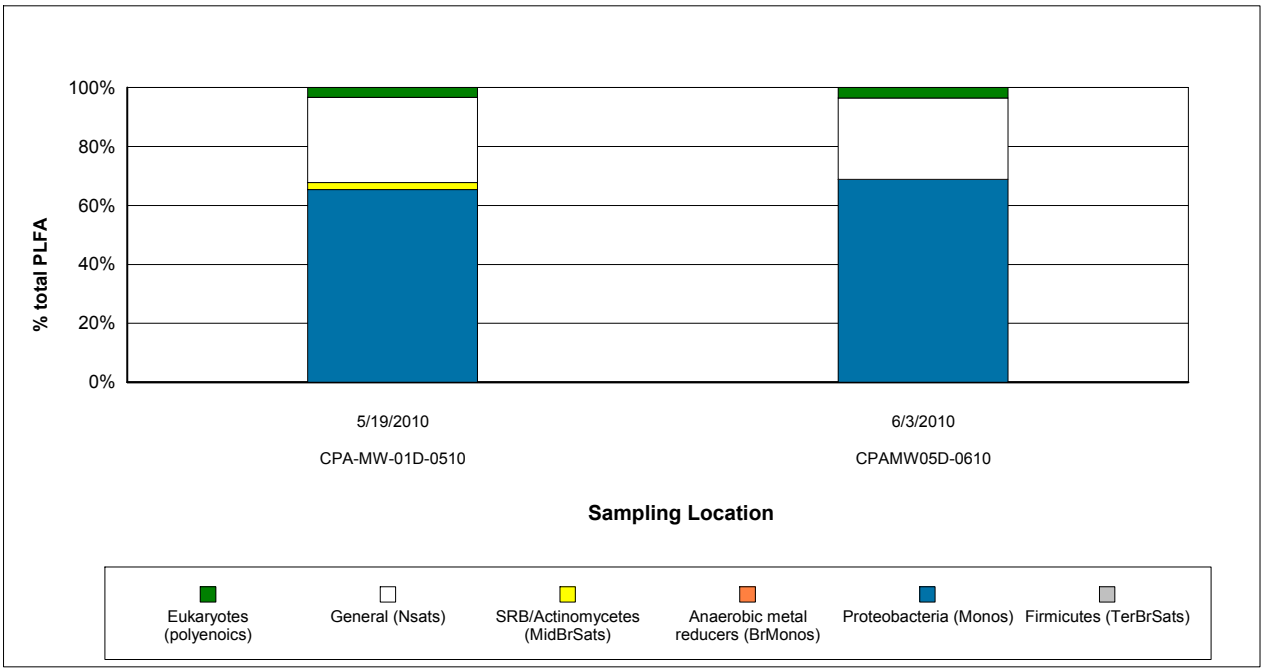

Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis.

2340 Stock Creek Blvd.
Rockford TN 37853-3044
Phone: (865) 573-8188
Fax: (865) 573-8133
Email: info@microbe.com

Identifier: 058HE **Date Rec:** 05/20/2010 **Report Date:** 06/30/2010

Client Project #: 21562401.00003 **Client Project Name:** 2Q10 LTM CW

Purchase Order #:

Comments: The total PLFA biomass for BSA-MW-05D-0510 was below the PQL but above the LQL. Therefore, caution should be exercized when interpreting the data from this sample.

2340 Stock Creek Blvd.
Rockford, TN 37853-3044
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

SITE LOGIC Report

Stable Isotope Probing (SIP) Study

Contact: Dave Palmer
Address: URS Corporation
1001 Highlands Plaza Drive West
Suite 300
St. Louis, MO 63110

Phone: 314.743.4154

Email: dave_palmer@urs.corp

MI Identifier: 058HE

Report Date: July 8, 2010

Project: 2Q10 LTM CW, 21562401.00003

Comments:

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Executive Summary

Bio-Trap® samplers baited with ^{13}C labeled benzene or chlorobenzene were deployed for 33 days and then recovered for analysis. A complete summary of the results is provided in Table 1.

- A low level of biomass (~10^4 cells/bead) was detected in the ^{13}C benzene sampler and a moderate level (~10^5 cells/bead) of biomass was observed in the ^{13}C chlorobenzene sampler.
- Quantification of ^{13}C enriched biomass demonstrated a high level of utilization of the ^{13}C benzene in well BSA-MW02D-0510. There was no incorporation of ^{13}C chlorobenzene into the biomass in well CPA-MW03D-0510.
- Quantification of the ^{13}C dissolved inorganic carbon (DIC) showed a high level of mineralization occurring in the ^{13}C benzene sampler. There was a low level of mineralization occurring in the ^{13}C chlorobenzene sampler.
- Comparison of pre- and post-deployment concentrations of ^{13}C labeled benzene and ^{13}C labeled chlorobenzene demonstrated no loss of the labeled contaminants.

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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.

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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-MW02D-0510-^{13}C Benzene	CPA-MW03D-0510-^{13}C Chlorobenzene
^{13}C Contaminant Loss		
Benzene Pre-deployment (mg/bd)	1.10	----
Benzene Post-deployment (mg/bd)	1.18	----
Chlorobenzene Pre-deployment (mg/bd)	----	0.75
Chlorobenzene Post-deployment (mg/bd)	----	0.76
% Loss	----	----
First Order Rate Constant (1/days)	Not Calculated	Not Calculated
Biomass & ^{13}C Incorporation		
Total Biomass (Cells/bd)	8.37E+04	1.69E+05
^{13}C Enriched Biomass (Cells/bd)	5.09E+02	0.00E+00
% ^{13}C Incorporation	0.61%	0.00%
Average PLFA Del (‰)	2395	0
Maximum PLFA Del (‰)	4327	0
^{13}C Mineralization		
DIC Del (‰)	11332	133
% 13C	12.00	1.24
Community Structure (% total PLFA)		
Firmicutes (TerBrSats)	0.0	2.4
Proteobacteria (Monos)	58.3	72.6
Anaerobic metal reducers (BrMonos)	0.0	0.0
Actinomycetes (MidBrSats)	0.0	0.0
General (Nsats)	33.8	22.6
Eukaryotes (Polyenoics)	7.9	2.4
Physiological Status (Proteobacteria only)		
Slowed Growth	0.00	0.03
Decreased Permeability	0.31	0.21

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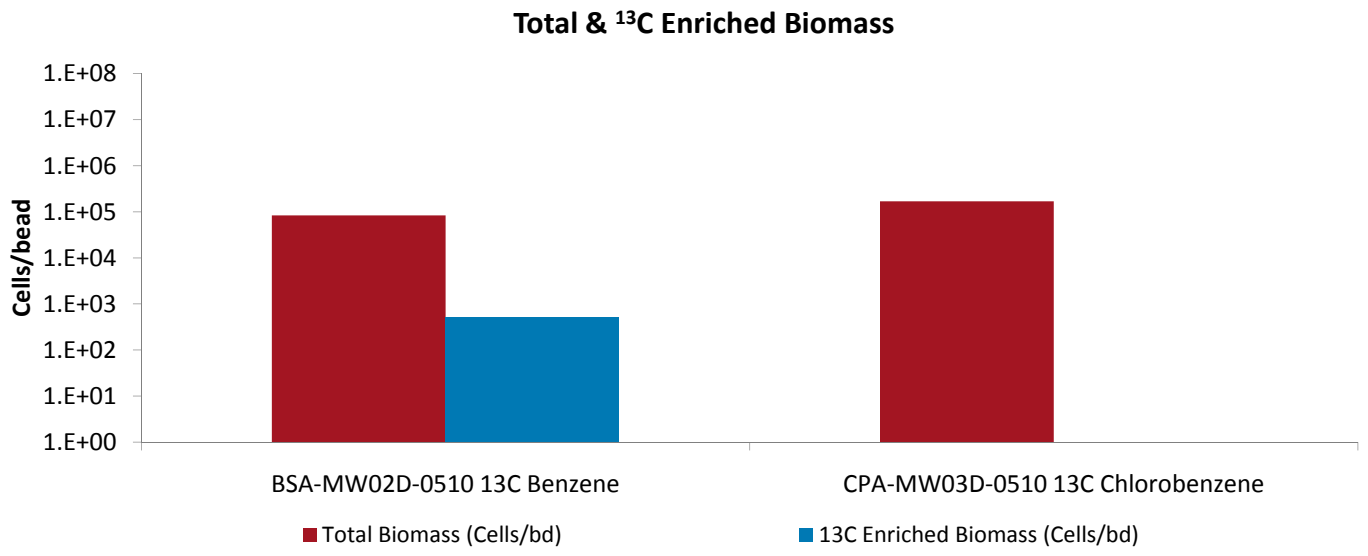

Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass (associated with higher organisms).

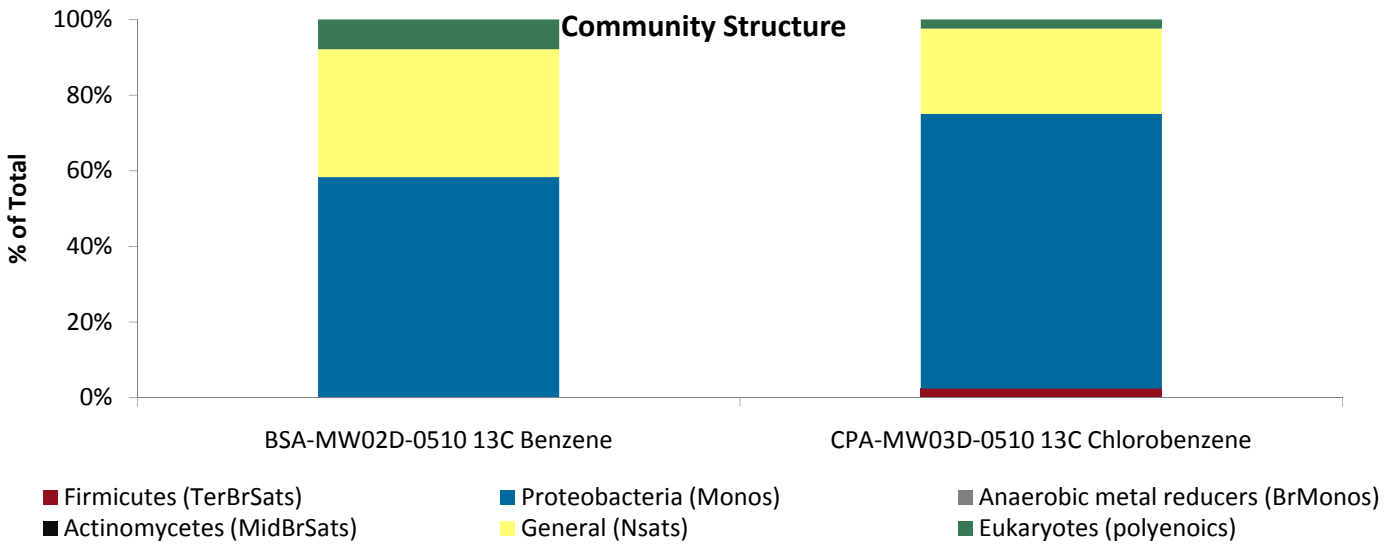

Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis. See the table in the interpretation section for detailed descriptions of the structural groups.

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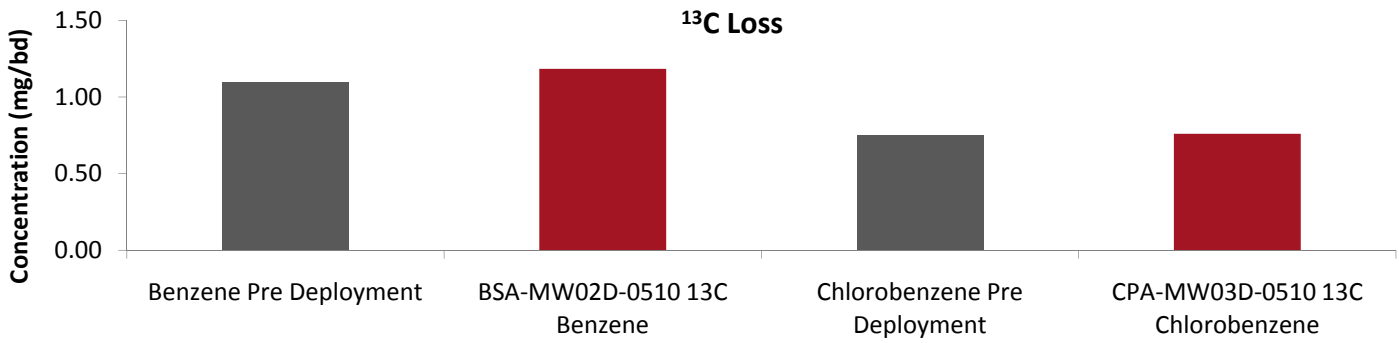

Figure 3. Comparison of Pre-deployment concentrations loaded on Bio-Sep beads to the concentrations detected after incubation.

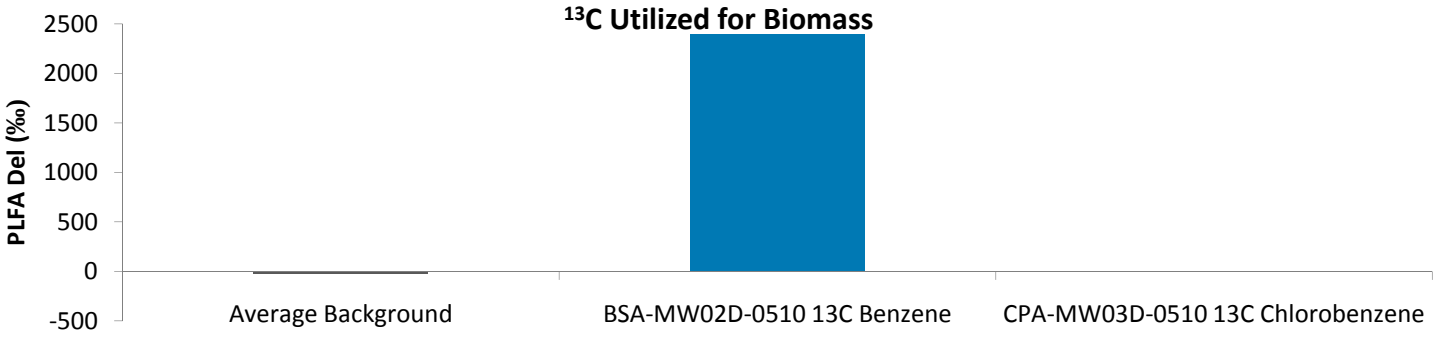

Figure 4. Comparison of the average Del value obtained from PLFA biomarkers from each Bio-Trap® unit to the average background Del observed in samples not exposed to ^{13}C enriched compounds.

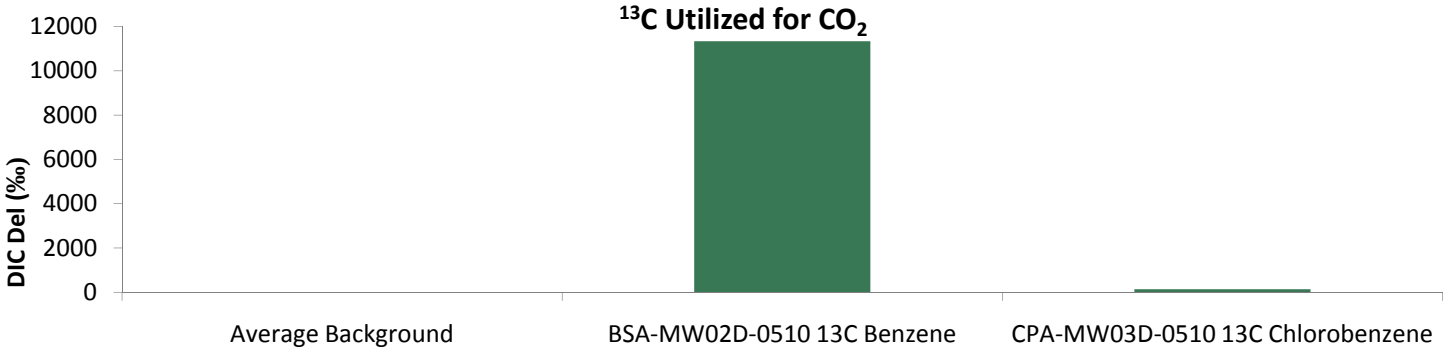

Figure 5. Comparison of the Del value obtained from DIC from each Bio-Trap® unit to the average background Del observed in samples not exposed to ^{13}C enriched compounds.

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Interpretation

Interpretation of the results of the SIP Bio-Trap® study must be performed with due consideration of site conditions, site activities, and the desired treatment mechanism. The following discussion describes interpretation of results in general terms and is meant to serve as a guide.

Contaminant Concentration: Bio-Traps® are baited with a ^{13}C labeled contaminant of concern and a pre-deployment concentration is determined prior to shipping. Following deployment, Bio-Traps® are recovered for analysis including measurement of the concentration of the ^{13}C labeled contaminant remaining. Pre- and post-deployment concentrations are used to calculate percent loss, to estimate the first order degradation rate constant (k), and to estimate the contaminant half life (Results Summary Table). For a description of how the first order rate constant is calculated, please see the glossary at the end of the report. The first order rate constant can be used to compare different wells or treatments depending on the design of the study. A higher value is indicative of a greater biodegradation rate.

Alternatively, the contaminant half life can be used to make the same types of comparisons between wells and treatments. By definition, half life is the amount of time required for the contaminant concentration to equal half of the initial concentration (see glossary for calculation).

Biomass Concentrations: PLFA analysis is one of the most reliable and accurate methods available for the determination of viable (live) biomass. Phospholipids break down rapidly upon cell death, so biomass calculations based on PLFA content do not include "fossil" lipids from dead cells. Total biomass (cells/bead) is calculated from total PLFA using a conversion factor of 20,000 cells/pmole of PLFA. When making comparisons between wells, treatments, or over time, differences of one order of magnitude or more are considered significant.

Total Biomass		
Low	**Moderate**	**High**
10^3 to 10^4 cells	10^5 to 10^6 cells	10^7 to 10^8 cells

For SIP studies, the ^{13}C enriched PLFA is also determined to conclusively demonstrate contaminant biodegradation and quantify incorporation into biomass as a result of the ^{13}C being used for cellular growth. The % ^{13}C incorporation (^{13}C enriched biomass/total biomass) is also provided in the data summary table, but the value must be interpreted carefully especially when comparing wells or treatments. Typically, biodegradation of a contaminant of concern is performed by a small subset of the total microbial community. For Bio-Traps® with large total biomass, the % ^{13}C incorporation value could be low despite significant ^{13}C labeled biomass and loss of the compound. The % ^{13}C incorporation should be viewed in light of total biomass, percent loss, and dissolved inorganic carbon (DIC) results.

^{13}C enrichment data is often reported as a del value. The del value is the difference between the isotopic ratio ($^{13}C/^{12}C$) of the sample (R_x) and a standard (R_{std}) normalized to the isotopic ratio of the standard (R_{std}) and multiplied by 1,000 (units are parts per thousand, denoted ‰).

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R_{std} is the naturally occurring isotopic ratio and is approximately 0.011180 (roughly 1% of naturally occurring carbon is ^{13}C). The isotopic ratio, R_x, of PLFA is typically less than the R_{std} under natural conditions, resulting in a del value between -20 and -30‰. For a SIP Bio-Trap® study, biodegradation and incorporation of the ^{13}C labeled compound into PLFA results in a larger $^{13}C/^{12}C$ ratio (R_x) and thus del values greater than under natural conditions. Typical PLFA del values are provided below.

PLFA Del (‰)		
Low	**Moderate**	**High**
0 to 100	100 to 1,000	>1,000

Dissolved Inorganic Carbon (DIC): Often, bacteria can utilize the ^{13}C labeled compound as both a carbon and energy source. The ^{13}C portion used as a carbon source for growth can be incorporated into PLFA as discussed above, while the ^{13}C used for energy is oxidized to $^{13}CO_2$ (mineralized).

^{13}C enriched CO_2 data is often reported as a del value as described above for PLFA. Under natural conditions, the R_x of CO_2 is approximately the same as R_{std} (0.01118 or about 1.1% ^{13}C). For an SIP Bio-Trap® study, mineralization of the ^{13}C labeled contaminant of concern would lead to a greater value of R_x (increased $^{13}CO_2$ production) and thus a positive del value. As with PLFA, del values between 0 and 100‰ are considered low, values between 100 and 1,000‰ are considered moderate, and values greater than 1,000‰ are considered high. Thus DIC %^{13}C are considered low if the value is less than 1.23%, moderate if between 1.23 and 2.24%, and high if greater than 2.24%.

Dissolved Inorganic Carbon (DIC) Del and % ^{13}C		
Low	**Moderate**	**High**
0 to 100	100 to 1,000	>1,000
1.11 to 1.23%	1.23 to 2.24 %	>2.24 %

Community Structure (% total PLFA): Community structure data is presented as a percentage of PLFA structural groups normalized to the total PLFA biomass. The relative proportions of the PLFA structural groups provide a "fingerprint" of the types of microbial groups (e.g. anaerobes, sulfate reducers, etc.) present and therefore offer insight into the dominant metabolic processes occurring at the sample location. Thorough interpretation of the PLFA structural groups depends in part on an understanding of site conditions and the desired microbial biodegradation pathways. For example, an increase in mid chain branched saturated PLFA (MidBrSats), indicative of sulfate reducing bacteria (SRB) and *Actinomycetes*, may be desirable at a site where anaerobic BTEX biodegradation is the treatment mechanism, but would not be desirable for a corrective action promoting aerobic BTEX or MTBE biodegradation. The following table provides a brief summary of each PLFA structural group and its potential relevance to bioremediation.

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Table 2. Description of PLFA structural groups.

PLFA Structural Group	General classification	Potential Relevance to Bioremediation Studies
Monoenoic (Monos)	Abundant in Proteobacteria (Gram negative bacteria), typically fast growing, utilize many carbon sources, and adapt quickly to a variety of environments.	Proteobacteria is one of the largest groups of bacteria and represents a wide variety of both aerobes and anaerobes. The majority of Hydrocarbon utilizing bacteria fall within the Proteobacteria
Terminally Branched Saturated (TerBrSats)	Characteristic of Firmicutes (Low G+C Gram-positive bacteria), and also found in Bacteriodes, and some Gram-negative bacteria (especially anaerobes).	Firmicutes are indicative of presence of anaerobic fermenting bacteria (mainly *Clostridia/Bacteriodes*-like), which produce the H_2 necessary for reductive dechlorination
Branched Monoenoic (BrMonos)	Found in the cell membranes of micro-aerophiles and anaerobes, such as sulfate- or iron-reducing bacteria	In contaminated environments high proportions are often associated with anaerobic sulfate and iron reducing bacteria
Mid-Chain Branched Saturated (MidBrSats)	Common in sulfate reducing bacteria and also Actinobacteria (High G+C Gram-positive bacteria).	In contaminated environments high proportions are often associated with anaerobic sulfate and iron reducing bacteria
Normal Saturated (Nsats)	Found in all organisms.	High proportions often indicate less diverse populations.
Polyenoic	Found in eukaryotes such as fungi, protozoa, algae, higher plants, and animals.	Eukaryotic scavengers will often rise up and prey on contaminant utilizing bacteria

Physiological Status (*Proteobacteria*): Some *Proteobacteria* modify specific PLFA as a strategy to adapt to stressful environmental conditions (3, 4). For example, *cis* monounsaturated fatty acids may be modified to cyclopropyl fatty acids during periods of slowed growth or modified to *trans* monounsaturated fatty acids to decrease membrane permeability in response to environmental stress. The ratio of product to substrate fatty acid thus provides an index of their health and metabolic activity. In general, status ratios greater than 0.25 indicate a response to unfavorable environmental conditions.

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Glossary

Del: A Del value is the difference between the isotopic ratio ($^{13}C/^{12}C$) of the sample (R_x) and a standard (R_{std}) normalized to the isotopic ratio of the standard (R_{std}) and multiplied by 1,000 (units are parts per thousand denoted ‰).

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

First Order Rate Constant: The first order rate is expression is $C=C_o e^{-kt}$ where C is the post-deployment concentration (mg/bead), C_o is the pre-deployment concentration (mg/bead), k is the first order rate constant (1/days), and t is the deployment time (days). Upon rearrangement and using pre-and post-deployment concentrations, $k=-\ln(C/C_o)/t$.

Half Life: Half life is the amount of time required for the contaminant concentration to equal half of the initial concentration and is expressed as $C=C_o/2$. Substituting into the rate expression and solving for half life ($t_{1/2}$), $t_{1/2} = \ln(0.5)/-k$. As opposed to the rate constant, a higher half life ($t_{1/2}$) indicates a lower degradation rate.

References

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Project Name: 2010 LTM GW
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Sample Information

MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	PLFA	VFA	MBE																																	
0581HE 1	CPA-MW-04D-0510	5/19/10	1230		X																																			
2	BSA-MW-04D-0510	5/19/10	1248		X																																			
3	BSA-MW-05D-0510	5/19/10	1305		X																																			
4	BSA-MW-3D-0510	5/19/10	1335		X																																			
SSTD 5	BSA-MW-02D-0510	5/19/10	1350		X																																	X		
7 6	CPA-MW-03D-0510	5/19/10	1400		X																																		X	
9 7	BSA-MW-01S-0510	5/19/10	1425		X																																			
10 8	CPA-MW-02D-0510	5/19/10	1440		X																																			
11 9	CPA-MW-01D-0510	5/19/10	1450		X																																			

CENSUS: Please select the target organism/gene

Other: SIP - Benzene
Other: SIP - Chlorobenzene
Other:
Other:

Relinquished by: [signature] Date: 5/19/10 1700
Received by: [signature] Date: 5/20/10

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