SOLUTIA Solutions for a better life.™

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

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

February 15, 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: Route 3 Drum Site Groundwater Monitoring Program
4th Quarter 2009 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

Dear Mr. Bardo:

Enclosed please find the Route 3 Drum Site Groundwater Monitoring Program 4th Quarter 2009 Data Report for Solutia Inc.'s W. G. Krummrich Plant, Sauget, IL.

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

Sincerely,

Gerald M. Rinaldi
Manager, Remediation Services

Enclosure

cc: Distribution List

DISTRIBUTION LIST

Route 3 Drum Site Groundwater Monitoring Program
4th Quarter 2009 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

USEPA

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

IEPA

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Solutia

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

4TH QUARTER 2009
DATA REPORT

ILLINOIS ROUTE 3 DRUM SITE GROUNDWATER SAMPLING

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

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

February 2010

URS Corporation
1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100
Project # 21562046.00004

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1.0 INTRODUCTION

Solutia Inc. (Solutia) is conducting groundwater monitoring activities as outlined in the Revised Illinois Route 3 Drum Site Operation and Maintenance Plan (Solutia, 2008). The Illinois Route 3 Drum Site (Site) is an area associated with the Solutia W.G. Krummrich Facility located in Sauget, Illinois that is subject to a RCRA Administrative Order on Consent (AOC) entered into by the U.S. EPA and Solutia on May 3, 2000. This report presents the results of the sampling event completed in 4th Quarter 2009 (4Q09). The Site is located in the area identified as "Lot F" in **Figure 1**.

During the 4Q09 sampling event, groundwater samples were collected from two Shallow Hydrogeologic Unit (SHU) monitoring wells, designated GM-31A and GM-58A (**Figure 2**), located hydraulically downgradient of the Site**.** Samples from each well were analyzed for select semivolatile organic compounds (SVOCs) using EPA Method 8270C. In addition, samples were collected from both wells for evaluation of monitored natural attenuation (MNA). The types of natural attenuation processes active at the site will be determined by measurements of the following key geochemical parameters: alkalinity, carbon dioxide, chloride, dissolved oxygen (DO), ferrous iron, total and dissolved iron, total and dissolved manganese, methane, nitrate, sulfate, total and dissolved organic carbon, and oxidation-reduction potential (ORP).

2.0 FIELD PROCEDURES

URS Corporation (URS) personnel collected groundwater level measurements on November 13, and conducted the 4Q09 Illinois Route 3 Drum Site groundwater sampling on November 19, 2009[1]. Groundwater samples were collected from two monitoring wells during the 4Q09 sampling event. This section summarizes the field investigative procedures.

Groundwater Level Measurements - An oil/water interface probe was used to measure depth to static groundwater levels and determine the presence of non-aqueous phase liquids (NAPL). Depth-to-groundwater measurements for the 4Q09 sampling event are presented in **Table 1**. NAPL was not detected in either of the monitoring wells.

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 no more than 400 mL/minute to minimize drawdown. If significant drawdown occurred, flow rates were reduced.

[1] The November 13th gauging was part of a comprehensive event which included other monitoring wells. Groundwater levels in the subject wells were gauged again on November 19th prior to sampling.

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. Bottles were filled in the following order:

- Gas Sensitive Parameters (e.g., carbon dioxide, methane)
- Semivolatile Organic Compounds (SVOCs)
- 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 for analysis of ferrous iron, dissolved iron, dissolved organic carbon, and dissolved manganese were filtered in the field using in-line 0.2 micron disposable filters.

Quality Assurance/Quality Control (QA/QC) samples consisting of analytical duplicates (AD) were collected at a rate of 10% and matrix spike/matrix spike duplicates (MS/MSD) were collected at a rate of 5%. One duplicate and one MS/MSD sample were collected.

Each sample was labeled immediately following collection. The groundwater sample identification system included the following nomenclature: “GM-31A-1109” which denotes Groundwater Monitoring well number 31A sampled in November 2009. QA/QC samples are identified by the suffix AD or MS/MSD. A notation of “F” in the sample nomenclature indicates a sample that was filtered in the field with a 0.2 micron filter.

Upon collection and labeling, sample containers were immediately placed inside an iced cooler, packed in such a way as to help prevent breakage and maintain inside temperature at or below approximately 4^{o}C. Field personnel recorded the project identification and number, sample

description/location, required analysis, date and time of sample collection, type and matrix of sample, number of sample containers, 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 overnight delivery service. Field sampling data sheets are included in **Appendix A**. COC forms are included in **Appendix B**.

3.0 LABORATORY PROCEDURES

Samples were analyzed by TestAmerica for a subset of 40 CFR 264 Appendix IX SVOCs, MNA parameters (per the Route 3 Drum Site O&M Plan), using the following methodologies:

- SVOCs, via USEPA SW-846 Method 8270C - The constituents of concern (COCs) identified by the USEPA are biphenyl, 2,4-dichlorophenol, dinitrochlorobenzene, nitrobenzene, 2-nitrobiphenyl, 3-nitrobiphenyl, 4-nitrobiphenyl, 2-nitrochlorobenzene, 3-nitrochlorobenzene, 4-nitrochlorobenzene, pentachlorophenol, and 2,4,6-trichlorophenol.
- MNA parameters consisting of alkalinity (310.1), carbon dioxide (310.1), chloride (325.2), total and dissolved iron (6010B), total and dissolved manganese (6010B), dissolved organic carbon (415.1), nitrate (353.2), sulfate (375.4), dissolved gases (RSK 175), and total organic carbon (TOC) (415.1).

Laboratory results were provided in electronic and hard copy formats.

4.0 QUALITY ASSURANCE

Analytical data were reviewed for quality and completeness. 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**. Laboratory data packages, along with data validation review sheets, are included in **Appendix D**.

A total of five groundwater samples (two investigative groundwater samples, one field duplicate sample pair, and one MS/MSD pair) were prepared and analyzed by TestAmerica for SVOCs and MNA parameters. The results for the various analyses were submitted as sample delivery group (SDG) KOM06 containing results for GM-31A and GM-58A.

Evaluation of the analytical data followed procedures outlined in the USEPA National Functional Guidelines for Superfund Organic Methods Data Review (USEPA 2008) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 2004). Based on the above mentioned criteria, results reported for the analyses performed were accepted for their intended use. Acceptable levels of accuracy and precision, based on MS/MSD, LCS, surrogate and field duplicate data were achieved for this SDG to meet the

project objectives. Completeness, which is defined to be the percentage of analytical results which are judged to be valid, including estimated detect/non-detect (**J/UJ**) data, was 100 percent.

5.0 OBSERVATIONS

SVOCs were not detected in the groundwater samples collected from monitoring wells GM-31A and GM-58A during the 4Q09 sampling event. The Mississippi River and groundwater levels in the subject monitoring wells and surrounding area were elevated during this sampling event. A summary of SVOC laboratory data is provided in **Table 2**, with MNA results provided in **Table 3**.

The 4Q09 sampling event was the sixth event conducted in accordance with the Revised Illinois Route 3 Drum Site Operations and Maintenance Plan. Groundwater samples will be collected for eight quarters, at which time the results will be analyzed to determine if any statistically significant changes have occurred for any of the constituents of concern. In addition, MNA results will be reviewed/analyzed at the end of eight quarters to determine the types and magnitude of active natural attenuation processes at the Site.

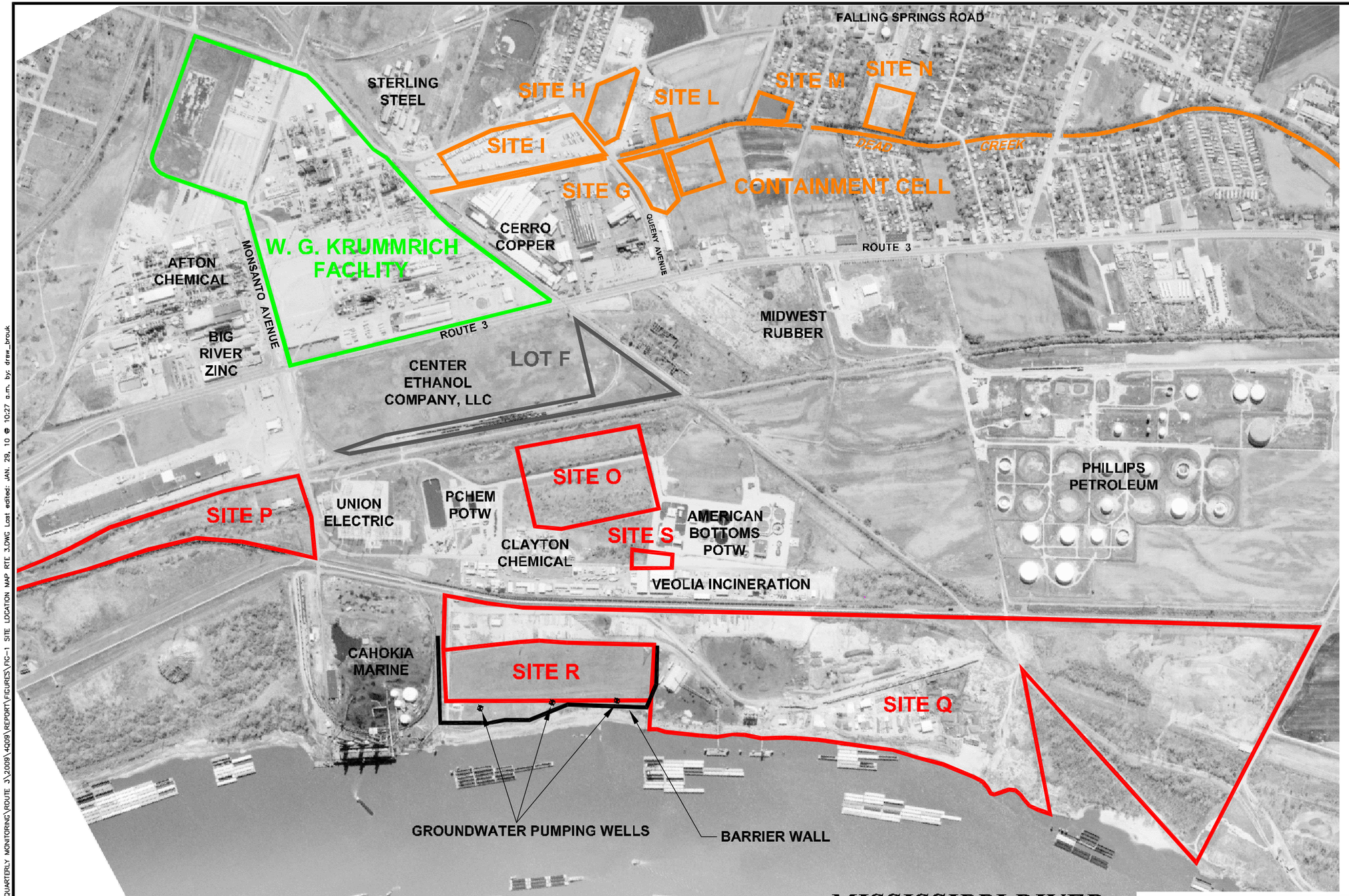
6.0 REFERENCES

Solutia Inc., 2008. Revised Illinois Route 3 Drum Site Operation and Maintenance Plan, W.G. Krummrich Facility, Sauget, IL, May 2008.

U.S. Environmental Protection Agency (USEPA), 2004. Contract Laboratory Program National Functional Guidelines for Inorganic Data Review.

U.S. Environmental Protection Agency (USEPA), 2008 National Functional Guidelines for Superfund Organic Methods Data Review.

Figures



LEGEND

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

Ø 1ØØØ

SCALE FEET

ILLINOIS ROUTE 3 DRUM SITE GROUNDWATER SAMPLING
4TH QUARTER 2ØØ9 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562046

URS

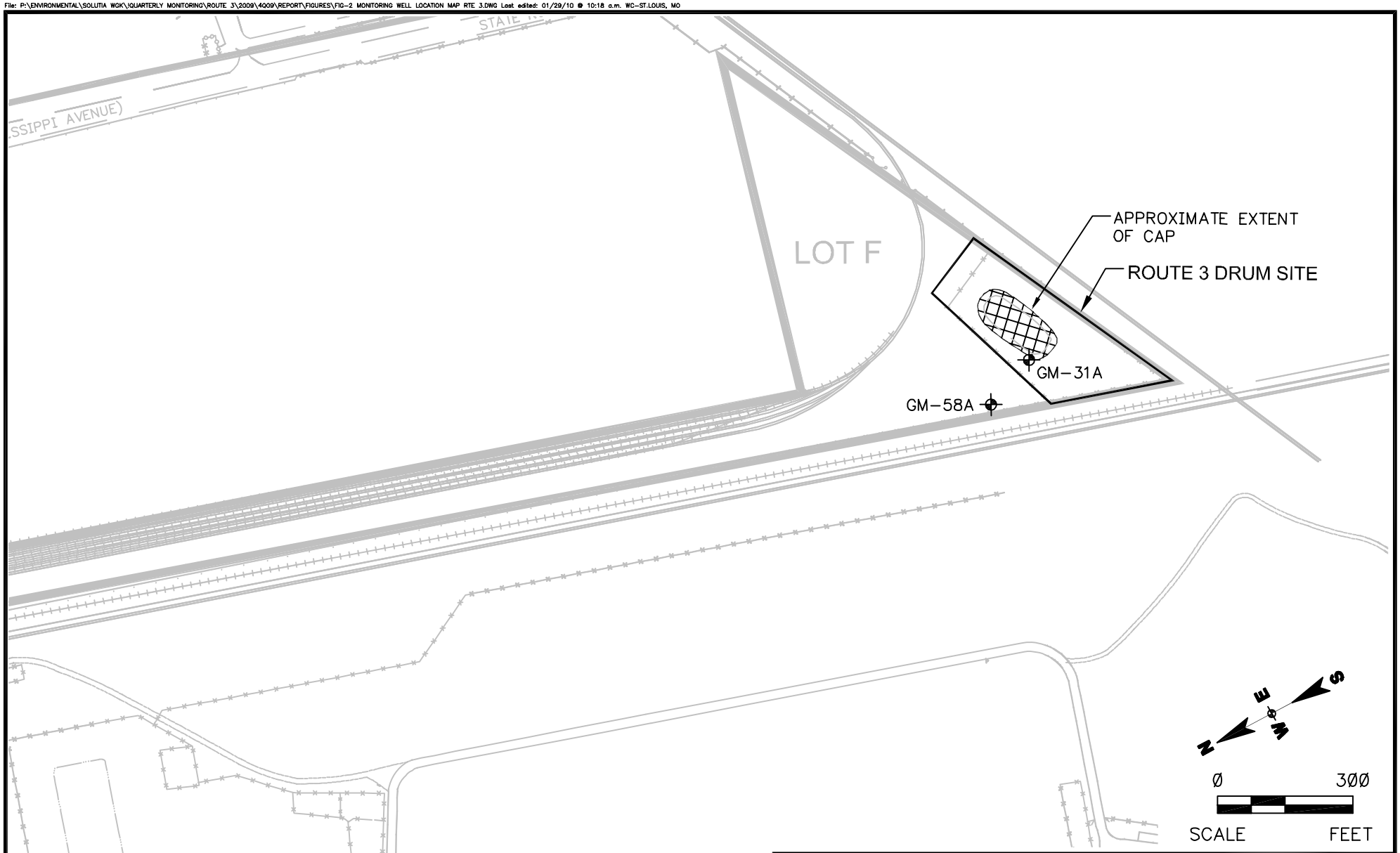
DRN. BY:chs February 2010
DSGN. BY:wh
CHKD. BY:

Site Location Map

FIG. NO. 1

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\ROUTE 3\2009\4Q09\REPORT\FIGURES\FIG-1 SITE LOCATION MAP RTE 3.DWG Last edited: JAN. 29, 10 @ 10:27 a.m. by: drew_brouk

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\ROUTE 3\2009\4009\REPORT\FIGURES\FIG-2 MONITORING WELL LOCATION MAP RTE 3.DWG Last edited: 01/29/10 @ 10:18 a.m. WC-ST.LOUIS, MO



LEGEND

⊕ MONITORING WELL LOCATION

ILLINOIS ROUTE 3 DRUM SITE GROUNDWATER SAMPLING 4TH QUARTER 2ØØ9 DATA REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS		PROJECT NO. 21562Ø46
URS		
DRN. BY:chs February 2Ø1Ø DSGN. BY: ekf CHKD. BY:	Monitoring Well Location Map	FIG. NO. 2

Tables

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						November 13, 2009		
	Ground Elevation* (feet)	Top of 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)	Product Thickness (feet)	Water Elevation* (feet)
Shallow Hydrogeologic Unit (SHU 395 - 380 ft NAVD 88)									
GM-31A	416.63	418.63	19.00	39.00	397.63	377.63	17.82	-	400.81
GM-58A	412.24	414.24	19.40	39.40	392.84	372.84	13.51	-	400.73

Notes:
* - Elevation based upon North American Vertical Datum (NAVD) 88 datum
bgs - below ground surface
btoc - below top of casing
Ground elevation for GM-58A calculated using top of screen elevation and depth to top of screen in feet below ground surface

Table 2
Groundwater Analytical Results

Sample ID	Sample Date	1,1'-Biphenyl (ug/L)	1-Chloro-2,4-Dinitrobenzene (ug/L)	1-Chloro-3-Nitrobenzene (ug/L)	2,4,6-Trichlorophenol (ug/L)	2,4-Dichlorophenol (ug/L)	2-Chloronitrobenzene/ 4-Chloronitrobenzene (ug/L)	2-Nitrobiphenyl (ug/L)	3-Nitrobiphenyl (ug/L)	3,4-Dichloronitrobenzene (ug/L)	4-Nitrobiphenyl (ug/L)	Nitrobenzene (ug/L)	Pentachlorophenol (ug/L)
Shallow Hydrogeologic Unit (SHU 395 - 380 ft NAVD 88)													
GM-31A-1109	11/19/2009	<9.5	<9.5	<9.5	<9.5	<9.5	<19	<9.5	<9.5	<9.5	<9.5	<9.5	<48
GM-31A-1109-AD	11/19/2009	<9.5	<9.5	<9.5	<9.5	<9.5	<19	<9.5	<9.5	<9.5	<9.5	<9.5	<48
GM-58A-1109	11/19/2009	<9.7	<9.7	<9.7	<9.7	<9.7	<19	<9.7	<9.7	<9.7	<9.7	<9.7	<49

Notes:
µg/L = micrograms per liter
< = Result is non-detect, less than the reporting limit given - indicated as a U qualifier on lab data

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 (µg/L)	Nitrogen, Nitrate (mg/L)	Sulfate as SO4 (mg/L)	Dissolved Organic Carbon (mg/L)	Total Organic Carbon (mg/L)	ORP (mV)
Shallow Hydrogeologic Unit (SHU 395 - 380 ft NAVD 88)																		
GM-31A-1109	11/19/2009	410	52	84	0.98	<0.35	<0.33		0.51		0.93		1.2	3.8 J	260		3.7	81.4
GM-31A-F(0.2)-1109	11/19/2009							0.16		0.055		0.89				3.5		
GM-58A-1109	11/19/2009	460	54	110	3.52	<0.35	<0.33		0.21		1.7		10	0.11	190		3.7	12.5
GM-58A-F(0.2)-1109	11/19/2009							0.2		0.2		1.7				3.3		

Notes:
DO and ORP were measured in the field using a YSI 6920 equipped with a flow-through cell.
Ferrous Iron readings were measured in the field using a LaMotte Colorimeter after the groundwater passed through a 0.2 µm filter.
mg/L = milligrams per liter
µg/L = micrograms per liter
< = Result is non-detect, less than the reporting limit given - indicated as a U qualifier on lab data
A blank space indicates sample not analyzed for select analyte.
F(0.2) = Sample was filtered utilizing a 0.2 µm filter in the field.
J = Estimated value
mV = milivolts

Appendix A

Groundwater Purging and Sampling Forms

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: WGK Route 3 Drum Lot PROJECT NUMBER: 21562046.00000 FIELD PERSONNEL: Mike Corbett, Craig Williams
DATE: 11/19/09 WEATHER: clouds, 45°
MONITORING WELL ID: GM-31A SAMPLE ID: GM-31A-1109, GM31A-1109-AD

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 40.85 ft
Constructed Well Depth (btoc): 41.00 ft
Depth to Water (btoc): 17.38 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 21.00 ft
Screen Length: 20 ft

Water Column Height (do not include LNAPL or DNAPL): 23.47 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 31.00 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell): 1,200 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,600 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or ±2 mg/L)	ORP (mv) (±20 mV)
0	0932	17.39	lt. brown	none	6.69	13.18	1.555	207.1	5.29	92.8
1,200	0936	17.39			6.74	13.45	1.574	130.7	1.12	85.8
2,400	0940	17.38			6.74	13.69	1.576	86.0	0.65	86.6
3,600	0944	↓			6.74	13.99	1.580	54.3	0.62	85.0
4,800	0948				6.74	14.11	1.584	37.2	0.57	81.1
6,000	0952	17.36			6.73	14.29	1.588	84.9	0.68	81.6
7,200	0956		↓		6.73	14.39	1.584	20.8	0.74	82.0
8,400	1000		colorless		6.73	14.37	1.582	15.6	0.91	82.1
9,600	1004				6.73	14.45	1.579	14.5	0.85	82.0
10,800	1008				6.73	14.46	1.576	12.1	0.94	81.9
12,000	1012				6.73	14.44	1.572	10.0	0.99	81.6
13,200	1016	↓	↓	↓	6.73	14.41	1.569	9.7	0.98	81.4

Start Time: 0932
Stop Time: 1016
Elapsed Time: 44 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 11/19/09

SAMPLING DATA

Sample Date: 11/19/09
Sample Method: Stainless Steel Monsoon
Sample Time: 1020
Sample Flow Rate: 300 mL/min.
Analysis: SVOCs, Metals, MNA
QA/QC Samples: AD

COMMENTS:

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

Ferrous Iron (0.2 Micron filter) = 0.16 ppm

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: WGK Route 3 Drum Lot PROJECT NUMBER: 21562046.00000 FIELD PERSONNEL: Mike Corbett, Craig Williams
DATE: 11/19/09 WEATHER: cloudy, 45°
MONITORING WELL ID: GM-58A SAMPLE ID: GM-58A-1109, GM-58A-1109-MS, GM-58A-1109-MSD

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 40.90 ft
Total Well Depth (btoc): 41.40 ft
Depth to Water (btoc): 13.10 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 21.40 ft
Screen Length: 20 ft

Water Column Height (do not include LNAPL or DNAPL): 27.80 ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 31.40 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): 1,200 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,600 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Peristaltic

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C) (±3 %)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or ±2 mg/L)	ORP (mv) (±20 mV)
0	1130	13.10	colorless	none	6.76	13.21	1.494	4.9	5.32	2.5
1,200	1134				6.75	13.24	1.501	4.3	3.11	4.3
2,400	1138				6.74	13.40	1.516	2.2	2.50	0.6
3,600	1142				6.74	13.53	1.513	2.1	3.47	2.2
4,800	1146				6.74	13.50	1.513	2.3	3.54	8.7
6,000	1150				6.74	13.56	1.504	0.1	3.49	11.2
7,200	1154				6.73	13.49	1.505	6.4	3.52	12.5

Start Time: 1130
Stop Time: 1154
Elapsed Time: 24 min
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 11/19/09

SAMPLING DATA

Sample Date: 11/19/09
Sample Method: Peristaltic
Sample Time: 1200
Sample Flow Rate: 300 ml/min.
Analysis: SVOCs, Metals, MNA
QA/QC Samples: MS/MSD

COMMENTS:

MNA – MNA – Alkalinity, CO_2, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (0.2 Micron filter) = 0.20 ppm

Appendix B

Chain-of-Custody

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: Jeff Adams	Site Contact: Mike Corbett	Date: 11/19/09	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. 21562046.00004
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: 4Q09 Route 3 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	SVOCs by 8270C*	Total Fe/Mn by 6010B	Alk/CO2 by 310.1	Chloride by 325.2/Sulfate by 375.4	Methane by RSK 175	Nitrate by 353.2	TOC by 415.1	Dissolved Fe/Mn by 6010B	DOC by 415.1	Sample Specific Notes:
GM-31A-1109	11/19/09	1020	G	Water	11		2	1	1	1	3	2	1			
GM-31A-1109-AD		1020	G	Water	2		2									
GM-31A-F(0.2)-1109		1020	G	Water	2	X								1	1	
GM-58A-1109		1200	G	Water	11		2	1	1	1	3	2	1			
GM-58A-1109-MS		1200	G	Water	2		2									
GM-58A-1109-MSD		1200	G	Water	2		2									
GM-58A-F(0.2)-1109		1200	G	Water	2	X								1	1	
							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

3.8/3.1/3.6
680-52837

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	URS	11/19/09 1600			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TMA	11/20/09 0905

Appendix C

Quality Assurance Report

QUALITY ASSURANCE REPORT

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

Illinois Route 3 Drum Site
4th Quarter 2009 Data Report

Prepared for

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

February 2010

URS Corporation
1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100
Project # 21562046

1.0 INTRODUCTION

This Quality Assurance Report presents the findings of a review of analytical data for groundwater samples collected in November 2009 at the Illinois Route 3 Drum Site on the Solutia W.G. Krummrich Facility as part of the 4th Quarter 2009 sampling event. The samples were collected by URS Corporation personnel and analyzed by TestAmerica Laboratories located in Savannah, Georgia using USEPA methodologies. Samples were analyzed for certain semi-volatile organic compounds (SVOCs) and monitored natural attenuation (MNA) parameters.

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

A total of five samples (two investigative groundwater samples, one field duplicate, and one matrix spike and matrix spike duplicate (MS/MSD) pair) were analyzed by TestAmerica. These samples were analyzed as Sample Delivery Group (SDG) KOM06, utilizing the following USEPA SW-846 Methods:

- USEPA SW-846 Method 8270C for SVOCs

Samples were also analyzed for MNA parameters by the following methods:

- Method RSK-175 for Dissolved Gases (Ethane, Ethylene, and Methane)
- USEPA Method 310.1 for Alkalinity and Carbon Dioxide
- USEPA Method 325.2 for Chloride
- USEPA Method 6010B for Total and Dissolved Iron and Manganese
- USEPA Method 415.1 for Total and Dissolved Organic Carbon
- USEPA Method 353.2 for Nitrogen, Nitrate
- USEPA Method 375.4 for Sulfate

Samples were reviewed following procedures outlined in the USEPA National Functional Guidelines for Superfund Organic Methods Data Review, 2008 and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

The above guidelines provided the criteria to review the data. Additional quantitative criteria are given in the analytical methods. Qualifiers assigned by the data reviewer have been applied to the laboratory reporting forms (Form-1s). The qualifiers indicate data that did not meet acceptance criteria.

The various qualifiers are explained in **Tables 1** and **2** below:

TABLE 1 Laboratory Data Qualifiers

Lab Qualifier	Definition
U	Indicates the analyte was analyzed for but not detected.
*	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.
N	MS, MSD: Spike recovery exceeds upper or lower control limits.
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 to be the percentage of analytical results which are judged to be valid, including estimated detect/nondetect (J/UJ) values was 100 percent, which meets the completeness goal of 95 percent.

The data review included evaluation of the following criteria:

Organics

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

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.

Extractions and/or analyses were completed within the recommended holding time requirements.

3.0 LABORATORY METHOD BLANK

Laboratory method blank samples evaluate the existence and magnitude of contamination problems resulting from laboratory activities. Laboratory method blank samples were analyzed at the method prescribed frequencies. No compounds were detected in the method blank; 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. All samples analyzed for SVOCs were spiked with surrogate compounds during sample preparation. USEPA National Functional Guidelines for Organic Data Review state how data is qualified, if surrogate spike recoveries do not meet evaluation criteria.

Surrogate recoveries were within evaluation criteria. Surrogates that were associated with quality control samples did not require qualification. In addition, no qualification of data was required if only one SVOC acid or base fraction surrogate was outside evaluation criteria. The USEPA National Functional Guidelines for Organic Data Review indicates to qualify data if two or more surrogates per SVOC fraction are outside criteria. No qualifications of data were required due to surrogate recoveries.

5.0 LABORATORY CONTROL SAMPLE RECOVERIES

Laboratory control samples (LCS) are analyzed with each analytical batch to assess the accuracy of the analytical process. Spiked LCS recoveries were within evaluation with the exception noted in the data review for LCS 680-154620/17-A. LCS recovery was above evaluation criteria for nitrobenzene. Analytical data which were reported as nondetect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Nitrobenzene was nondetect in the associated SVOC samples; therefore, 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 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 two investigative samples, meeting the work plan frequency requirement.

SVOC MS/MSD recoveries for nitrobenzene were above evaluation criteria in sample GM-58A-1109. SVOC MSD recovery for 3-nitrobiphenyl was above evaluation criteria and SVOC MS recovery for 2-chloronitrobenzene/4-chloronitrobenzene was below evaluation criteria in sample GM-58A-1109. National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone and LCS recoveries, with the exception of nitrobenzene, were within evaluation criteria. Analytical data that were reported as nondetect and associated with MS/MSD recoveries above evaluation criteria, indicating a

possible high bias, did not require qualification. The compound nitrobenzene was nondetect in sample GM-58A-1109; therefore, no qualification of data was required.

Sulfate MS/MSD data could not be evaluated because sample concentrations were greater than four times (4X) spiking concentrations. The nitrate and nitrate/nitrite MS recoveries were below evaluation criteria in sample GM-31A-1109. Analytical data that required qualification based on MS/MSD data are included in the following table.

Sample ID	Parameter	Analyte	Qualification
GM-31A-1109	General Chemistry	Nitrate	**J**

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 field duplicate sample was collected for the two investigative samples. This satisfies the requirement in the work plan (one per 10 investigative samples or 10 percent). All field duplicate RPDs were within evaluation criteria. No qualification of the data was required.

8.0 INTERNAL STANDARD RESPONSES

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. IS areas must be within -50 percent to +100 percent for SVOCs. Also, the IS retention times must be within 30 seconds of the preceding IS CV retention time.

The internal standards area responses for the SVOCs were verified for the data reviews. IS responses met the criteria. No qualification of the data was required.

9.0 RESULTS REPORTED FROM DILUTIONS

Sulfate samples were diluted and reanalyzed due to the high levels of nitrate and sulfate in these samples. The diluted sample results for nitrate and sulfate were reported at the lowest possible reporting limit.

Appendix D

Groundwater Analytical Results

(with Data Review Sheets)

Solutia Krummrich Data Review
WGK Route 3 Drum Site O&M 4Q09

Laboratory SDG: KOM06

Reviewer: Susan Jansen

Date Reviewed: 1/22/2010

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 Illinois Route 3 Drum Site Operation and Maintenance Plan (Solutia 2008)

Sample Identification	Sample Identification
GM-31A-1109	GM-58A-1109
GM-31A-F(0.2)-1109	GM-58A-F(0.2)-1109
GM-31A-1109-AD	

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

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

Yes, the laboratory case narrative indicated that LCS recoveries were outside evaluation criteria for nitrobenzene. SVOC and general chemistry MS/MSD recoveries were outside evaluation criteria. Samples were diluted due to high levels of nitrate and sulfate. These issues are addressed further in the appropriate sections below.

The cooler receipt form did not indicate any problems.

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?

No

LCS ID	Parameter	Analyte	LCS	RPD	LCS Criteria
680-154620/17-A	SVOCs	Nitrobenzene	**141**	N/A	46-110

Analytical data which were reported as nondetect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Nitrobenzene was nondetect in the associated SVOC samples; therefore, no qualification of data was required.

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 GM-58A-1109 was spiked and analyzed for SVOCs. Sample GM-31A-1109 was spiked and analyzed for chloride, nitrate, nitrate nitrite, sulfate, and total organic carbon.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD Criteria
GM-58A-1109	SVOCs	Nitrobenzene	**122/144**	17	46-110/40
GM-58A-1109	SVOCs	3-Nitrobiphenyl	96**/134**	34	70-130/40
GM-58A-1109	SVOCs	2-chloronitrobenzene/4-chloronitrobenzene	**64/**78	20	70-130/40
GM-31A-1109	General Chemistry	Nitrate	**88/**93	3	90-110/10
GM-31A-1109	General Chemistry	Nitrate / nitrite	**88/**93	3	90-110/10

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone and LCS recoveries, with the exception of nitrobenzene, were within evaluation criteria. Compounds which are nondetect and associated with MS/MSD recoveries above evaluation criteria, indicating a high bias, do not require qualification; therefore, no qualification of the SVOC data was required. Sulfate MS/MSD data could not be evaluated because sample concentrations were greater than four times (4X) spiking concentrations.

Analytical data that required qualification based on MS/MSD data are included in the following table.

Sample ID	Parameter	Analyte	Qualification
GM-31A-1109	General Chemistry	Nitrate	**J**

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples collected as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
GM-31A-1109	GM-31A-1109-AD

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

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

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

12.0 Additional Qualifications

Were additional qualifications applied?

No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-52837-1

SDG Number: KOM06

Job Description: WGK Route 3 Drum Site O&M 4Q09

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

Attention: Mr. Jerry Rinaldi

Lidya Gulizia

Approved for release.
Lidya Gulizia
Project Manager I
12/30/2009 3:39 PM

Lidya Gulizia
Project Manager I
lidya.gulizia@testamericainc.com
12/30/2009

Reviewed on
JAN 22 2010

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

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

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

ACCREDITED IN ACCORDANCE WITH nelac

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

GC/MS Semi VOA
Method(s) 8270C: The laboratory control sample (LCS) for preparation batch 154620 exceeded control limits for the following analytes: nitrobenzene. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

The LCS and MS/MSD were spiked with methyl benzoate, which coelutes with nitrobenzene. Both compounds have mass 77 in their spectra, the mass used to quantify nitrobenzene. Since these compounds coelute, the response of mass 77 was enhanced and the recovery of nitrobenzene is higher than if it were spiked alone.

Method(s) 8270C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 154620 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8270C: The grand mean exception, as outlined in EPA Method 8000B, was applied to the initial calibration (ICAL). This rule states that when one or more compounds in the ICAL fail to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average %RSD (the grand mean) of all the compounds in the ICAL is less than or equal to 15 %RSD.

No other analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
Method(s) 353.2: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 154340 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 375.4: Due to the high concentration of sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for batch 155100 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

No other analytical or quality issues were noted.

Comments
No additional comments.

METHOD SUMMARY

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

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

JAN 22 2010

METHOD / ANALYST SUMMARY

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Method	Analyst	Analyst ID
SW846 8270C	Davis, Nancy	ND
RSK RSK-175	Moncrief, Amy	AEM
SW846 6010B	Bland, Brian	BCB
MCAWW 310.1	Vasquez, Juana	JV
MCAWW 325.2	Ross, Jon	JR
MCAWW 353.2	Ross, Jon	JR
MCAWW 375.4	Ross, Jon	JR
MCAWW 415.1	Blackshear, Kim	KB

JAN 22 2010

SAMPLE SUMMARY

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-52837-1	GM-31A-1109	Water	11/19/2009 1020	11/20/2009 0905
680-52837-2FD	GM-31A-1109-AD	Water	11/19/2009 1020	11/20/2009 0905
680-52837-3	GM-31A-F(0.2)-1109	Water	11/19/2009 1020	11/20/2009 0905
680-52837-4	GM-58A-1109	Water	11/19/2009 1200	11/20/2009 0905
680-52837-4MS	GM-58A-1109-MS	Water	11/19/2009 1200	11/20/2009 0905
680-52837-4MSD	GM-58A-1109-MSD	Water	11/19/2009 1200	11/20/2009 0905
680-52837-5	GM-58A-F(0.2)-1109	Water	11/19/2009 1200	11/20/2009 0905

JAN 22 2010

SAMPLE RESULTS

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Client Sample ID: **GM-31A-1109**

Lab Sample ID: 680-52837-1
Client Matrix: Water

Date Sampled: 11/19/2009 1020
Date Received: 11/20/2009 0905

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

Method:	8270C	Analysis Batch: 680-156881		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154620		Lab File ID:	t1754.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	12/22/2009 1334			Final Weight/Volume:	1 mL
Date Prepared:	11/25/2009 1344			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
1,1'-Biphenyl	9.5	U	9.5
2,4-Dichlorophenol	9.5	U	9.5
Nitrobenzene	9.5	U *	9.5
Pentachlorophenol	48	U	48
2,4,6-Trichlorophenol	9.5	U	9.5
1-Chloro-3-nitrobenzene	9.5	U	9.5
2-Nitrobiphenyl	9.5	U	9.5
3-Nitrobiphenyl	9.5	U	9.5
3,4-Dichloronitrobenzene	9.5	U	9.5
4-Nitrobiphenyl	9.5	U	9.5
2-chloronitrobenzene / 4-chloronitrobenzene	19	U	19
1-chloro-2,4-dinitrobenzene	9.5	U	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	70		50 - 113
2-Fluorophenol	59		36 - 110
Nitrobenzene-d5	75		45 - 112
Phenol-d5	64		38 - 116
Terphenyl-d14	43		10 - 121
2,4,6-Tribromophenol	86		40 - 139

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Client Sample ID: **GM-31A-1109-AD**

Lab Sample ID: 680-52837-2FD
Client Matrix: Water

Date Sampled: 11/19/2009 1020
Date Received: 11/20/2009 0905

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

Method:	8270C	Analysis Batch: 680-156881		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154620		Lab File ID:	t1755.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	12/22/2009 1358			Final Weight/Volume:	1 mL
Date Prepared:	11/25/2009 1344			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
1,1'-Biphenyl	9.5	U	9.5
2,4-Dichlorophenol	9.5	U	9.5
Nitrobenzene	9.5	U *	9.5
Pentachlorophenol	48	U	48
2,4,6-Trichlorophenol	9.5	U	9.5
1-Chloro-3-nitrobenzene	9.5	U	9.5
2-Nitrobiphenyl	9.5	U	9.5
3-Nitrobiphenyl	9.5	U	9.5
3,4-Dichloronitrobenzene	9.5	U	9.5
4-Nitrobiphenyl	9.5	U	9.5
2-chloronitrobenzene / 4-chloronitrobenzene	19	U	19
1-chloro-2,4-dinitrobenzene	9.5	U	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	82		50 - 113
2-Fluorophenol	67		36 - 110
Nitrobenzene-d5	83		45 - 112
Phenol-d5	72		38 - 116
Terphenyl-d14	66		10 - 121
2,4,6-Tribromophenol	91		40 - 139

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Client Sample ID: **GM-58A-1109**

Lab Sample ID: 680-52837-4
Client Matrix: Water

Date Sampled: 11/19/2009 1200
Date Received: 11/20/2009 0905

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

Method:	8270C	Analysis Batch: 680-156881		Instrument ID:	MST
Preparation:	3520C	Prep Batch: 680-154620		Lab File ID:	t1756.d
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	12/22/2009 1423			Final Weight/Volume:	1 mL
Date Prepared:	11/25/2009 1344			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
1,1'-Biphenyl	9.7	U	9.7
2,4-Dichlorophenol	9.7	U	9.7
Nitrobenzene	9.7	U *	9.7
Pentachlorophenol	49	U	49
2,4,6-Trichlorophenol	9.7	U	9.7
1-Chloro-3-nitrobenzene	9.7	U	9.7
2-Nitrobiphenyl	9.7	U	9.7
3-Nitrobiphenyl	9.7	U	9.7
3,4-Dichloronitrobenzene	9.7	U	9.7
4-Nitrobiphenyl	9.7	U	9.7
2-chloronitrobenzene / 4-chloronitrobenzene	19	U	19
1-chloro-2,4-dinitrobenzene	9.7	U	9.7

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	77		50 - 113
2-Fluorophenol	67		36 - 110
Nitrobenzene-d5	83		45 - 112
Phenol-d5	70		38 - 116
Terphenyl-d14	57		10 - 121
2,4,6-Tribromophenol	88		40 - 139

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Client Sample ID: **GM-31A-1109**

Lab Sample ID: 680-52837-1
Client Matrix: Water

Date Sampled: 11/19/2009 1020
Date Received: 11/20/2009 0905

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-154492		Instrument ID:	VGUFID2
Preparation:	N/A			Lab File ID:	U112327.D
Dilution:	1.0			Initial Weight/Volume:	17000 uL
Date Analyzed:	11/24/2009 1042			Final Weight/Volume:	17 mL
Date Prepared:				Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Ethane	0.35	U	0.35
Ethylene	0.33	U	0.33
Methane	1.2		0.19

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Client Sample ID: **GM-58A-1109**

Lab Sample ID: 680-52837-4
Client Matrix: Water

Date Sampled: 11/19/2009 1200
Date Received: 11/20/2009 0905

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-154492		Instrument ID:	VGUFID2
Preparation:	N/A			Lab File ID:	U112328.D
Dilution:	1.0			Initial Weight/Volume:	17000 uL
Date Analyzed:	11/24/2009 1057			Final Weight/Volume:	17 mL
Date Prepared:				Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
Ethane	0.35	U	0.35
Ethylene	0.33	U	0.33
Methane	10		0.19

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Client Sample ID: **GM-31A-1109**

Lab Sample ID: 680-52837-1
Client Matrix: Water

Date Sampled: 11/19/2009 1020
Date Received: 11/20/2009 0905

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Batch: 680-155356		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-155200		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	12/04/2009 2343			Final Weight/Volume:	50 mL
Date Prepared:	12/03/2009 1448				

Analyte	Result (mg/L)	Qualifier	RL
Iron	0.51		0.050
Manganese	0.93		0.010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Client Sample ID: **GM-31A-F(0.2)-1109**

Lab Sample ID: 680-52837-3
Client Matrix: Water

Date Sampled: 11/19/2009 1020
Date Received: 11/20/2009 0905

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 680-155356		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-155200		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	12/04/2009 2359			Final Weight/Volume:	50 mL
Date Prepared:	12/03/2009 1448				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	0.055		0.050
Manganese, Dissolved	0.89		0.010

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Client Sample ID: **GM-58A-1109**

Lab Sample ID: 680-52837-4
Client Matrix: Water

Date Sampled: 11/19/2009 1200
Date Received: 11/20/2009 0905

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Batch: 680-155356		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-155200		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	12/05/2009 0004			Final Weight/Volume:	50 mL
Date Prepared:	12/03/2009 1448				

Analyte	Result (mg/L)	Qualifier	RL
Iron	0.21		0.050
Manganese	1.7		0.010

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Client Sample ID: **GM-58A-F(0.2)-1109**

Lab Sample ID: 680-52837-5
Client Matrix: Water

Date Sampled: 11/19/2009 1200
Date Received: 11/20/2009 0905

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 680-155356		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-155200		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	12/05/2009 0010			Final Weight/Volume:	50 mL
Date Prepared:	12/03/2009 1448				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	0.20		0.050
Manganese, Dissolved	1.7		0.010

JAN 22 2010

General Chemistry

Client Sample ID: **GM-31A-1109**

Lab Sample ID: 680-52837-1
Client Matrix: Water

Date Sampled: 11/19/2009 1020
Date Received: 11/20/2009 0905

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	84		mg/L	1.0	1.0	325.2
Analysis Batch: 680-154972	Date Analyzed: 12/01/2009 1307					
Nitrate as N	3.8	J	mg/L	0.25	5.0	353.2
Analysis Batch: 680-154340	Date Analyzed: 11/20/2009 1617					
Sulfate	260		mg/L	50	10	375.4
Analysis Batch: 680-155100	Date Analyzed: 12/02/2009 1244					
Total Organic Carbon	3.7		mg/L	1.0	1.0	415.1
Analysis Batch: 680-155089	Date Analyzed: 12/01/2009 1615					

Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	410		mg/L	5.0	1.0	310.1
Analysis Batch: 680-154420	Date Analyzed: 11/23/2009 1335					
Carbon Dioxide, Free	52		mg/L	5.0	1.0	310.1
Analysis Batch: 680-154420	Date Analyzed: 11/23/2009 1335					

JAN 22 2010

General Chemistry

Client Sample ID: **GM-31A-F(0.2)-1109**

Lab Sample ID: 680-52837-3
Client Matrix: Water

Date Sampled: 11/19/2009 1020
Date Received: 11/20/2009 0905

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	3.5		mg/L	1.0	1.0	415.1

Analysis Batch: 680-155513 Date Analyzed: 11/24/2009 1057

General Chemistry

Client Sample ID: **GM-58A-1109**

Lab Sample ID: 680-52837-4
Client Matrix: Water

Date Sampled: 11/19/2009 1200
Date Received: 11/20/2009 0905

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	110		mg/L	2.0	2.0	325.2
Analysis Batch: 680-154972	Date Analyzed: 12/01/2009 1324					
Nitrate as N	0.11		mg/L	0.050	1.0	353.2
Analysis Batch: 680-154340	Date Analyzed: 11/20/2009 1617					
Sulfate	190		mg/L	50	10	375.4
Analysis Batch: 680-155100	Date Analyzed: 12/02/2009 1246					
Total Organic Carbon	3.7		mg/L	1.0	1.0	415.1
Analysis Batch: 680-155089	Date Analyzed: 12/01/2009 1558					

Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	460		mg/L	5.0	1.0	310.1
Analysis Batch: 680-154420	Date Analyzed: 11/23/2009 1345					
Carbon Dioxide, Free	54		mg/L	5.0	1.0	310.1
Analysis Batch: 680-154420	Date Analyzed: 11/23/2009 1345					

JAN 22 2010

General Chemistry

Client Sample ID: **GM-58A-F(0.2)-1109**

Lab Sample ID: 680-52837-5
Client Matrix: Water

Date Sampled: 11/19/2009 1200
Date Received: 11/20/2009 0905

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	3.3		mg/L	1.0	1.0	415.1

Analysis Batch: 680-155521 Date Analyzed: 12/07/2009 1610

JAN 22 2010

DATA REPORTING QUALIFIERS

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	*	LCS or LCSD exceeds the control limits
	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
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

QUALITY CONTROL RESULTS

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 680-154620					
LCS 680-154620/17-A	Lab Control Sample	T	Water	3520C	
MB 680-154620/16-A	Method Blank	T	Water	3520C	
680-52837-1	GM-31A-1109	T	Water	3520C	
680-52837-2FD	GM-31A-1109-AD	T	Water	3520C	
680-52837-4	GM-58A-1109	T	Water	3520C	
680-52837-4MS	Matrix Spike	T	Water	3520C	
680-52837-4MSD	Matrix Spike Duplicate	T	Water	3520C	
Analysis Batch:680-156881					
LCS 680-154620/17-A	Lab Control Sample	T	Water	8270C	680-154620
MB 680-154620/16-A	Method Blank	T	Water	8270C	680-154620
680-52837-1	GM-31A-1109	T	Water	8270C	680-154620
680-52837-2FD	GM-31A-1109-AD	T	Water	8270C	680-154620
680-52837-4	GM-58A-1109	T	Water	8270C	680-154620
680-52837-4MS	Matrix Spike	T	Water	8270C	680-154620
680-52837-4MSD	Matrix Spike Duplicate	T	Water	8270C	680-154620

Report Basis
T = Total

GC VOA					
Analysis Batch:680-154492					
LCS 680-154492/17	Lab Control Sample	T	Water	RSK-175	
LCSD 680-154492/18	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-154492/19	Method Blank	T	Water	RSK-175	
680-52837-1	GM-31A-1109	T	Water	RSK-175	
680-52837-4	GM-58A-1109	T	Water	RSK-175	

Report Basis
T = Total

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 680-155200					
LCS 680-155200/22-A	Lab Control Sample	R	Water	3005A	
MB 680-155200/21-A	Method Blank	R	Water	3005A	
680-52837-1	GM-31A-1109	R	Water	3005A	
680-52837-3	GM-31A-F(0.2)-1109	D	Water	3005A	
680-52837-4	GM-58A-1109	R	Water	3005A	
680-52837-5	GM-58A-F(0.2)-1109	D	Water	3005A	
Analysis Batch:680-155356					
LCS 680-155200/22-A	Lab Control Sample	R	Water	6010B	680-155200
MB 680-155200/21-A	Method Blank	R	Water	6010B	680-155200
680-52837-1	GM-31A-1109	R	Water	6010B	680-155200
680-52837-3	GM-31A-F(0.2)-1109	D	Water	6010B	680-155200
680-52837-4	GM-58A-1109	R	Water	6010B	680-155200
680-52837-5	GM-58A-F(0.2)-1109	D	Water	6010B	680-155200

Report Basis
D = Dissolved
R = Total Recoverable

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:680-154340					
LCS 680-154340/2	Lab Control Sample	T	Water	353.2	
MB 680-154340/1	Method Blank	T	Water	353.2	
680-52837-1	GM-31A-1109	T	Water	353.2	
680-52837-1MS	Matrix Spike	T	Water	353.2	
680-52837-1MSD	Matrix Spike Duplicate	T	Water	353.2	
680-52837-4	GM-58A-1109	T	Water	353.2	
Analysis Batch:680-154420					
LCS 680-154420/3	Lab Control Sample	T	Water	310.1	
MB 680-154420/2	Method Blank	T	Water	310.1	
680-52837-1	GM-31A-1109	T	Water	310.1	
680-52837-4	GM-58A-1109	T	Water	310.1	
Analysis Batch:680-154972					
LCS 680-154972/1	Lab Control Sample	T	Water	325.2	
MB 680-154972/11	Method Blank	T	Water	325.2	
680-52837-1	GM-31A-1109	T	Water	325.2	
680-52837-1MS	Matrix Spike	T	Water	325.2	
680-52837-1MSD	Matrix Spike Duplicate	T	Water	325.2	
680-52837-4	GM-58A-1109	T	Water	325.2	
Analysis Batch:680-155089					
LCS 680-155089/4	Lab Control Sample	T	Water	415.1	
LCSD 680-155089/5	Lab Control Sample Duplicate	T	Water	415.1	
MB 680-155089/2	Method Blank	T	Water	415.1	
680-52837-1	GM-31A-1109	T	Water	415.1	
680-52837-1MS	Matrix Spike	T	Water	415.1	
680-52837-1MSD	Matrix Spike Duplicate	T	Water	415.1	
680-52837-4	GM-58A-1109	T	Water	415.1	
Analysis Batch:680-155100					
LCS 680-155100/2	Lab Control Sample	T	Water	375.4	
MB 680-155100/1	Method Blank	T	Water	375.4	
680-52837-1	GM-31A-1109	T	Water	375.4	
680-52837-1MS	Matrix Spike	T	Water	375.4	
680-52837-1MSD	Matrix Spike Duplicate	T	Water	375.4	
680-52837-4	GM-58A-1109	T	Water	375.4	
Analysis Batch:680-155513					
LCS 680-155513/2	Lab Control Sample	D	Water	415.1	
MB 680-155513/1	Method Blank	D	Water	415.1	
680-52837-3	GM-31A-F(0.2)-1109	D	Water	415.1	

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:680-155521					
LCS 680-155521/2	Lab Control Sample	D	Water	415.1	
MB 680-155521/1	Method Blank	D	Water	415.1	
680-52837-5	GM-58A-F(0.2)-1109	D	Water	415.1	

Report Basis
D = Dissolved
T = Total

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Method Blank - Batch: 680-154620

Method: 8270C
Preparation: 3520C

Lab Sample ID: MB 680-154620/16-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/22/2009 1600
Date Prepared: 11/25/2009 1344

Analysis Batch: 680-156881
Prep Batch: 680-154620
Units: ug/L

Instrument ID: GC/MS SemiVolatiles - T
Lab File ID: t1752a.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	Result	Qual	RL
1,1'-Biphenyl	10	U	10
2,4-Dichlorophenol	10	U	10
Nitrobenzene	10	U	10
Pentachlorophenol	50	U	50
2,4,6-Trichlorophenol	10	U	10
1-Chloro-3-nitrobenzene	10	U	10
2-Nitrobiphenyl	10	U	10
3-Nitrobiphenyl	10	U	10
3,4-Dichloronitrobenzene	10	U	10
4-Nitrobiphenyl	10	U	10
2-chloronitrobenzene / 4-chloronitrobenzene	20	U	20
1-chloro-2,4-dinitrobenzene	10	U	10

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	70	50 - 113
2-Fluorophenol	63	36 - 110
Nitrobenzene-d5	82	45 - 112
Phenol-d5	70	38 - 116
Terphenyl-d14	83	10 - 121
2,4,6-Tribromophenol	89	40 - 139

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Surrogate Recovery Report

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

Client Matrix: Water

Lab Sample ID	Client Sample ID	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec	TBP %Rec
680-52837-1	GM-31A-1109	70	59	75	64	43	86
680-52837-2	GM-31A-1109-AD	82	67	83	72	66	91
680-52837-4	GM-58A-1109	77	67	83	70	57	88
MB 680-154620/16-A		70	63	82	70	83	89
LCS 680-154620/17-A		60	76	80	79	83	87
680-52837-4 MS	GM-58A-1109 MS	54	57	65	60	67	75
680-52837-4 MSD	GM-58A-1109 MSD	63	68	77	72	71	84

Surrogate	Acceptance Limits
FBP = 2-Fluorobiphenyl	50-113
2FP = 2-Fluorophenol	36-110
NBZ = Nitrobenzene-d5	45-112
PHL = Phenol-d5	38-116
TPH = Terphenyl-d14	10-121
TBP = 2,4,6-Tribromophenol	40-139

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Lab Control Sample - Batch: 680-154620

Method: 8270C
Preparation: 3520C

Lab Sample ID: LCS 680-154620/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/22/2009 1625
Date Prepared: 11/25/2009 1344

Analysis Batch: 680-156881
Prep Batch: 680-154620
Units: ug/L

Instrument ID: GC/MS SemiVolatiles - T
Lab File ID: t1753a.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	100	60.9	61	47 - 112	
2,4-Dichlorophenol	100	81.3	81	46 - 115	
Nitrobenzene	100	141	141	46 - 110	*
Pentachlorophenol	100	99.9	100	37 - 132	
2,4,6-Trichlorophenol	100	76.9	77	46 - 120	
1-Chloro-3-nitrobenzene	100	93.6	94	70 - 130	
2-Nitrobiphenyl	100	108	108	70 - 130	
3-Nitrobiphenyl	100	104	104	70 - 130	
3,4-Dichloronitrobenzene	100	94.4	94	70 - 130	
4-Nitrobiphenyl	100	88.0	88	70 - 130	
2-chloronitrobenzene / 4-chloronitrobenzene	200	163	82	70 - 130	
1-chloro-2,4-dinitrobenzene	100	113	113	70 - 130	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	60	50 - 113
2-Fluorophenol	76	36 - 110
Nitrobenzene-d5	80	45 - 112
Phenol-d5	79	38 - 116
Terphenyl-d14	83	10 - 121
2,4,6-Tribromophenol	87	40 - 139

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154620

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	680-52837-4	Analysis Batch: 680-156881	Instrument ID: GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch: 680-154620	Lab File ID: t1757.d
Dilution:	1.0		Initial Weight/Volume: 1060 mL
Date Analyzed:	12/22/2009 1445		Final Weight/Volume: 1 mL
Date Prepared:	11/25/2009 1344		Injection Volume: 1 uL

MSD Lab Sample ID:	680-52837-4	Analysis Batch: 680-156881	Instrument ID: GC/MS SemiVolatiles - T
Client Matrix:	Water	Prep Batch: 680-154620	Lab File ID: t1758.d
Dilution:	1.0		Initial Weight/Volume: 1050 mL
Date Analyzed:	12/22/2009 1509		Final Weight/Volume: 1 mL
Date Prepared:	11/25/2009 1344		Injection Volume: 1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	56	64	47 - 112	14	40		
2,4-Dichlorophenol	64	77	46 - 115	20	40		
Nitrobenzene	122	144	46 - 110	17	40	F	F
Pentachlorophenol	96	102	37 - 132	7	40		
2,4,6-Trichlorophenol	60	70	46 - 120	16	40		
1-Chloro-3-nitrobenzene	72	88	70 - 130	21	40		
2-Nitrobiphenyl	99	118	70 - 130	18	40		
3-Nitrobiphenyl	96	134	70 - 130	34	40		F
3,4-Dichloronitrobenzene	74	89	70 - 130	19	40		
4-Nitrobiphenyl	88	96	70 - 130	9	40		
2-chloronitrobenzene / 4-chloronitrobenzene	64	78	70 - 130	20	40	F	
1-chloro-2,4-dinitrobenzene	96	108	70 - 130	13	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl	54	63	50 - 113
2-Fluorophenol	57	68	36 - 110
Nitrobenzene-d5	65	77	45 - 112
Phenol-d5	60	72	38 - 116
Terphenyl-d14	67	71	10 - 121
2,4,6-Tribromophenol	75	84	40 - 139

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Method Blank - Batch: 680-154492

Method: RSK-175
Preparation: N/A

Lab Sample ID: MB 680-154492/19
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/24/2009 0851
Date Prepared: N/A

Analysis Batch: 680-154492
Prep Batch: N/A
Units: ug/L

Instrument ID: GC Volatiles - U FID
Lab File ID: UQ112314.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL

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: 680-154492

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID: LCS 680-154492/17
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/23/2009 1828
Date Prepared: N/A

Analysis Batch: 680-154492
Prep Batch: N/A
Units: ug/L

Instrument ID: GC Volatiles - U FID
Lab File ID: UQ112309.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL

LCSD Lab Sample ID: LCSD 680-154492/18
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/23/2009 1841
Date Prepared: N/A

Analysis Batch: 680-154492
Prep Batch: N/A
Units: ug/L

Instrument ID: GC Volatiles - U FID
Lab File ID: UQ112310.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Ethane	100	106	75 - 125	6	30		
Ethylene	104	109	75 - 125	5	30		
Methane	109	115	75 - 125	5	30		

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Method Blank - Batch: 680-155200

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID: MB 680-155200/21-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/04/2009 2332
Date Prepared: 12/03/2009 1448

Analysis Batch: 680-155356
Prep Batch: 680-155200
Units: mg/L

Instrument ID: ICP/AES - D
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

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

Lab Control Sample - Batch: 680-155200

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID: LCS 680-155200/22-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/04/2009 2338
Date Prepared: 12/03/2009 1448

Analysis Batch: 680-155356
Prep Batch: 680-155200
Units: mg/L

Instrument ID: ICP/AES - D
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	1.00	1.05	105	75 - 125	
Iron, Dissolved	1.00	1.05	105	75 - 125	
Manganese	0.500	0.515	103	75 - 125	
Manganese, Dissolved	0.500	0.515	103	75 - 125	

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Method Blank - Batch: 680-154420

Method: 310.1
Preparation: N/A

Lab Sample ID: MB 680-154420/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/23/2009 1308
Date Prepared: N/A

Analysis Batch: 680-154420
Prep Batch: N/A
Units: mg/L

Instrument ID: PC Titrate - Mantech1
Lab File ID: N/A
Initial Weight/Volume: 25 mL
Final Weight/Volume: 50 mL

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

Lab Control Sample - Batch: 680-154420

Method: 310.1
Preparation: N/A

Lab Sample ID: LCS 680-154420/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/23/2009 1314
Date Prepared: N/A

Analysis Batch: 680-154420
Prep Batch: N/A
Units: mg/L

Instrument ID: PC Titrate - Mantech1
Lab File ID: N/A
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Alkalinity	236	213	90	80 - 120	

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Method Blank - Batch: 680-154972

Method: 325.2
Preparation: N/A

Lab Sample ID: MB 680-154972/11
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/01/2009 1316
Date Prepared: N/A

Analysis Batch: 680-154972
Prep Batch: N/A
Units: mg/L

Instrument ID: KoneLab1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Chloride	1.0	U	1.0

Lab Control Sample - Batch: 680-154972

Method: 325.2
Preparation: N/A

Lab Sample ID: LCS 680-154972/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/01/2009 1307
Date Prepared: N/A

Analysis Batch: 680-154972
Prep Batch: N/A
Units: mg/L

Instrument ID: KoneLab1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	50.0	51.7	103	85 - 115	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154972

Method: 325.2
Preparation: N/A

MS Lab Sample ID: 680-52837-1
Client Matrix: Water
Dilution: 2.0
Date Analyzed: 12/01/2009 1309
Date Prepared: N/A

Analysis Batch: 680-154972
Prep Batch: N/A

Instrument ID: KoneLab1
Lab File ID: N/A
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 680-52837-1
Client Matrix: Water
Dilution: 2.0
Date Analyzed: 12/01/2009 1309
Date Prepared: N/A

Analysis Batch: 680-154972
Prep Batch: N/A

Instrument ID: KoneLab1
Lab File ID: N/A
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	93	94	85 - 115	1	30		

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Method Blank - Batch: 680-154340

Method: 353.2
Preparation: N/A

Lab Sample ID: MB 680-154340/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/20/2009 1648
Date Prepared: N/A

Analysis Batch: 680-154340
Prep Batch: N/A
Units: mg/L

Instrument ID: KoneLab2
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Nitrate as N	0.050	U	0.050
Nitrate Nitrite as N	0.050	U	0.050
Nitrite as N	0.050	U	0.050

Lab Control Sample - Batch: 680-154340

Method: 353.2
Preparation: N/A

Lab Sample ID: LCS 680-154340/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/20/2009 1648
Date Prepared: N/A

Analysis Batch: 680-154340
Prep Batch: N/A
Units: mg/L

Instrument ID: KoneLab2
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N	1.00	1.06	106	90 - 110	
Nitrate Nitrite as N	1.00	1.06	106	90 - 110	

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-154340

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	680-52837-1	Analysis Batch:	680-154340	Instrument ID:	KoneLab2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	5.0			Initial Weight/Volume:	10 mL
Date Analyzed:	11/20/2009 1617			Final Weight/Volume:	10 mL
Date Prepared:	N/A				

MSD Lab Sample ID:	680-52837-1	Analysis Batch:	680-154340	Instrument ID:	KoneLab2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	5.0			Initial Weight/Volume:	10 mL
Date Analyzed:	11/20/2009 1617			Final Weight/Volume:	10 mL
Date Prepared:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate as N	88	93	90 - 110	3	10	F	
Nitrate Nitrite as N	88	93	90 - 110	3	10	F	

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Method Blank - Batch: 680-155100

Method: 375.4
Preparation: N/A

Lab Sample ID: MB 680-155100/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/02/2009 1149
Date Prepared: N/A

Analysis Batch: 680-155100
Prep Batch: N/A
Units: mg/L

Instrument ID: KoneLab1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Sulfate	5.0	U	5.0

Lab Control Sample - Batch: 680-155100

Method: 375.4
Preparation: N/A

Lab Sample ID: LCS 680-155100/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/02/2009 1149
Date Prepared: N/A

Analysis Batch: 680-155100
Prep Batch: N/A
Units: mg/L

Instrument ID: KoneLab1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	20.0	19.5	98	75 - 125	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-155100

Method: 375.4
Preparation: N/A

MS Lab Sample ID: 680-52837-1
Client Matrix: Water
Dilution: 10
Date Analyzed: 12/02/2009 1244
Date Prepared: N/A

Analysis Batch: 680-155100
Prep Batch: N/A

Instrument ID: KoneLab1
Lab File ID: N/A
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 680-52837-1
Client Matrix: Water
Dilution: 10
Date Analyzed: 12/02/2009 1246
Date Prepared: N/A

Analysis Batch: 680-155100
Prep Batch: N/A

Instrument ID: KoneLab1
Lab File ID: N/A
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Sulfate	55	309	75 - 125	17	30	4	4

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Method Blank - Batch: 680-155089

Method: 415.1
Preparation: N/A

Lab Sample ID: MB 680-155089/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/01/2009 1102
Date Prepared: N/A

Analysis Batch: 680-155089
Prep Batch: N/A
Units: mg/L

Instrument ID: Total Organic Carbon Analyze
Lab File ID: N/A
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	Result	Qual	RL
Total Organic Carbon	1.0	U	1.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-155089

Method: 415.1
Preparation: N/A

LCS Lab Sample ID: LCS 680-155089/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/01/2009 1135
Date Prepared: N/A

Analysis Batch: 680-155089
Prep Batch: N/A
Units: mg/L

Instrument ID: Total Organic Carbon Analyze
Lab File ID: N/A
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

LCSD Lab Sample ID: LCSD 680-155089/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/01/2009 1150
Date Prepared: N/A

Analysis Batch: 680-155089
Prep Batch: N/A
Units: mg/L

Instrument ID: Total Organic Carbon Analy:
Lab File ID: N/A
Initial Weight/Volume: 25 mL
Final Weight/Volume: 25 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Organic Carbon	100	100	80 - 120	0	25		

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-155089

Method: 415.1
Preparation: N/A

MS Lab Sample ID:	680-52837-1	Analysis Batch: 680-155089	Instrument ID: Total Organic Carbon
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 25 mL
Date Analyzed:	12/01/2009 1642		Final Weight/Volume: 25 mL
Date Prepared:	N/A		

MSD Lab Sample ID:	680-52837-1	Analysis Batch: 680-155089	Instrument ID: Total Organic Carbon Analyze
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 25 mL
Date Analyzed:	12/01/2009 1656		Final Weight/Volume: 25 mL
Date Prepared:	N/A		

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Total Organic Carbon	99	100	80 - 120	1	25		

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Method Blank - Batch: 680-155513

Method: 415.1
Preparation: N/A

Lab Sample ID: MB 680-155513/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/24/2009 1057
Date Prepared: N/A

Analysis Batch: 680-155513
Prep Batch: N/A
Units: mg/L

Instrument ID: Total Organic Carbon Analyze
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: 680-155513

Method: 415.1
Preparation: N/A

Lab Sample ID: LCS 680-155513/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/24/2009 1057
Date Prepared: N/A

Analysis Batch: 680-155513
Prep Batch: N/A
Units: mg/L

Instrument ID: Total Organic Carbon Analyze
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	19.8	99	80 - 120	

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

JAN 22 2010

Client: Solutia Inc.

Job Number: 680-52837-1
Sdg Number: KOM06

Method Blank - Batch: 680-155521

Method: 415.1
Preparation: N/A

Lab Sample ID: MB 680-155521/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/07/2009 1610
Date Prepared: N/A

Analysis Batch: 680-155521
Prep Batch: N/A
Units: mg/L

Instrument ID: Total Organic Carbon Analyze
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: 680-155521

Method: 415.1
Preparation: N/A

Lab Sample ID: LCS 680-155521/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/07/2009 1610
Date Prepared: N/A

Analysis Batch: 680-155521
Prep Batch: N/A
Units: mg/L

Instrument ID: Total Organic Carbon Analyze
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	20.9	104	80 - 120	

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

JAN 22 2010

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: Jeff Adams	Site Contact: Mike Corbett	Date: 11/19/09	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. 21562046.00004
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: 4Q09 Route 3 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	SVOCs by 8270C*	Total Fe/Mn by 6010B	Alk/CO2 by 310.1	Chloride by 325.2/Sulfate by 375.4	Methane by RSK 175	Nitrate by 353.2	TOC by 415.1	Dissolved Fe/Mn by 6010B	DOC by 415.1	Sample Specific Notes:
GM-31A-1109	11/19/09	1020	G	Water	11		2	1	1	1	3	2	1			
GM-31A-1109-AD		1020	G	Water	2		2									
GM-31A-F(0.2)-1109		1020	G	Water	2	X								1	1	
GM-58A-1109		1200	G	Water	11		2	1	1	1	3	2	1			
GM-58A-1109-MS		1200	G	Water	2		2									
GM-58A-1109-MSD		1200	G	Water	2		2									
GM-58A-F(0.2)-1109		1200	G	Water	2	X								1	1	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____							1	4	1	1	1	3,1	2	4	2	

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

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

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

3.8/3.1/3.6
680-52837

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	URS	11/19/09 1600			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TMA	11/20/09 0905

JAN 22 2010

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-52837-1
SDG Number: KOM06

Login Number: 52837
Creator: Conner, Keaton
List Number: 1

List Source: TestAmerica Savannah

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	3 coolers rec'd on ice
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.8, 3.1, 3.6 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 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	

JAN 22 2010