SOLUTIA

Solutions for a better life.

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

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

April 27, 2010

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

VIA FEDEX

Re: Route 3 Drum Site Groundwater Monitoring Program
1st Quarter 2010 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

Dear Mr. Bardo:

Enclosed please find the Route 3 Drum Site Groundwater Monitoring Program 1st Quarter 2010 Data Report for Solutia Inc.'s W. G. Krummrich Plant, Sauget, IL.

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

Sincerely,

Gerald M. Rinaldi
Manager, Remediation Services

Enclosure

cc: Distribution List

DISTRIBUTION LIST

Route 3 Drum Site Groundwater Monitoring Program
1st Quarter 2010 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

USEPA

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

IEPA

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

Booz Allen Hamilton

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

Solutia

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

1ST QUARTER 2010
DATA REPORT

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

April 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 1st Quarter 2010 (1Q10). The Site is located in the area identified as "Lot F" in **Figure 1**.

During the 1Q10 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 February 12, 2010 and conducted the 1Q10 Illinois Route 3 Drum Site groundwater sampling on February 18, 2010[1]. Groundwater samples were collected from two monitoring wells during the 1Q10 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 1Q10 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 of 300 mL/minute to minimize drawdown. If significant drawdown occurred, flow rates were reduced.

[1] The February 12th gauging was part of a comprehensive event which included monitoring wells associated with other programs. Groundwater levels in the subject wells were gauged again on February 18th 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-0210” which denotes Groundwater Monitoring well number 31A sampled in February 2010. 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 the 40 CFR 264 Appendix IX SVOCs, and 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, 3-nitrobenzene, 2-nitrobiphenyl, 3-nitrobiphenyl, 4-nitrobiphenyl, 2-nitrochlorobenzene, nitrochlorobenzene, 4-nitrochlorobenzene, pentachlorophenol, and 2,4,6-trichlorophenol.
- MNA parameters consisted 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 reports, along with data validation review sheets, are included in **Appendix D**.

A total of five groundwater samples (two investigative groundwater samples, one field duplicate 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) KOM07 and contained results for GM-31A and GM-58A. Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA 2008) and the 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 detected in groundwater samples collected from monitoring wells GM-31A and GM-58A during the 1Q10 sampling event. Laboratory analytical data for groundwater sample GM-31A-0210 indicate detections of 1-Chloro-2,4-Dinitrobenzene and 2-Nitrobiphenyl, both at concentrations of 11 µg/L, along with 2,4,6-Trichlorophenol and 2-Chloronitrobenzene/4-Chloronitrobenzene at concentrations of 26 µg/L and 42 µg/L, respectively. Detected concentrations were comparable in the duplicate sample from this monitoring well. 2-Chloronitrobenzene/4-Chloronitrobenzene was the only constituent detected in groundwater sample GM-58A-0210, at a concentration of 34 µg/L. A summary of SVOC detections is provided in **Table 2**, with MNA results provided in **Table 3**.

The 1Q10 sampling event was the seventh 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

FALLING SPRINGS ROAD

STERLING STEEL

SITE H

SITE L

SITE M

SITE N

SITE I

DEAD CREEK

SITE G

CONTAINMENT CELL

CERRO COPPER

QUERRY AVENUE

W. G. KRUMMRICH FACILITY

MONSANTO AVENUE

AFTON CHEMICAL

ROUTE 3

BIG RIVER ZINC

MIDWEST RUBBER

CENTER ETHANOL COMPANY, LLC

LOT F

PHILLIPS PETROLEUM

SITE O

SITE P

UNION ELECTRIC

PCHEM POTW

AMERICAN BOTTOMS POTW

CLAYTON CHEMICAL

SITE S

VEOLIA INCINERATION

CAHOKIA MARINE

SITE R

SITE Q

GROUNDWATER PUMPING WELLS

BARRIER WALL

MISSISSIPPI RIVER

LEGEND

W.G. KRUMMRICH FACILITY

SAUGET AREA #1

SAUGET AREA #2

0 1000

SCALE FEET

ILLINOIS ROUTE 3 DRUM SITE GROUNDWATER SAMPLING
1ST QUARTER 2010 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562046

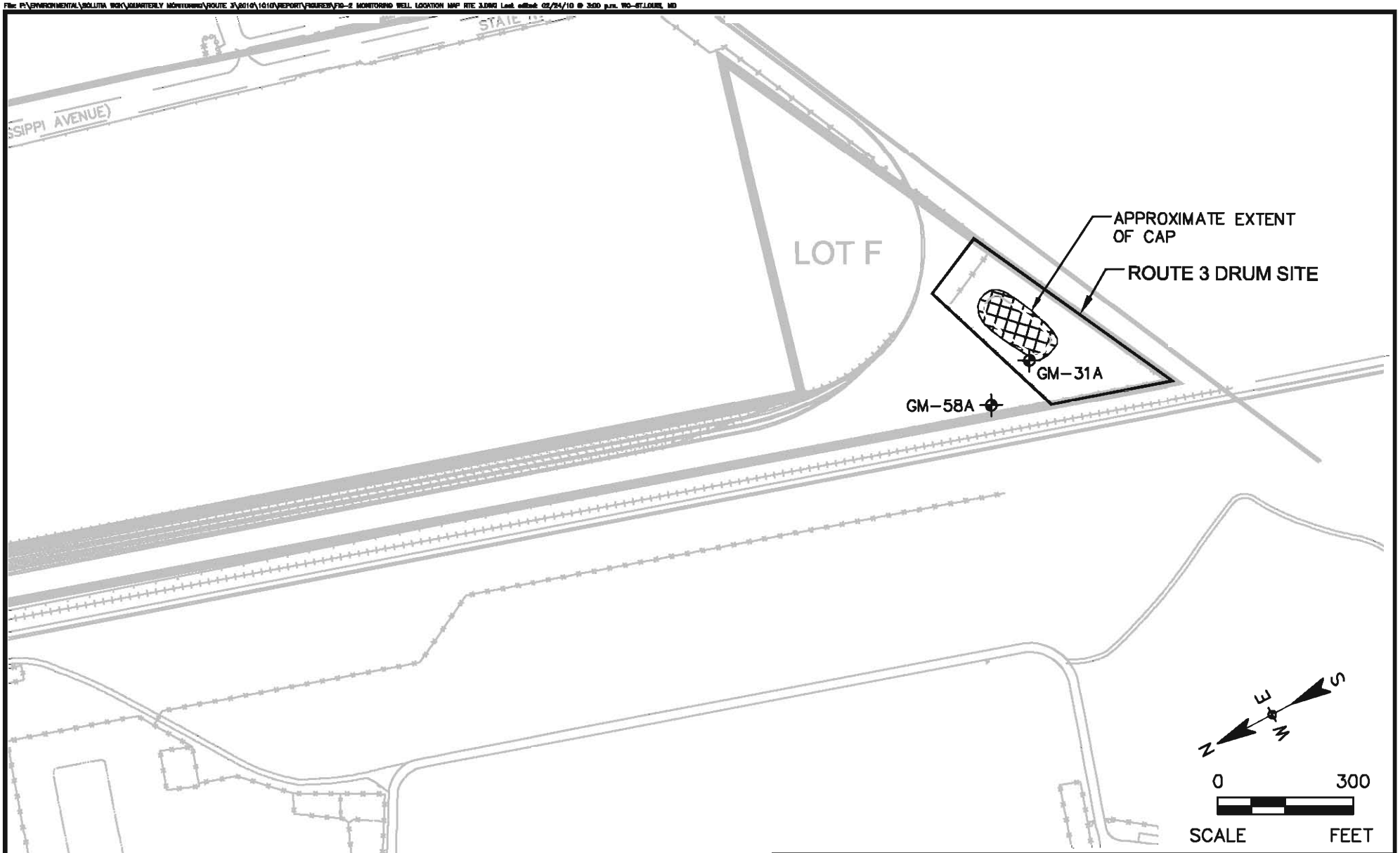
URS

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\2010\1010\REPORT\FIGURES\FIG-1 SITE LOCATION MAP RTE 3.DWG Last edited: FEB. 24, 10 @ 3:00 p.m. by: curt_smith



LEGEND

⊕ MONITORING WELL LOCATION

ILLINOIS ROUTE 3 DRUM SITE GROUNDWATER SAMPLING 1ST QUARTER 2010 DATA REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS		PROJECT NO. 21562046
URS		
DRN. BY: chs February 2010 DSGN. BY: ekf CHKD. BY:	Monitoring Well Location Map	FIG. NO. 2

Tables

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						February 12, 2010		
	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)	Depth to Bottom (feet btoc)	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	18.99	40.26	399.64
GM-58A	412.24	414.24	19.40	39.40	392.84	372.84	14.82	40.87	399.42

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

Table 2
Groundwater Analytical Results

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-0210	2/18/2010	<9.8	**11**	<9.8	**26**	<9.8	**42**	**11**	<9.8	<9.8	<9.8	<9.8	<49
GM-31A-0210-AD	2/18/2010	<9.5	**12**	<9.5	**27**	<9.5	**44**	**11**	<9.5	<9.5	<9.5	<9.5	<48
GM-58A-0210	2/18/2010	<9.5	<9.5	<9.5	<9.5	<9.5	**34**	<9.5	<9.5	<9.5	<9.5	<9.5	<48

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

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-0210	2/18/2010	490	48	30	0.44	<0.35	<0.33		0.52		1.1		15	1.1	94		3.0	58.0
GM-31A-F(0.2)-0210	2/18/2010							0.07		0.05		1.0				3.0		
GM-58A-0210	2/18/2010	510	44	52	0.18	<0.35	<0.33		0.3		1.4		3.4	1.5	110		2.6	5.9
GM-58A-F(0.2)-0210	2/18/2010							0.0		0.052		1.4				2.6		

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.
mV = milivolts

Appendix A

Groundwater Purging and Sampling Forms

LOW FLOW GROUNDWA , SAMPLING DATA SHEET

PROJECT NAME: WGK Route 3 Drum Lot PROJECT NUMBER: 21562046.00000 FIELD PERSONNEL: Mike Corbett, Nathan McNurlen
DATE: 2/18/10 WEATHER: Sunny, 32°F
MONITORING WELL ID: GM-31A SAMPLE ID: GM-31A-0210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 40.26 ft
Constructed Well Depth (btoc): 41.00 ft
Depth to Water (btoc): 19.58 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): 20.68 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 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): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C) (±3 %)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	1312	19.60	lt. yellow	odorless	6.69	14.38	1.002	17.3	1.20	60.6
1200	1316	↓	↓	↓	6.60	14.96	1.016	19.8	0.85	58.5
2400	1320	↓	↓	↓	6.59	15.05	1.057	15.2	0.68	58.1
3600	1324	19.61	↓	↓	6.53	14.85	1.076	13.4	0.67	58.5
4800	1328	↓	↓	↓	6.58	14.76	1.097	11.3	0.58	58.0
6000	1332	↓	↓	↓	6.53	14.75	1.115	10.3	0.50	58.9
7200	1336	↓	↓	↓	6.54	14.73	1.125	9.4	0.49	58.2
8400	1340	↓	↓	↓	6.52	14.81	1.130	8.0	0.44	58.0
								MEC		

Start Time: 1312
Stop Time: 1340
Elapsed Time: 28 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/18/10

SAMPLING DATA

Sample Date: 2/18/10
Sample Method: Stainless Steel Monsoon
Sample Time: 1350
Sample Flow Rate: 300 mL/min.
Analysis: SVOCs, Metals, MNA
QA/QC Samples: AD — GM-31A-0210-AD

COMMENTS:
MNA – Alkalinity, CO_2, Chloride, Ferrous Iron, Methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = 0.07 ppm

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: WGK Route 3 Drum Lot PROJECT NUMBER: 21562046.00000 FIELD PERSONNEL: Mike Corbett, Nathan McNurlen
DATE: 2/18/10 WEATHER: Sunny, 30°F
MONITORING WELL ID: GM-58A SAMPLE ID: GM-58A-0210, GM-58A-0210MS, GM-58A-0210-MSD

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 40.87 ft
Constructed Well Depth (btoc): 41.40 ft
Depth to Water (btoc): 15.45 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): 25.42 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 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): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: 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 0.2 mg/L)	ORP (mv) (±20 mV)
0	1050	15.45	colorless	odorless	6.88	11.41	1.076	7.6	0.57	-8.8
1200	1054				6.73	11.85	1.080	5.9	0.39	-4.0
2400	1058				6.66	11.85	1.095	4.4	0.44	-0.6
3600	1102				6.64	12.10	1.098	3.6	0.18	1.5
4800	1106				6.64	12.03	1.103	2.9	0.15	2.8
6000	1110				6.62	12.22	1.104	2.7	0.14	4.5
7200	1114				6.60	12.27	1.110	2.5	0.18	5.9
								MEC		

Start Time: 1050
Stop Time: 1114
Elapsed Time: 24 min.
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/18/10

SAMPLING DATA

Sample Date: 2/18/10
Sample Method: Peristaltic
Sample Time: 1120
Sample Flow Rate: 300 mL
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 (Filtered 0.2 micron) = 0.00 ppm

Appendix B

Chain-of-Custody

Savannah
02 LaRoche Avenue
avannah, GA 31404
hone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jeff Adams	Site Contact: Mike Corbett	Date: 2/18/10	COC No:
RS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gulizia	Carrier: FedEx	1 of 1 COCs
001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562046.00004
t. 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			
roject Name: 1Q10 Route 3 Drum Lot GW Sampling	☐ 1 week			
ite: Solutia WG Krummrich Facility	☐ 2 days			
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, Ethane, Ethene by RSK 175	Nitrate by 353.2	TOC by 415.1	Dissolved Fe/Mn by 6010B	DOC by 415.1	Sample Specific Notes:
GM-31A-0210	2/18/10	1350	G	Water	11		2	1	1	1	3	2	1			
GM-31A-0210-AD		1350	G	Water	2		2									
GM-31A-F(0.2)-0210		1350	G	Water	2	X								1	1	
GM-58A-0210		1120	G	Water	11		2	1	1	1	3	2	1			
GM-58A-0210-MS		1120	G	Water	2		2									
GM-58A-0210-MSD		1120	G	Water	2		2									
GM-58A-F(0.2)-0210		1120	G	Water	2	X								1	1	
							1	4	1	1	1	3,1	2	4	2	680-55184

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 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 2.0/1.6/0.9

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	2/18/10 1515	[signature]	TH STL	2.19.10 @ 0930
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Appendix C

Quality Assurance Report

QUALITY ASSURANCE REPORT

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

Illinois Route 3 Drum Site
1st Quarter 2010 Data Report

Prepared for

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

April 2010

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

1.0 INTRODUCTION

This Quality Assurance Report presents the findings of a review of analytical data for groundwater samples collected in February 2010 at the Illinois Route 3 Drum Site on the Solutia W.G. Krummrich Facility as part of the 1st Quarter 2010 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) KOM07, 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 Contract Laboratory Program 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. 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.

The cooler receipt form indicated that two of three coolers were received by the laboratory at temperatures below the 4ºC ± 2ºC criteria. Samples received were in good condition and not frozen; therefore, no qualification of data was required.

3.0 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; 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 were within evaluation criteria; therefore, no qualification of data was required based on MS/MSD analyses.

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 (2X) 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

Samples for sulfate analysis were diluted and reanalyzed due to the high levels of sulfate in these samples. The diluted sample results for 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 1Q10

Laboratory SDG: KOM07

Reviewer: Elizabeth Kunkel

Date Reviewed: 3/30/2010

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	
GM-31A-0210	GM-58A-0210
GM-31A-0210-AD	GM-58A-F(0.2)-0210
GM-31A-F(0.2)-0210	

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 sulfate. This issue is addressed further in the appropriate section below.

The cooler receipt form indicated that two out of three coolers were received by the laboratory at temperatures below the 4ºC ± 2ºC criteria. Samples received were in good condition and not frozen; therefore, no qualification of data was required.

3.0 Holding Times

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 GM-58A-0210 was spiked and analyzed for SVOCs.

Were MS/MSD recoveries within evaluation criteria?

Yes

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples collected as part of this SDG?

Yes, sample GM-31A-0210 was duplicated and analyzed for chloride and sulfate. Sample GM-58A-0210 was duplicated and analyzed for nitrate.

Were laboratory duplicate sample RPDs within criteria?

Yes

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
GM-31A-0210	GM-31A-0210-AD

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

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

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

12.0 Additional Qualifications

Were additional qualifications applied?

No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-55184-1

SDG Number: KOM07

Job Description: WGK Rt. 3 Drum Site O&M 1Q10 - FEB 2010

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

Attention: Mr. Jerry Rinaldi

Approved for release.
Lidya Gulizia
Project Manager I
3/19/2010 7:01 PM

Lidya Gulizia
Project Manager I
lidya.gulizia@testamericainc.com
03/19/2010

Reviewed
on
3/22/2010
EZK

cc: Mr. Thomas Adams
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.

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
No 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) 325.2, SM 4500 Cl- E: Due to the high concentration of chloride, the matrix spike / matrix spike duplicate (MS/MSD) for batch 162285 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Comments
No additional comments.

METHOD SUMMARY

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

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	
DOC	TAL SAV	MCAWW 415.1	
TOC	TAL SAV	MCAWW 415.1	
Sample Filtration, Field	TAL SAV		FIELD_FLTRD

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

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

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

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

METHOD / ANALYST SUMMARY

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

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

SAMPLE SUMMARY

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-55184-1	GM-31A-0210	Water	02/18/2010 1350	02/19/2010 0930
680-55184-2FD	GM-31A-0210-AD	Water	02/18/2010 1350	02/19/2010 0930
680-55184-3	GM-31A-F(0.2)-0210	Water	02/18/2010 1350	02/19/2010 0930
680-55184-4	GM-58A-0210	Water	02/18/2010 1120	02/19/2010 0930
680-55184-4MS	GM-58A-0210	Water	02/18/2010 1120	02/19/2010 0930
680-55184-4MSD	GM-58A-0210	Water	02/18/2010 1120	02/19/2010 0930
680-55184-5	GM-58A-F(0.2)-0210	Water	02/18/2010 1120	02/19/2010 0930

MAR 22 2010

SAMPLE RESULTS

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Client Sample ID: **GM-31A-0210**

Lab Sample ID: 680-55184-1
Client Matrix: Water

Date Sampled: 02/18/2010 1350
Date Received: 02/19/2010 0930

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

Method:	8270C	Analysis Batch: 680-161895		Instrument ID:	MSG
Preparation:	3520C	Prep Batch: 680-161212		Lab File ID:	g0149.d
Dilution:	1.0			Initial Weight/Volume:	1020 mL
Date Analyzed:	02/26/2010 1429			Final Weight/Volume:	1 mL
Date Prepared:	02/19/2010 1513			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	RL
1,1'-Biphenyl	9.8	U	9.8
2,4-Dichlorophenol	9.8	U	9.8
Nitrobenzene	9.8	U	9.8
Pentachlorophenol	49	U	49
2,4,6-Trichlorophenol	26		9.8
1-Chloro-3-nitrobenzene	9.8	U	9.8
2-Nitrobiphenyl	11		9.8
3-Nitrobiphenyl	9.8	U	9.8
3,4-Dichloronitrobenzene	9.8	U	9.8
4-Nitrobiphenyl	9.8	U	9.8
2-chloronitrobenzene / 4-chloronitrobenzene	42		20
1-chloro-2,4-dinitrobenzene	11		9.8

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	73		50 - 113
2-Fluorophenol	71		36 - 110
Nitrobenzene-d5	78		45 - 112
Phenol-d5	66		38 - 116
Terphenyl-d14	35		10 - 121
2,4,6-Tribromophenol	87		40 - 139

MAR 22 2010 EVK

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Client Sample ID: **GM-31A-0210-AD**

Lab Sample ID: 680-55184-2FD
Client Matrix: Water

Date Sampled: 02/18/2010 1350
Date Received: 02/19/2010 0930

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

Method:	8270C	Analysis Batch: 680-161895		Instrument ID:	MSG
Preparation:	3520C	Prep Batch: 680-161212		Lab File ID:	g0150.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	02/26/2010 1456			Final Weight/Volume:	1 mL
Date Prepared:	02/19/2010 1513			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	27		9.5
1-Chloro-3-nitrobenzene	9.5	U	9.5
2-Nitrobiphenyl	11		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	44		19
1-chloro-2,4-dinitrobenzene	12		9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	81		50 - 113
2-Fluorophenol	78		36 - 110
Nitrobenzene-d5	81		45 - 112
Phenol-d5	73		38 - 116
Terphenyl-d14	37		10 - 121
2,4,6-Tribromophenol	95		40 - 139

MAR 22 2010

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Client Sample ID: **GM-58A-0210**

Lab Sample ID: 680-55184-4
Client Matrix: Water

Date Sampled: 02/18/2010 1120
Date Received: 02/19/2010 0930

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

Method:	8270C	Analysis Batch: 680-161895		Instrument ID:	MSG
Preparation:	3520C	Prep Batch: 680-161212		Lab File ID:	g0151.d
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	02/26/2010 1523			Final Weight/Volume:	1 mL
Date Prepared:	02/19/2010 1513			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	34		19
1-chloro-2,4-dinitrobenzene	9.5	U	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	77		50 - 113
2-Fluorophenol	71		36 - 110
Nitrobenzene-d5	79		45 - 112
Phenol-d5	67		38 - 116
Terphenyl-d14	33		10 - 121
2,4,6-Tribromophenol	88		40 - 139

MAR 22 2010

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Client Sample ID: **GM-31A-0210**

Lab Sample ID: 680-55184-1
Client Matrix: Water

Date Sampled: 02/18/2010 1350
Date Received: 02/19/2010 0930

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-161547		Instrument ID:	VGUFID2
Preparation:	N/A			Initial Weight/Volume:	17000 uL
Dilution:	1.0			Final Weight/Volume:	17 mL
Date Analyzed:	02/24/2010 1306			Injection Volume:	1 uL
Date Prepared:				Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Ethane	0.35	U	0.35
Ethylene	0.33	U	0.33
Methane	15		0.19

MAR 22 2010

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Client Sample ID: **GM-58A-0210**

Lab Sample ID: 680-55184-4
Client Matrix: Water

Date Sampled: 02/18/2010 1120
Date Received: 02/19/2010 0930

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 680-161547	Instrument ID: VGUFID2
Preparation:	N/A		Initial Weight/Volume: 17000 uL
Dilution:	1.0		Final Weight/Volume: 17 mL
Date Analyzed:	02/24/2010 1319		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Ethane	0.35	U	0.35
Ethylene	0.33	U	0.33
Methane	3.4		0.19

MAR 22 2010 EVK

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Client Sample ID: **GM-31A-0210**

Lab Sample ID: 680-55184-1
Client Matrix: Water

Date Sampled: 02/18/2010 1350
Date Received: 02/19/2010 0930

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Batch: 680-161776		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-161475		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	02/24/2010 2153			Final Weight/Volume:	50 mL
Date Prepared:	02/23/2010 1652				

Analyte	Result (mg/L)	Qualifier	RL
Iron	0.52		0.050
Manganese	1.1		0.010

MAR 22 2010

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Client Sample ID: **GM-31A-F(0.2)-0210**

Lab Sample ID: 680-55184-3
Client Matrix: Water

Date Sampled: 02/18/2010 1350
Date Received: 02/19/2010 0930

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 680-161776		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-161475		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	02/24/2010 2159			Final Weight/Volume:	50 mL
Date Prepared:	02/23/2010 1652				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	0.050	U	0.050
Manganese, Dissolved	1.0		0.010

MAR 22 2010

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Client Sample ID: **GM-58A-0210**

Lab Sample ID: 680-55184-4
Client Matrix: Water

Date Sampled: 02/18/2010 1120
Date Received: 02/19/2010 0930

6010B Metals (ICP)-Total Recoverable

Method:	6010B	Analysis Batch: 680-161776		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-161475		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	02/24/2010 2204			Final Weight/Volume:	50 mL
Date Prepared:	02/23/2010 1652				

Analyte	Result (mg/L)	Qualifier	RL
Iron	0.30		0.050
Manganese	1.4		0.010

MAR 22 2010 EZR

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Client Sample ID: **GM-58A-F(0.2)-0210**

Lab Sample ID: 680-55184-5
Client Matrix: Water

Date Sampled: 02/18/2010 1120
Date Received: 02/19/2010 0930

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 680-161776		Instrument ID:	ICPD
Preparation:	3005A	Prep Batch: 680-161475		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	02/24/2010 2209			Final Weight/Volume:	50 mL
Date Prepared:	02/23/2010 1652				

Analyte	Result (mg/L)	Qualifier	RL
Iron, Dissolved	0.052		0.050
Manganese, Dissolved	1.4		0.010

MAR 22 2010

General Chemistry

Client Sample ID: **GM-31A-0210**

Lab Sample ID: 680-55184-1
Client Matrix: Water

Date Sampled: 02/18/2010 1350
Date Received: 02/19/2010 0930

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	30		mg/L	1.0	1.0	325.2
Analysis Batch: 680-162285	Date Analyzed: 03/04/2010 1247					
Nitrate as N	1.1		mg/L	0.050	1.0	353.2
Analysis Batch: 680-162120	Date Analyzed: 02/19/2010 1643					
Sulfate	94		mg/L	25	5.0	375.4
Analysis Batch: 680-161667	Date Analyzed: 02/25/2010 1103					
Total Organic Carbon	3.0		mg/L	1.0	1.0	415.1
Analysis Batch: 680-161728	Date Analyzed: 02/24/2010 1314					

Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	490		mg/L	5.0	1.0	310.1
Analysis Batch: 680-161368	Date Analyzed: 02/22/2010 1438					
Carbon Dioxide, Free	48		mg/L	5.0	1.0	310.1
Analysis Batch: 680-161368	Date Analyzed: 02/22/2010 1438					

MAR 22 2010

General Chemistry

Client Sample ID: **GM-31A-F(0.2)-0210**

Lab Sample ID: 680-55184-3
Client Matrix: Water

Date Sampled: 02/18/2010 1350
Date Received: 02/19/2010 0930

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	3.0		mg/L	1.0	1.0	415.1

Analysis Batch: 680-161773 Date Analyzed: 02/25/2010 1351

MAR 22 2010 ERL

General Chemistry

Client Sample ID: **GM-58A-0210**

Lab Sample ID: 680-55184-4
Client Matrix: Water

Date Sampled: 02/18/2010 1120
Date Received: 02/19/2010 0930

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	52		mg/L	1.0	1.0	325.2
Analysis Batch: 680-162285	Date Analyzed: 03/04/2010 1247					
Nitrate as N	1.5		mg/L	0.050	1.0	353.2
Analysis Batch: 680-162120	Date Analyzed: 02/19/2010 1643					
Sulfate	110		mg/L	50	10	375.4
Analysis Batch: 680-161667	Date Analyzed: 02/25/2010 1059					
Total Organic Carbon	2.6		mg/L	1.0	1.0	415.1
Analysis Batch: 680-161728	Date Analyzed: 02/24/2010 1330					

Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	510		mg/L	5.0	1.0	310.1
Analysis Batch: 680-161368	Date Analyzed: 02/22/2010 1448					
Carbon Dioxide, Free	44		mg/L	5.0	1.0	310.1
Analysis Batch: 680-161368	Date Analyzed: 02/22/2010 1448					

MAR 22 2010

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

General Chemistry

Client Sample ID: **GM-58A-F(0.2)-0210**

Lab Sample ID: 680-55184-5
Client Matrix: Water

Date Sampled: 02/18/2010 1120
Date Received: 02/19/2010 0930

Analyte	Result	Qual	Units	RL	Dil	Method
Dissolved Organic Carbon-Dissolved	2.6		mg/L	1.0	1.0	415.1

Analysis Batch: 680-161773 Date Analyzed: 02/25/2010 1351

MAR 22 2010

DATA REPORTING QUALIFIERS

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
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.

QUALITY CONTROL RESULTS

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 680-161212					
LCS 680-161212/5-A	Lab Control Sample	T	Water	3520C	
MB 680-161212/4-A	Method Blank	T	Water	3520C	
680-55184-1	GM-31A-0210	T	Water	3520C	
680-55184-2FD	GM-31A-0210-AD	T	Water	3520C	
680-55184-4	GM-58A-0210	T	Water	3520C	
680-55184-4MS	Matrix Spike	T	Water	3520C	
680-55184-4MSD	Matrix Spike Duplicate	T	Water	3520C	
Analysis Batch:680-161895					
LCS 680-161212/5-A	Lab Control Sample	T	Water	8270C	680-161212
MB 680-161212/4-A	Method Blank	T	Water	8270C	680-161212
680-55184-1	GM-31A-0210	T	Water	8270C	680-161212
680-55184-2FD	GM-31A-0210-AD	T	Water	8270C	680-161212
680-55184-4	GM-58A-0210	T	Water	8270C	680-161212
680-55184-4MS	Matrix Spike	T	Water	8270C	680-161212
680-55184-4MSD	Matrix Spike Duplicate	T	Water	8270C	680-161212

Report Basis
T = Total

GC VOA					
Analysis Batch:680-161547					
LCS 680-161547/15	Lab Control Sample	T	Water	RSK-175	
LCSD 680-161547/16	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 680-161547/17	Method Blank	T	Water	RSK-175	
680-55184-1	GM-31A-0210	T	Water	RSK-175	
680-55184-4	GM-58A-0210	T	Water	RSK-175	

Report Basis
T = Total

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 680-161475					
LCS 680-161475/16-A	Lab Control Sample	R	Water	3005A	
MB 680-161475/15-A	Method Blank	R	Water	3005A	
680-55184-1	GM-31A-0210	R	Water	3005A	
680-55184-3	GM-31A-F(0.2)-0210	D	Water	3005A	
680-55184-4	GM-58A-0210	R	Water	3005A	
680-55184-5	GM-58A-F(0.2)-0210	D	Water	3005A	
Analysis Batch:680-161776					
LCS 680-161475/16-A	Lab Control Sample	R	Water	6010B	680-161475
MB 680-161475/15-A	Method Blank	R	Water	6010B	680-161475
680-55184-1	GM-31A-0210	R	Water	6010B	680-161475
680-55184-3	GM-31A-F(0.2)-0210	D	Water	6010B	680-161475
680-55184-4	GM-58A-0210	R	Water	6010B	680-161475
680-55184-5	GM-58A-F(0.2)-0210	D	Water	6010B	680-161475

Report Basis
D = Dissolved
R = Total Recoverable

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:680-161368					
LCS 680-161368/6	Lab Control Sample	T	Water	310.1	
MB 680-161368/5	Method Blank	T	Water	310.1	
680-55184-1	GM-31A-0210	T	Water	310.1	
680-55184-4	GM-58A-0210	T	Water	310.1	
Analysis Batch:680-161667					
LCS 680-161667/2	Lab Control Sample	T	Water	375.4	
MB 680-161667/1	Method Blank	T	Water	375.4	
680-55184-1	GM-31A-0210	T	Water	375.4	
680-55184-1DU	Duplicate	T	Water	375.4	
680-55184-4	GM-58A-0210	T	Water	375.4	
Analysis Batch:680-161728					
LCS 680-161728/4	Lab Control Sample	T	Water	415.1	
MB 680-161728/2	Method Blank	T	Water	415.1	
680-55184-1	GM-31A-0210	T	Water	415.1	
680-55184-4	GM-58A-0210	T	Water	415.1	
Analysis Batch:680-161773					
LCS 680-161773/2	Lab Control Sample	D	Water	415.1	
MB 680-161773/1	Method Blank	D	Water	415.1	
680-55184-3	GM-31A-F(0.2)-0210	D	Water	415.1	
680-55184-5	GM-58A-F(0.2)-0210	D	Water	415.1	
Analysis Batch:680-162120					
LCS 680-162120/2	Lab Control Sample	T	Water	353.2	
MB 680-162120/1	Method Blank	T	Water	353.2	
680-55184-1	GM-31A-0210	T	Water	353.2	
680-55184-4	GM-58A-0210	T	Water	353.2	
680-55184-4DU	Duplicate	T	Water	353.2	
Analysis Batch:680-162285					
LCS 680-162285/1	Lab Control Sample	T	Water	325.2	
MB 680-162285/19	Method Blank	T	Water	325.2	
680-55184-1	GM-31A-0210	T	Water	325.2	
680-55184-1DU	Duplicate	T	Water	325.2	
680-55184-4	GM-58A-0210	T	Water	325.2	

Report Basis
D = Dissolved
T = Total

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

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
680-55184-1	GM-31A-0210	73	71	78	66	35	87
680-55184-2	GM-31A-0210-AD	81	78	81	73	37	95
680-55184-4	GM-58A-0210	77	71	79	67	33	88
MB 680-161212/4-A		80	83	82	76	79	89
LCS 680-161212/5-A		83	71	80	66	72	89
680-55184-4 MS	GM-58A-0210 MS	81	67	74	65	44	88
680-55184-4 MSD	GM-58A-0210 MSD	78	65	74	65	42	83

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

MAR 22 2010

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Method Blank - Batch: 680-161212

Method: 8270C
Preparation: 3520C

Lab Sample ID:	MB 680-161212/4-A	Analysis Batch:	680-161895	Instrument ID:	MSG
Client Matrix:	Water	Prep Batch:	680-161212	Lab File ID:	g0147.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	02/26/2010 1334			Final Weight/Volume:	1 mL
Date Prepared:	02/19/2010 1513			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	80	50 - 113
2-Fluorophenol	83	36 - 110
Nitrobenzene-d5	82	45 - 112
Phenol-d5	76	38 - 116
Terphenyl-d14	79	10 - 121
2,4,6-Tribromophenol	89	40 - 139

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

MAR 22 2010

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Lab Control Sample - Batch: 680-161212

Method: 8270C
Preparation: 3520C

Lab Sample ID:	LCS 680-161212/5-A	Analysis Batch:	680-161895	Instrument ID:	MSG
Client Matrix:	Water	Prep Batch:	680-161212	Lab File ID:	g0148.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	02/26/2010 1401			Final Weight/Volume:	1 mL
Date Prepared:	02/19/2010 1513			Injection Volume:	1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	100	80.4	80	47 - 112	
2,4-Dichlorophenol	100	78.1	78	46 - 115	
Nitrobenzene	100	78.9	79	46 - 110	
Pentachlorophenol	100	90.9	91	37 - 132	
2,4,6-Trichlorophenol	100	89.2	89	46 - 120	
1-Chloro-3-nitrobenzene	100	82.7	83	70 - 130	
2-Nitrobiphenyl	100	90.0	90	70 - 130	
3-Nitrobiphenyl	100	89.6	90	70 - 130	
3,4-Dichloronitrobenzene	100	84.3	84	70 - 130	
4-Nitrobiphenyl	100	91.8	92	70 - 130	
2-chloronitrobenzene / 4-chloronitrobenzene	200	156	78	70 - 130	
1-chloro-2,4-dinitrobenzene	100	89.7	90	70 - 130	

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	83	50 - 113
2-Fluorophenol	71	36 - 110
Nitrobenzene-d5	80	45 - 112
Phenol-d5	66	38 - 116
Terphenyl-d14	72	10 - 121
2,4,6-Tribromophenol	89	40 - 139

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

MAR 22 2010

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-161212

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	680-55184-4	Analysis Batch:	680-161895	Instrument ID:	MSG
Client Matrix:	Water	Prep Batch:	680-161212	Lab File ID:	g0152.d
Dilution:	1.0			Initial Weight/Volume:	1020 mL
Date Analyzed:	02/26/2010 1550			Final Weight/Volume:	1 mL
Date Prepared:	02/19/2010 1513			Injection Volume:	1 uL
MSD Lab Sample ID:	680-55184-4	Analysis Batch:	680-161895	Instrument ID:	MSG
Client Matrix:	Water	Prep Batch:	680-161212	Lab File ID:	g0153.d
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	02/26/2010 1617			Final Weight/Volume:	1 mL
Date Prepared:	02/19/2010 1513			Injection Volume:	1 uL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1'-Biphenyl	84	81	47 - 112	5	40		
2,4-Dichlorophenol	75	73	46 - 115	4	40		
Nitrobenzene	75	76	46 - 110	0	40		
Pentachlorophenol	89	85	37 - 132	5	40		
2,4,6-Trichlorophenol	85	82	46 - 120	5	40		
1-Chloro-3-nitrobenzene	81	81	70 - 130	1	40		
2-Nitrobiphenyl	94	92	70 - 130	3	40		
3-Nitrobiphenyl	92	89	70 - 130	5	40		
3,4-Dichloronitrobenzene	87	86	70 - 130	3	40		
4-Nitrobiphenyl	95	92	70 - 130	4	40		
2-chloronitrobenzene / 4-chloronitrobenzene	79	77	70 - 130	4	40		
1-chloro-2,4-dinitrobenzene	94	95	70 - 130	0	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
2-Fluorobiphenyl	81	78	50 - 113
2-Fluorophenol	67	65	36 - 110
Nitrobenzene-d5	74	74	45 - 112
Phenol-d5	65	65	38 - 116
Terphenyl-d14	44	42	10 - 121
2,4,6-Tribromophenol	88	83	40 - 139

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

MAR 22 2010 EzK

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Method Blank - Batch: 680-161547

Method: RSK-175
Preparation: N/A

Lab Sample ID: MB 680-161547/17
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1012
Date Prepared: N/A

Analysis Batch: 680-161547
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUFID2
Lab File ID: UQ249.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

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

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

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID: LCS 680-161547/15
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 0909
Date Prepared: N/A

Analysis Batch: 680-161547
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUFID2
Lab File ID: UQ246.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 680-161547/16
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 0950
Date Prepared: N/A

Analysis Batch: 680-161547
Prep Batch: N/A
Units: ug/L

Instrument ID: VGUFID2
Lab File ID: UQ247.D
Initial Weight/Volume: 17000 uL
Final Weight/Volume: 17 mL
Injection Volume: 1 uL
Column ID: PRIMARY

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

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

MAR 22 2010 ERL

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Method Blank - Batch: 680-161475

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 680-161475/15-A	Analysis Batch:	680-161776	Instrument ID:	ICPD
Client Matrix:	Water	Prep Batch:	680-161475	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	02/24/2010 2030			Final Weight/Volume:	50 mL
Date Prepared:	02/23/2010 1652				

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

Lab Control Sample - Batch: 680-161475

Method: 6010B
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 680-161475/16-A	Analysis Batch:	680-161776	Instrument ID:	ICPD
Client Matrix:	Water	Prep Batch:	680-161475	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	02/24/2010 2035			Final Weight/Volume:	50 mL
Date Prepared:	02/23/2010 1652				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	1.00	1.01	101	75 - 125	
Iron, Dissolved	1.00	1.01	101	75 - 125	
Manganese	0.500	0.509	102	75 - 125	
Manganese, Dissolved	0.500	0.509	102	75 - 125	

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

MAR 22 2010 EZR

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Method Blank - Batch: 680-161368

Method: 310.1
Preparation: N/A

Lab Sample ID: MB 680-161368/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/22/2010 1233
Date Prepared: N/A

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

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

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

Lab Control Sample - Batch: 680-161368

Method: 310.1
Preparation: N/A

Lab Sample ID: LCS 680-161368/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/22/2010 1240
Date Prepared: N/A

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

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

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

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

MAR 22 2010 EZK

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Method Blank - Batch: 680-162285

Method: 325.2
Preparation: N/A

Lab Sample ID: MB 680-162285/19
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/04/2010 1316
Date Prepared: N/A

Analysis Batch: 680-162285
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Chloride	1.0	U	1.0

Lab Control Sample - Batch: 680-162285

Method: 325.2
Preparation: N/A

Lab Sample ID: LCS 680-162285/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/04/2010 1139
Date Prepared: N/A

Analysis Batch: 680-162285
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	50.0	51.2	102	85 - 115	

Duplicate - Batch: 680-162285

Method: 325.2
Preparation: N/A

Lab Sample ID: 680-55184-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/04/2010 1247
Date Prepared: N/A

Analysis Batch: 680-162285
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	30	29.6	1	30	

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

MAR 22 2010 EZR

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Method Blank - Batch: 680-162120

Method: 353.2
Preparation: N/A

Lab Sample ID: MB 680-162120/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/02/2010 1656
Date Prepared: N/A

Analysis Batch: 680-162120
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB2
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

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

Lab Control Sample - Batch: 680-162120

Method: 353.2
Preparation: N/A

Lab Sample ID: LCS 680-162120/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/02/2010 1656
Date Prepared: N/A

Analysis Batch: 680-162120
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB2
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate as N	0.989	1.02	103	90 - 110	
Nitrate Nitrite as N	0.989	1.02	103	90 - 110	

Duplicate - Batch: 680-162120

Method: 353.2
Preparation: N/A

Lab Sample ID: 680-55184-4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/19/2010 1643
Date Prepared: N/A

Analysis Batch: 680-162120
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB2
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Nitrate as N	1.5	1.50	3	10	

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

MAR 22 2010 EMK

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Method Blank - Batch: 680-161667

Method: 375.4
Preparation: N/A

Lab Sample ID: MB 680-161667/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/25/2010 1017
Date Prepared: N/A

Analysis Batch: 680-161667
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Result	Qual	RL
Sulfate	5.0	U	5.0

Lab Control Sample - Batch: 680-161667

Method: 375.4
Preparation: N/A

Lab Sample ID: LCS 680-161667/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/25/2010 1017
Date Prepared: N/A

Analysis Batch: 680-161667
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	20.0	20.1	101	75 - 125	

Duplicate - Batch: 680-161667

Method: 375.4
Preparation: N/A

Lab Sample ID: 680-55184-1
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 02/25/2010 1101
Date Prepared: N/A

Analysis Batch: 680-161667
Prep Batch: N/A
Units: mg/L

Instrument ID: KONELAB1
Lab File ID: N/A
Initial Weight/Volume: 2 mL
Final Weight/Volume: 2 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Sulfate	94	94.9	1	30	

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

MAR 22 2010

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Method Blank - Batch: 680-161728

Method: 415.1
Preparation: N/A

Lab Sample ID: MB 680-161728/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1129
Date Prepared: N/A

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

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

Analyte	Result	Qual	RL
Total Organic Carbon	1.0	U	1.0

Lab Control Sample - Batch: 680-161728

Method: 415.1
Preparation: N/A

Lab Sample ID: LCS 680-161728/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1159
Date Prepared: N/A

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

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

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Organic Carbon	20.0	20.0	100	80 - 120	

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

MAR 22 2010

Client: Solutia Inc.

Job Number: 680-55184-1
Sdg Number: KOM07

Method Blank - Batch: 680-161773

Method: 415.1
Preparation: N/A

Lab Sample ID: MB 680-161773/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/25/2010 1351
Date Prepared: N/A

Analysis Batch: 680-161773
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: 680-161773

Method: 415.1
Preparation: N/A

Lab Sample ID: LCS 680-161773/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/25/2010 1351
Date Prepared: N/A

Analysis Batch: 680-161773
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	19.6	98	80 - 120	

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

MAR 22 2010

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: Jeff Adams	Site Contact: Mike Corbett	Date: 2/18/10	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. 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: 1Q10 Route 3 Drum Lot 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, Ethane, Ethene by RSK 175	Nitrate by 353.2	TOC by 415.1	Dissolved Fe/Mn by 6010B	DOC by 415.1	Sample Specific Notes:
GM-31A-0210	2/18/10	1350	G	Water	11		2	1	1	1	3	2	1			
GM-31A-0210-AD		1350	G	Water	2		2									
GM-31A-F(0.2)-0210		1350	G	Water	2	X								1	1	
GM-58A-0210		1120	G	Water	11		2	1	1	1	3	2	1			
GM-58A-0210-MS		1120	G	Water	2		2									
GM-58A-0210-MSD		1120	G	Water	2		2									
GM-58A-F(0.2)-0210		1120	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	680-55184

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

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

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

Temp 2.0/1.6/0.9

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	URS	2/18/10 1515	Brian Daughtry	TH SAV	2-19-10 @ 0930
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

MAR 22 2010 EZR

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55184-1
SDG Number: KOM07

Login Number: 55184
Creator: Daughtry, Beth
List Number: 1

List Source: TestAmerica Savannah

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	3 coolers rec'd on ice
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0, 1.6, 0.9 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	

MAR 22 2010 ER/2