Solutia Inc.
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St. Louis, Missouri 63141

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gmrina@solutia.com

May 19, 2011

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 2011 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 2011 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 2011 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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Booz Allen Hamilton, 8283 Greensboro Drive, McLean, VA 22102

Solutia

Brett Shank 500 Monsanto Avenue, Sauget, IL 62206-1198

FIRST QUARTER 2011
DATA REPORT
ILLINOIS ROUTE 3 DRUM SITE
GROUNDWATER SAMPLING
SOLUTIA INC.
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

Prepared for:

SOLUTIA INC.
St. Louis, Missouri

Prepared by:

GEOTECHNOLOGY, INC.
St. Louis, Missouri

Geotechnology, Inc. Report No. J017210.11

May 18, 2011

J017210.11

FIRST QUARTER 2011
DATA REPORT
ILLINOIS ROUTE 3 DRUM SITE
GROUNDWATER SAMPLING
SOLUTIA INC.
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

TABLE OF CONTENTS

		Page
1.0	INTRODUCTION	1
2.0	FIELD PROCEDURES	1
3.0	LABORATORY PROCEDURES	3
4.0	QUALITY ASSURANCE	3
5.0	OBSERVATIONS	4
6.0	REFERENCES	4

TABLES

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

ILLUSTRATIONS

	Plate
Site Location Map	1
Monitoring Well Location Map	2

APPENDICES

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

J017210.11

FIRST QUARTER 2011
DATA REPORT
ILLINOIS ROUTE 3 DRUM SITE
GROUNDWATER SAMPLING
SOLUTIA INC.
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

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 (WGK) 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 2011 (1Q11). The Site is located in the area identified as "Lot F" in Figure 1.

During the 1Q11 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 were determined by measurements of the following key geochemical parameters: alkalinity, carbon dioxide, chloride, dissolved oxygen (DO), 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

Geotechnology, Inc. (Geotechnology) personnel collected groundwater level measurements on February 16, 2011 and conducted the 1Q11 Illinois Route 3 Drum Site groundwater sampling on February 23, 2011. Groundwater samples were collected from two monitoring wells during the 1Q11 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 1Q11 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 263 to 273 mL/minute to minimize drawdown. If significant drawdown occurred, flow rates were reduced.

Drawdown was measured periodically throughout purging to ensure that it did not exceed 25% of the distance between the pump intake and the top of the screen. Once the flow rate and drawdown were stable, field measurements were collected approximately every three to five minutes. Purging of a well was considered complete when the following water quality parameters remained stable over three consecutive flow-through cell volumes:

Parameter	Stabilization Guidelines
Dissolved Oxygen (DO)	+/- 10% or +/-0.2 mg/L, whichever is greatest
Oxidation-Reduction Potential (ORP)	+/- 20 mV
pH	+/- 0.2 units
Specific Conductivity	+/- 3%

Sampling commenced upon completion of purging. Prior to sample collection, the flow-through cell was bypassed to allow for collection of uncompromised groundwater. Samples were collected at a flow rate less than or equal to the rate at which stabilization was achieved. Sample containers were filled based on laboratory analysis to be performed. 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 and oxidation reduction potential)

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

Quality Assurance/Quality Control (QA/QC) samples consisting of analytical duplicates (AD) and equipment blanks (EB) were collected at a rate of 10% and matrix spike/matrix spike duplicates (MS/MSD) were collected at a rate of 5%. 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-0211" which denotes Groundwater Monitoring well number 31A sampled in February 2011. 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°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. 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. The laboratory report and data review sheets are included in Appendix D.

A total of six groundwater samples (two investigative groundwater samples, one field duplicate, one MS/MSD pair, and one equipment blank) were prepared and analyzed by TestAmerica for SVOCs and MNA parameters. The results for the various analyses were submitted as sample delivery group (SDG) KOM011 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 data, was 94.74 percent.

5.0 OBSERVATIONS

SVOCs were detected in the groundwater samples collected from monitoring wells GM-31A and GM-58A during the 1Q11 sampling event. Laboratory analytical data for groundwater sample GM-31A-0211 indicated detections of 19 µg/L of 2,4,6-trichlorophenol and 9.9 µg/L of nitrobenzene. Laboratory analytical data for groundwater sample GM-58A-0211 indicates a detection of 63 µg/L of 2,4,6-trichlorophenol and 220 µg/L of 2-chloronitrobenzene/ 4-chloronitrobenzene. A summary of SVOC detections is provided in Table 2, with MNA results provided in Table 3.

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.

TABLE 1

J017210.11
May 2011

MONITORING WELL GAUGING INFORMATION

Well ID	Construction Details						February 2011		
	Ground Elevation* (feet)	Casing Elevation* (feet)	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Top of Screen Elevation* (feet)	Bottom of Screen Elevation* (feet)	Depth to Water (feet btoc)	Depth to Bottom (feet btoc)	Water Elevation* (feet)
Shallow Hydrogeologic Unit (SHU 395-380 feet NAVD 88)									
GM-31A	416.63	418.63	19.00	39.00	397.63	377.63	24.34	40.42	394.29
GM-58A	412.24	414.24	19.40	39.40	392.84	372.84	20.26	40.93	393.98

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

TABLE 2

J017210.11
May 2011

GROUNDWATER ANALYTICAL RESULTS

Sample ID	Sample Date	1,1'-Biphenyl (µg/L)	1-Chloro-2,4-Dinitrobenzene (µg/L)	1-Chloro-3-Nitrobenzene (µg/L)	2,4,6-Trichlorophenol (µg/L)	2,4-Dichlorophenol (µg/L)	2-Chloronitrobenzene/ 4-Chloronitrobenzene (µg/L)	2-Nitrobiphenyl (µg/L)	3-Nitrobiphenyl (µg/L)	3,4-Dichloronitrobenzene (µg/L)	4-Nitrobiphenyl (µg/L)	Nitrobenzene (µg/L)	Pentachlorophenol (µg/L)
Shallow Hydrogeologic Unit (SHU 395 - 380 ft NAVD 88)													
GM-31A-0211	02/23/11	<9.9	<9.9	<9.9	**19**	<9.9	<20	**9.9**	<9.9	<9.9	<9.9	<9.9*	<49
GM-31A-0211-AD	02/23/11	<10	<10	<10	**11**	<10	<21	<10	<10	<10	<10	<10*	<52
GM-58A-0211	02/23/11	<10	<10	<10	**63**	<10	**220**	<10	<10	<10	<10	<10	<50

Notes:
µg/L = micrograms per liter
< = Result is non-detect, less than the reporting limit given - indicated as a U qualifier on lab data
* = LCS, LCSD, MS, MSD, MD or surrogate exceeds the control limits
BOLD indicates concentration greater than the reporting limit

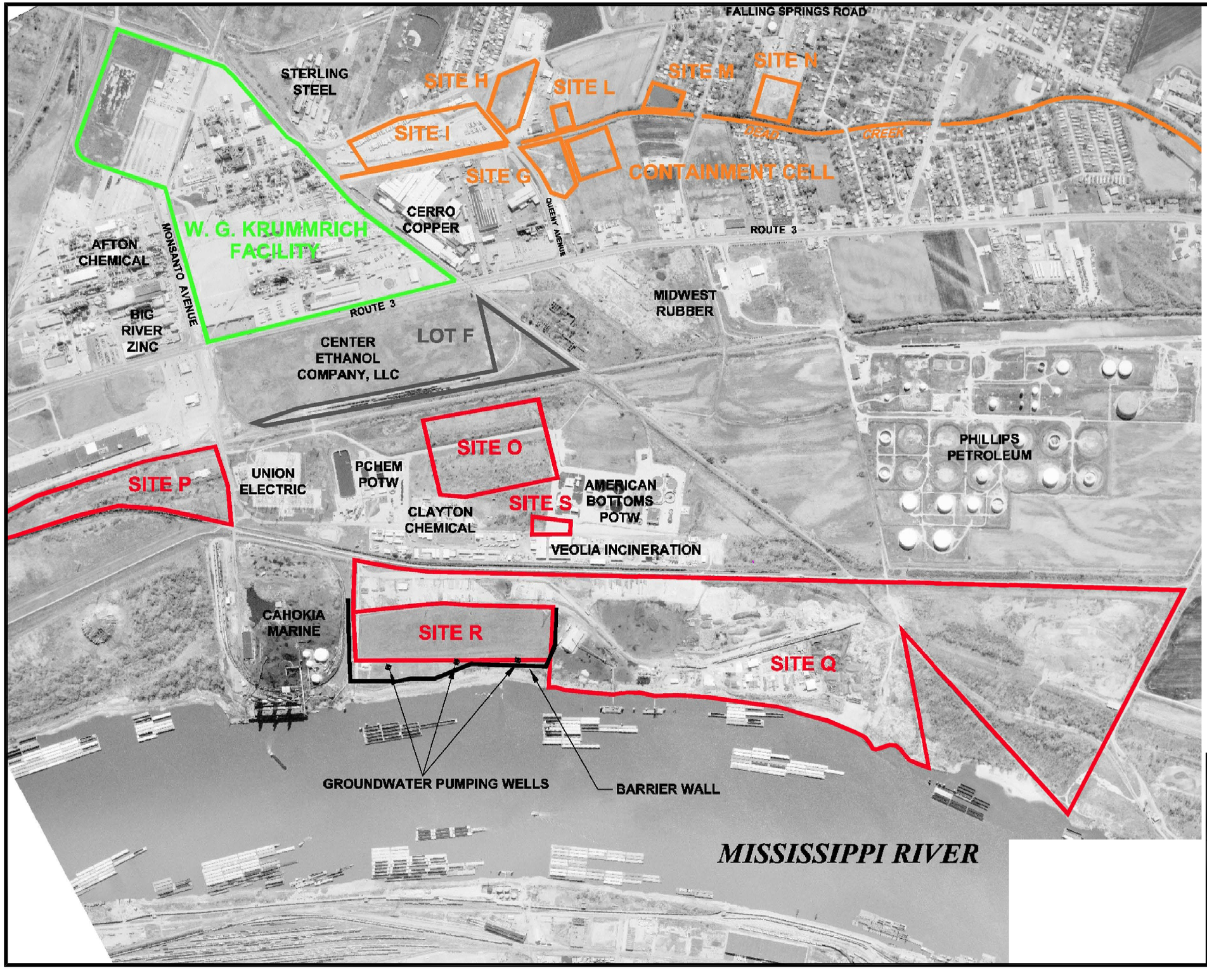
TABLE 3

J017210.11
May 2011

MONITORED NATURAL ATTENUATION RESULTS SUMMARY

Sample ID	Sample Date	Alkalinity (mg/L)	Carbon Dioxide (mg/l)	Chloride (mg/L)	Dissolved Oxygen (mg/L)	Ethane (µg/L)	Ethylene (µg/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-0211	02/23/11	360	21	29	0.0	<1.1	<1.0	0.31	6.9 J		0.91		4.1	<0.050	93		3.7	105.3
GM-31A-F(0.2)-0211	02/23/11									<0.050 J		0.79				4		
GM-58A-0211	02/23/11	510	39	60	0.0	<1.1	<1.0	0.38	10 J		1.4		6.1	1.3	110		4.9	189.3
GM-58A-F(0.2)-0211	02/23/11									0.091 J		1.4				4.3		

Notes:
DO and ORP were measured in the field using a Horiba U22 equipped with a flow-thru cell.
Ferrous Iron readings were not measured in the field.
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 = millivolts
J=Estimated value



NOTES:

1. Plan adapted from a drawing titled "Site Location Map" provided by URS.

LEGEND:

- W.G. Krummrich Facility
- Sauget Area #1
- Sauget Area #2

N

0 1,000 2,000

SCALE IN FEET

Drawn By: SLC	Ck'd By: AMS	App'vd By: DTK
Date: 04-15-11	Date: 04-15-11	Date: 04-15-11

GEOTECHNOLOGY INC
FROM THE GROUND UP

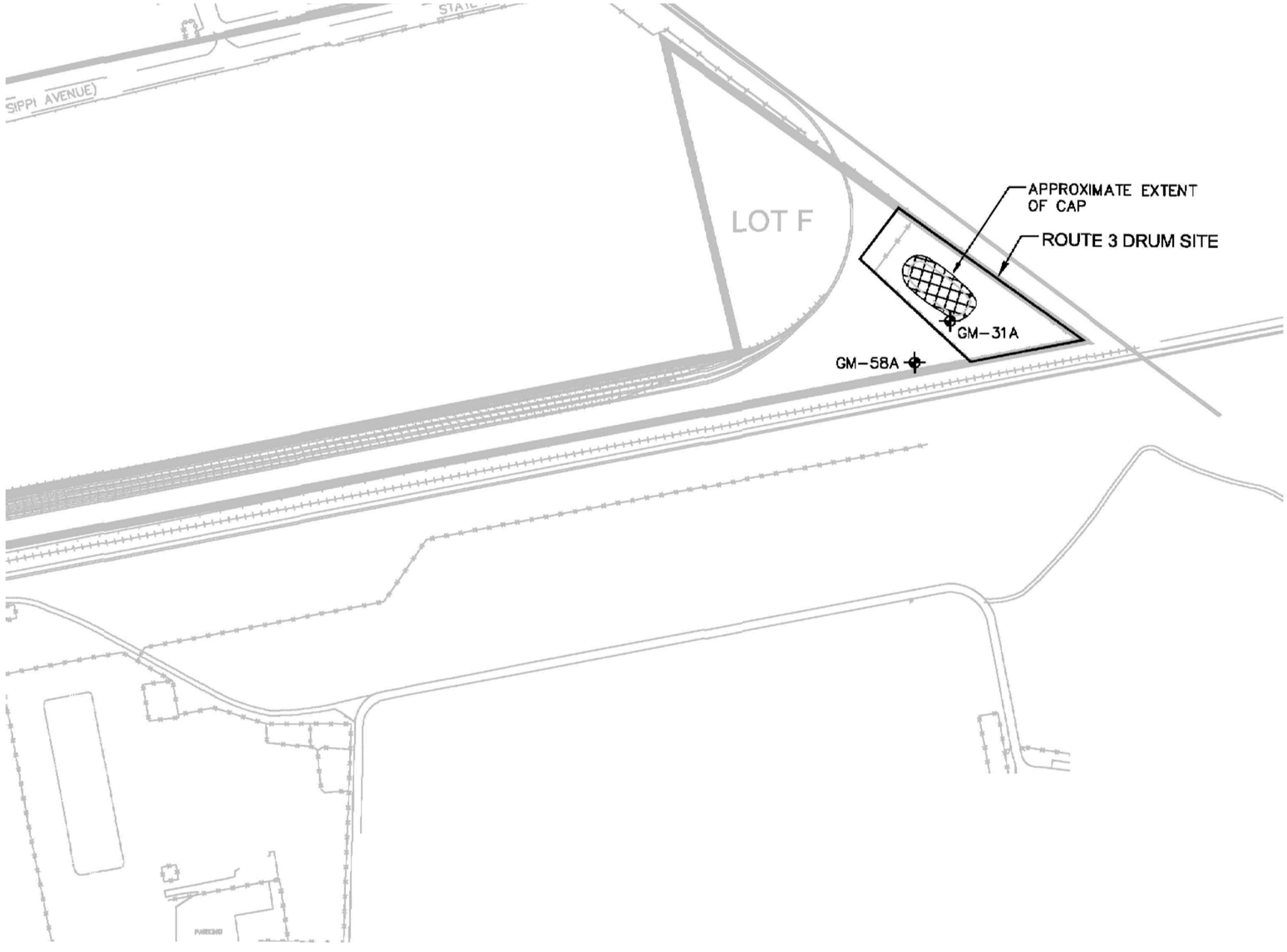
1Q 2011
Route 3 Drum Site Program
Sauget, Illinois

SITE LOCATION MAP

Project Number J017210.11	PLATE 1

NOTES:

1. Plan adapted from a drawing titled "Monitoring Well Location Map" provided by URS.



LEGEND:

Monitoring Well Location

N

0 300 600

SCALE IN FEET

Drawn By: SLC	Ck'd By: AMS	App'vd By: DTK
Date: 04-15-11	Date: 04-15-11	Date: 04-15-11

GEOTECHNOLOGY INC
FROM THE GROUND UP

1Q 2011
Route 3 Drum Site Program
Sauget, Illinois

MONITORING WELL LOCATION MAP

Project Number J017210.11	PLATE 2

APPENDIX A

GROUNDWATER PURGING AND SAMPLING FORMS

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: W6K DRUM 1Q11 | PROJECT NUMBER: J017210.11 | FIELD PERSONNEL: KCR / DCW
DATE: 2-23-11 | WEATHER: 40°F
MONITORING WELL ID: GM-31A | SAMPLE ID: GM-31A-0211

INITIAL DATA

Well Diameter: 2" in
Measured Well Depth (btoc): 40.42 ft
Constructed Well Depth (btoc): 41.00 ft
Depth to Water (btock): 24.04 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): 16.38 ft
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet
Place Pump at: Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = 31.0 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are <4 ft,
Place Pump at: Total Well Depth -)9.5 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
DNPL Present: No If Present, Do Not Sample

Volume of Flow Through Cell): 700 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2100 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 12.7 ppm

PURGE DATA

Pump Type: QED Sample Pro

	HAVE THE STABILIZATION PARAMETERS BEEN SATISFIED? All are units unless %					
	± 0.2	Record Data Only	± 3%	Record Data Only	± 10% or ± 0.2	± 20
Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. Ms/cm	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
0	1305	24.04	-	-	-	-	-	-	-	-
1000	1309		Somewhat cloudy	none	7.13	14.28	0.12	151	0.15	108
2000	1312				6.91	14.52	0.12	261	0.0	106
3000	1315		yellow tint		6.88	14.69	0.12	268	0.0	106
4000	1319				6.80	13.96	0.12	381	0.0	104
5000	1323				6.78	14.12	0.12	349	0.0	103
6000	1327				6.60	14.19	0.12	326	0.0	109

Start Time: 1305
Stop Time: 1327
Elapsed Time: 22 min
Average Purge Rate (mL/min): 272.7
Water Quality Meter ID: Horiba U-22
Date Calibrated: 2-23-11

SAMPLING DATA

Sample Date: 2-23-11
Sample Method: low flow
Sample Time: 1330
Sample Flow Rate: 272.7
Analysis: SVOCs, metals, MNA
QA/QC Samples: AD

VOA Vials, No Headspace [X] Initials: KCR

COMMENTS: MNA: Alkalinity CO_2, chloride, Ferrous Iron, methane, Nitrate, Sulfate, DOC, TOC
Ferrous Iron (Filtered 0.2 micron) = 0.31

1312 to 1313 - Cleaned out flow through cell since it was silting up. Didn't work, new water has high turbidity

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: W6K Drum 1Q11
PROJECT NUMBER: J017210.11
FIELD PERSONNEL: KCR / DEW
DATE: 2-23-11
WEATHER: 40° Rainy
MONITORING WELL ID: 6M-58A
SAMPLE ID: 6M-58A-0211

INITIAL DATA

Well Diameter: 2" in
Measured Well Depth (btoc): 40.93 ft
Constructed Well Depth (btoc): 41.4 ft
Depth to Water (btock): 20.26 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 21.4 ft
Screen Length: 20 ft

Water Column Height (do not include LNAPL or DNAPL): 20.67 ft
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet
Place Pump at: Total Well Depth - 0.5 (Screen Length + DNAPL Column Height) = 31.4 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are <4 ft,
Place Pump at: Total Well Depth -)9.5 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
DNPL Present NO If Present, Do Not Sample

Volume of Flow Through Cell): 700 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2100 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: ____ ppm

PURGE DATA

Pump Type: QED Sample Pro

HAVE THE STABILIZATION PARAMETERS BEEN SATISFIED? All are units unless %

	± 0.2	Record Data Only	± 3%	Record Data Only	± 10% or ± 0.2	± 20
Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. Ms/cm	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
0	1435	19.88	—	—	—	—	—	—	—	—
1000	1439	19.90	Yellow tint	none	6.77	12.96	0.15	250.0	0.0	200
2000	1443	19.89	↓	↓	6.75	13.18	0.15	233.0	0.0	196
3000	1447	19.89			6.75	13.22	0.15	284	0.0	193
4000	1450	19.89			6.73	13.36	0.15	290	0.0	189
5000	1453				6.72	13.5	0.15	250	0.0	186

Start Time: 1435
Stop Time: 1453
Elapsed Time: 18 min
Average Purge Rate (mL/min): 263.15 mL/min
Water Quality Meter ID: Horiba U-22
Date Calibrated: 2-23-11

SAMPLING DATA

Sample Date: 2-23-11
Sample Method: low flow
Sample Time: 1505
Sample Flow Rate: 263.15 mL/min
Analysis: SVOCs, metals, MNA
QA/QC Samples: MS, MSD, & EB

VOA Vials, No Headspace [X] Initials: KCR

COMMENTS: MNA: Alkalinity, CO_2, chloride, Ferrous Iron, methane, Nitrate, Sulfate, TOC, DOC
Ferrous Iron (Filtered 0.2 micron) = 0.38

APPENDIX B

CHAINS-OF-CUSTODY

Serial Number 000179

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

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

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE: WGK - Drum site - 1Q11	PROJECT NO.: Drum site	PROJECT LOCATION (STATE): IL
TAL (LAB) PROJECT MANAGER: Gm Rinaldi	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Gm Rinaldi	CLIENT PHONE: 314-674-3312	CLIENT FAX: 314-674-8808
CLIENT NAME: Solutia, Inc	CLIENT E-MAIL: gmrina@solutia.com	
CLIENT ADDRESS: 575 Maryville Center Dr, St. Louis, MO 63141		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ☒ DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS / NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	SVOC 8270 (none)	Total Fe/mn 6010B (HNO3)	Alka/CO2 310.1 (none)	Chloride 325.2 Sulfate 375.4 (none)	Methane Ethane Ethene RSK 175 (none)	Nitrate 353.2 (H2SO4)	TOC 415.1 (HCl)	Diss Fe/mn 6010B (HNO3)	Diss DOC 415.1 (HCl)		REMARKS
2-23-11	1330	GM-31A-0211	6	X				2	1	1	1	3	1	1				
	1330	GM-31A-0211-F(0.2)	6	X											1	1		Filtered
	1330	GM-31A-0211-AD	6	X				2										
	1505	GM-58A-0211	6	X				2	1	1	1	3	1	1				
	1505	GM-58A-0211-F(0.2)	6	X											1	1		Filtered
	1505	GM-58A-0211-MS	6	X				2										
	1505	GM-58A-0211-MSD	6	X				2										
	1505	GM-58A-0211-EB	6	X				2										

PRESERVATIVE

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2-23-11	16:40						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	2/24/11	0923	YES ○ NO ○		680-65900	3.6/4.0/1.2/2.2

TAL 8240-680 (1008)

APPENDIX C

QUALITY ASSURANCE REPORT

FIRST QUARTER 2011
ILLINOIS ROUTE 3 DRUM SITE GROUNDWATER SAMPLING
QUALITY ASSURANCE REPORT
SOLUTIA INC.
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

Prepared for:

SOLUTIA INC.
St. Louis, Missouri

Prepared by:

GEOTECHNOLOGY, INC.
St. Louis, Missouri

Geotechnology, Inc. Report No. J017210.11

May 18, 2011

J017210.11

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ILLINOIS ROUTE 3 DRUM SITE GROUNDWATER SAMPLING
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SOLUTIA INC.
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1

2.0 RECEIPT CONDITION AND SAMPLE HOLDING TIMES 3

3.0 LABORATORY METHOD AND EQUIPMENT BLANK SAMPLES 3

4.0 SURROGATE SPIKE RECOVERIES 4

5.0 LABORATORY CONTROL SAMPLE RECOVERIES 4

6.0 MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) SAMPLES.....4

7.0 FIELD DUPLICATE RESULTS 5

8.0 INTERNAL STANDARD RESPONSES 5

9.0 RESULTS REPORTED FROM DILUTIONS 5

10.0 MASS SPECTROMETER TUNING.....5

11.0 CALIBRATION.....6

12.0 COMPOUND IDENTIFICATION 6

13.0 OTHER PROBLEMS/DOCUMENTATION 6

J017210.11

FIRST QUARTER 2011
ILLINOIS ROUTE 3 DRUM SITE GROUNDWATER SAMPLING
QUALITY ASSURANCE REPORT
SOLUTIA INC.
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

1.0 INTRODUCTION

This Quality Assurance Report presents the findings of a review of analytical data for groundwater samples collected in February of 2011 at the Solutia W.G. Krummrich plant as part of the 1st Quarter 2011 Illinois Route 3 Drum Site Groundwater Sampling. The samples were collected by Geotechnology, Inc. (Geotechnology) personnel and analyzed by TestAmerica Laboratories located in Savannah, Georgia using USEPA methodologies. Groundwater samples were analyzed for semi-volatile organic compounds (SVOCs) and monitored natural attenuation (MNA) parameters.

Geotechnology subcontracted with the M.J.W. Corporation to conduct third party Level III data validation. One hundred percent of the data was subjected to a data quality review (Level III validation.) M.J.W. Corporation selected four random groundwater samples for Level IV data validation (GM-31A-0211, GM-31A-F(0.2)-0211, GM-58A-0211 and GM-58A-F(0.2)-0211. The Level III and IV reviews were performed in order to confirm that the analytical data provided by TestAmerica were acceptable in quality for their intended use.

A total of 6 samples (two investigative groundwater samples, one field duplicate, one matrix spike and matrix spike duplicate (MS/MSD) pair, and one equipment blank) were analyzed by TestAmerica. These samples were analyzed as part of Sample Delivery Group (SDG) KOM11 utilizing the following USEPA SW-846 Methods:

- Method 8270 for semi-volatile organic compounds
- Method RSK-175 for dissolved gases (ethane, ethylene and methane)
- Method 6010B for total and dissolved iron and manganese
- Method 325.2 for chloride
- Method 353.2 for nitrogen, nitrate
- Method 375.4 for sulfate
- Method 415.1 for total and dissolved organic carbon
- Method 310.1 for alkalinity and carbon dioxide

Samples were reviewed following procedures outlined in the USEPA National Functional Guidelines for Superfund Organic Methods Data Review (USEPA 2008) and the 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. Data was qualified based on the data quality review. Qualifiers assigned indicate data that did not meet acceptance criteria and for which corrective actions were not successful or not performed. The various qualifiers are explained in Tables 1 and 2 below:

Table 1 – Laboratory Data Qualifiers

Lab Qualifier	Definition
U	Indicates the analyte was analyzed for but not detected.
F	MS or MSD exceeds the control limits.
H	Sample was prepped or analyzed beyond the specified holding time.
*	LC or LCS exceeds the control limits.

Table 2 – Geotechnology (MJW Corporation) Data Qualifiers

MJW Corp. Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	Indicates the result qualified as estimated.

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 94.74%.

The data review included evaluation of the following criteria:

Organics

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

- Calibration
- Compound identification
- Other problems/documentation

Inorganics

- 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 report 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.

Since the LCS exceeded control limits for all samples submitted for Method 8270C analysis, the samples were re-extracted and re-analyzed outsize of the holding times. The original data is acceptable for use.

The cooler receipt form indicated that one of the four coolers was received by the laboratory at a temperature outside the temperature requirements – one was reported as "rec'd on ice" at 1.2 degrees Celsius, which is outside the 4°C $\pm$ 2°C criteria. Samples received were in good condition; therefore, no qualification of data was required.

3.0 LABORATORY METHOD AND EQUIPMENT BLANK SAMPLES

Laboratory method blank samples evaluate the existence and magnitude of contamination problems resulting from laboratory activities. All laboratory method blank samples were analyzed at the method prescribed frequencies. No analytes were detected in the method blank; therefore, no qualification of date was required.

Equipment blank samples are used to assess the effectiveness of equipment decontamination procedures. No analytes were detected in the equipment blank sample.

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 Superfund Organic Methods Data Review state how data is qualified, if surrogate spike recoveries do not meet evaluation criteria. Surrogate recoveries were within evaluation 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. LCS 680-195497/13A was out of limit for Nitrobenzene. All samples were re-extracted outside of holding times and both sets of results were reported. The re-analysis of LCS 680-195497/13A was acceptable for all analytes; 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 required to be collected at a frequency of one per 20 investigative samples in accordance with the work plan (one per 20 investigative samples or 5%). Geotechnology submitted one MS/MSD sample set for two investigative samples, meeting the work plan frequency requirement.

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

Sample GM-58A-0211 was spiked and analyzed for SVOCs in SDG KOM11. MS/MSD batch 680-195497 had results out of control limits for 1-chloro-3-nitrobenzene, 2-chloronitrobenzene/ 4-chloronitrobenzene, 1,1-biphenyl, nitrobenzene, and 2,4,6-trichlorophenol for Method 8270C. Matrix spike 680-65917-B-1-B MS was out of control limits for iron for Method 6010B and was qualified as estimated “J”. Data does not require qualification based on MS/MSD data alone; therefore no qualification of semi-volatile data was performed.

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). Field duplicate results were within evaluation criteria. No qualifications of data were 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. For the SVOCs, the IS areas must be within -50 to +10% percent of the preceding calibration verification (CV) IS value. Also, the IS retention times must be within 30 seconds of the preceding IS CV retention time.

The internal standards area responses for SVOCs were verified for the data reviews. IS responses met the criteria as described above. No qualifications of data were required.

9.0 RESULTS REPORTED FROM DILUTIONS

Samples were not diluted; therefore, qualifications of data were not required.

10. MASS SPECTROMETER TUNING

Instrument performance was determined to be satisfactory. No qualifications of data were required.

11.0 CALIBRATION

Percent Relative Standard Deviation (%RSD) is used to indicate the stability of a specific compound response factor over increasing concentration. Percent D (%D) is a measure of the instrument's daily performance. Percent RSD must be <30% and Percent D must be <25%.

No samples were qualified for percent D or percent RSD; therefore no qualifications of data were required.

12.0 COMPOUND IDENTIFICATION

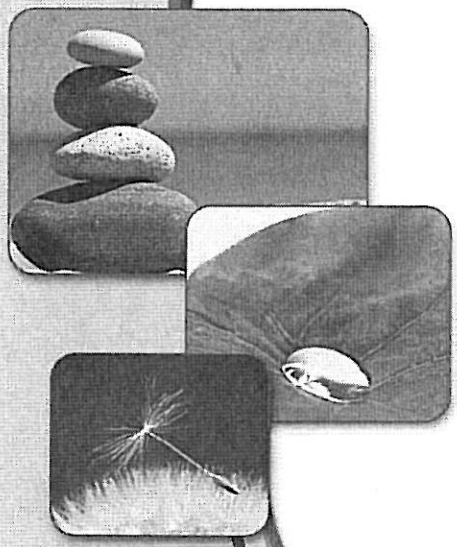
Compound identification was determined to be satisfactory. No qualifications of data were required.

13.0 OTHER PROBLEMS/DOCUMENTATION

Other problems or documentation were no noted. No qualifications of data were required.

APPENDIX D

GROUNDWATER ANALYTICAL RESULTS
(WITH DATA REVIEW SHEETS)



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 680-65900-1
TestAmerica Sample Delivery Group: KOM011
Client Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

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

Attn: Jerry Rinaldi

Lidya Gulizia

Authorized for release by:
03/28/2011 05:48:22 PM

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

cc: Duane Kreuger

LINKS

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Visit us at: www.testamericainc.com

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

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Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 4
Method Summary 5
Definitions 6
Client Sample Results 7
Surrogate Summary 15
QC Sample Results 16
QC Association 25
Chronicle 28
Chain of Custody 30
Sample Receipt Checklist 31
Certification Summary 32

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4/11/11

Job ID: 680-65900-1

Laboratory: TestAmerica Savannah

Narrative

Job Narrative
680-65900-1 / SDG KOM011

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

GC/MS Semi VOA
Method(s) 8270C: The laboratory control sample (LCS)) for batch 195497 exceeded control limits for multiple analytes that are not reported in the project samples. Per laboratory standard operating procedure (SOP), all samples were re-extracted outside holding times and both sets of results have been reported.

Method(s) 8270C: Internal standard (ISTD) response for the following sample(s) was outside control limits: GM-58A-0211-EB (680-65900-6). The sample(s) was re-analyzed with concurring results. The original set of data has been reported.

Method(s) 8270C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 195497 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8270C: Twice the required about of Internal standard solution (ISTD) was added to the extract for sample GM-58A-0211(680-65900-4). All calculations have been adjusted and data reported.

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
No analytical or quality issues were noted.

Comments
No additional comments.

Sample Summary

Client: Solutia Inc.
Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

TestAmerica Job ID: 680-65900-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-65900-1	GM-31A-0211	Water	02/23/11 13:30	02/24/11 09:23
680-65900-2	GM-31A-0211-F(0.2)	Water	02/23/11 13:30	02/24/11 09:23
680-65900-3	GM-31A-0211-AD	Water	02/23/11 13:30	02/24/11 09:23
680-65900-4	GM-58A-0211	Water	02/23/11 15:05	02/24/11 09:23
680-65900-5	GM-58A-0211-F(0.2)	Water	02/23/11 15:05	02/24/11 09:23
680-65900-6	GM-58A-0211-EB	Water	02/23/11 15:05	02/24/11 09:23

4/11/11

Method Summary

Client: Solutia Inc.
Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

TestAmerica Job ID: 680-65900-1
SDG: KOM011

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

Protocol References:

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

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

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

Laboratory References:

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

4/11/11

Qualifier Definition/Glossary

Client: Solutia Inc.
Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

TestAmerica Job ID: 680-65900-1
SDG: KOM011

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
F	MS or MSD exceeds the control limits
H	Sample was prepped or analyzed beyond the specified holding time
U	Indicates the analyte was analyzed for but not detected.

GC VOA

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

Metals

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

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

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4/11/11

Client Sample ID: GM-31A-0211
Date Collected: 02/23/11 13:30
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	9.9	U	9.9		ug/L		02/28/11 14:49	03/03/11 17:34	1
2,4-Dichlorophenol	9.9	U	9.9		ug/L		02/28/11 14:49	03/03/11 17:34	1
Nitrobenzene	9.9	U *	9.9		ug/L		02/28/11 14:49	03/03/11 17:34	1
Pentachlorophenol	49	U	49		ug/L		02/28/11 14:49	03/03/11 17:34	1
2,4,6-Trichlorophenol	**19**		9.9		ug/L		02/28/11 14:49	03/03/11 17:34	1
1-Chloro-3-nitrobenzene	9.9	U	9.9		ug/L		02/28/11 14:49	03/03/11 17:34	1
2-Nitrobiphenyl	**9.9**		9.9		ug/L		02/28/11 14:49	03/03/11 17:34	1
3-Nitrobiphenyl	9.9	U	9.9		ug/L		02/28/11 14:49	03/03/11 17:34	1
3,4-Dichloronitrobenzene	9.9	U	9.9		ug/L		02/28/11 14:49	03/03/11 17:34	1
4-Nitrobiphenyl	9.9	U	9.9		ug/L		02/28/11 14:49	03/03/11 17:34	1
2-chloronitrobenzene / 4-chloronitrobenzene	20	U	20		ug/L		02/28/11 14:49	03/03/11 17:34	1
1-chloro-2,4-dinitrobenzene	9.9	U	9.9		ug/L		02/28/11 14:49	03/03/11 17:34	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*69*		*38 - 130*	*02/28/11 14:49*	*03/03/11 17:34*	*1*
2-Fluorophenol	*58*		*25 - 130*	*02/28/11 14:49*	*03/03/11 17:34*	*1*
Nitrobenzene-d5	*61*		*39 - 130*	*02/28/11 14:49*	*03/03/11 17:34*	*1*
Phenol-d5	*57*		*25 - 130*	*02/28/11 14:49*	*03/03/11 17:34*	*1*
Terphenyl-d14	*52*		*10 - 143*	*02/28/11 14:49*	*03/03/11 17:34*	*1*
2,4,6-Tribromophenol	*85*		*31 - 141*	*02/28/11 14:49*	*03/03/11 17:34*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	9.7	U H	9.7		ug/L		03/08/11 14:38	03/15/11 12:10	1
2,4-Dichlorophenol	9.7	U H	9.7		ug/L		03/08/11 14:38	03/15/11 12:10	1
Nitrobenzene	9.7	U H	9.7		ug/L		03/08/11 14:38	03/15/11 12:10	1
Pentachlorophenol	49	U H	49		ug/L		03/08/11 14:38	03/15/11 12:10	1
2,4,6-Trichlorophenol	**13**	H	9.7		ug/L		03/08/11 14:38	03/15/11 12:10	1
1-Chloro-3-nitrobenzene	9.7	U H	9.7		ug/L		03/08/11 14:38	03/15/11 12:10	1
2-Nitrobiphenyl	9.7	U H	9.7		ug/L		03/08/11 14:38	03/15/11 12:10	1
3-Nitrobiphenyl	9.7	U H	9.7		ug/L		03/08/11 14:38	03/15/11 12:10	1
3,4-Dichloronitrobenzene	9.7	U H	9.7		ug/L		03/08/11 14:38	03/15/11 12:10	1
4-Nitrobiphenyl	9.7	U H	9.7		ug/L		03/08/11 14:38	03/15/11 12:10	1
2-chloronitrobenzene / 4-chloronitrobenzene	19	U H	19		ug/L		03/08/11 14:38	03/15/11 12:10	1
1-chloro-2,4-dinitrobenzene	9.7	U H	9.7		ug/L		03/08/11 14:38	03/15/11 12:10	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*38 - 130*	*03/08/11 14:38*	*03/15/11 12:10*	*1*
2-Fluorophenol	*60*		*25 - 130*	*03/08/11 14:38*	*03/15/11 12:10*	*1*
Nitrobenzene-d5	*64*		*39 - 130*	*03/08/11 14:38*	*03/15/11 12:10*	*1*
Phenol-d5	*58*		*25 - 130*	*03/08/11 14:38*	*03/15/11 12:10*	*1*
Terphenyl-d14	*52*		*10 - 143*	*03/08/11 14:38*	*03/15/11 12:10*	*1*
2,4,6-Tribromophenol	*81*		*31 - 141*	*03/08/11 14:38*	*03/15/11 12:10*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	1.1	U	1.1		ug/L			03/02/11 17:34	1
Ethylene	1.0	U	1.0		ug/L			03/02/11 17:34	1
Methane	**4.1**		0.58		ug/L			03/02/11 17:34	1

4/11/11

Analytical Data

Client: Solutia Inc.
Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

TestAmerica Job ID: 680-65900-1
SDG: KOM011

Client Sample ID: GM-31A-0211
Date Collected: 02/23/11 13:30
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	6.9	"J"	0.050		mg/L		03/02/11 12:50	03/07/11 19:37	1
Manganese	0.91		0.010		mg/L		03/02/11 12:50	03/07/11 19:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29		1.0		mg/L			02/28/11 17:18	1
Nitrate as N	0.050	U	0.050		mg/L			02/24/11 16:49	1
Sulfate	93		25		mg/L			03/08/11 12:54	5
Total Organic Carbon	3.7		1.0		mg/L			03/03/11 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	360		5.0		mg/L			02/27/11 12:59	1
Carbon Dioxide, Free	21		5.0		mg/L			02/27/11 12:59	1

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4/11/11

Client: Solutia Inc.
Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

TestAmerica Job ID: 680-65900-1
SDG: KOM011

Client Sample ID: GM-31A-0211-F(0.2)
Date Collected: 02/23/11 13:30
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-2
Matrix: Water

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	0.050	U "J"	0.050		mg/L		03/02/11 12:50	03/07/11 19:41	1
Manganese, Dissolved	0.79		0.010		mg/L		03/02/11 12:50	03/07/11 19:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	4.0		1.0		mg/L			03/04/11 03:53	1

4/11/11

Client Sample ID: GM-31A-0211-AD
Date Collected: 02/23/11 13:30
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:02	1
2,4-Dichlorophenol	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:02	1
Nitrobenzene	10	U *	10		ug/L		02/28/11 14:49	03/03/11 18:02	1
Pentachlorophenol	52	U	52		ug/L		02/28/11 14:49	03/03/11 18:02	1
2,4,6-Trichlorophenol	11		10		ug/L		02/28/11 14:49	03/03/11 18:02	1
1-Chloro-3-nitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:02	1
2-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:02	1
3-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:02	1
3,4-Dichloronitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:02	1
4-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:02	1
2-chloronitrobenzene / 4-chloronitrobenzene	21	U	21		ug/L		02/28/11 14:49	03/03/11 18:02	1
1-chloro-2,4-dinitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:02	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*38 - 130*	*02/28/11 14:49*	*03/03/11 18:02*	*1*
2-Fluorophenol	*55*		*25 - 130*	*02/28/11 14:49*	*03/03/11 18:02*	*1*
Nitrobenzene-d5	*59*		*39 - 130*	*02/28/11 14:49*	*03/03/11 18:02*	*1*
Phenol-d5	*53*		*25 - 130*	*02/28/11 14:49*	*03/03/11 18:02*	*1*
Terphenyl-d14	*42*		*10 - 143*	*02/28/11 14:49*	*03/03/11 18:02*	*1*
2,4,6-Tribromophenol	*85*		*31 - 141*	*02/28/11 14:49*	*03/03/11 18:02*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	10	U H	10		ug/L		03/08/11 14:38	03/15/11 12:38	1
2,4-Dichlorophenol	10	U H	10		ug/L		03/08/11 14:38	03/15/11 12:38	1
Nitrobenzene	10	U H	10		ug/L		03/08/11 14:38	03/15/11 12:38	1
Pentachlorophenol	51	U H	51		ug/L		03/08/11 14:38	03/15/11 12:38	1
2,4,6-Trichlorophenol	10	U H	10		ug/L		03/08/11 14:38	03/15/11 12:38	1
1-Chloro-3-nitrobenzene	10	U H	10		ug/L		03/08/11 14:38	03/15/11 12:38	1
2-Nitrobiphenyl	10	U H	10		ug/L		03/08/11 14:38	03/15/11 12:38	1
3-Nitrobiphenyl	10	U H	10		ug/L		03/08/11 14:38	03/15/11 12:38	1
3,4-Dichloronitrobenzene	10	U H	10		ug/L		03/08/11 14:38	03/15/11 12:38	1
4-Nitrobiphenyl	10	U H	10		ug/L		03/08/11 14:38	03/15/11 12:38	1
2-chloronitrobenzene / 4-chloronitrobenzene	21	U H	21		ug/L		03/08/11 14:38	03/15/11 12:38	1
1-chloro-2,4-dinitrobenzene	10	U H	10		ug/L		03/08/11 14:38	03/15/11 12:38	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*69*		*38 - 130*	*03/08/11 14:38*	*03/15/11 12:38*	*1*
2-Fluorophenol	*54*		*25 - 130*	*03/08/11 14:38*	*03/15/11 12:38*	*1*
Nitrobenzene-d5	*62*		*39 - 130*	*03/08/11 14:38*	*03/15/11 12:38*	*1*
Phenol-d5	*56*		*25 - 130*	*03/08/11 14:38*	*03/15/11 12:38*	*1*
Terphenyl-d14	*56*		*10 - 143*	*03/08/11 14:38*	*03/15/11 12:38*	*1*
2,4,6-Tribromophenol	*79*		*31 - 141*	*03/08/11 14:38*	*03/15/11 12:38*	*1*

4/11/11

Client Sample ID: GM-58A-0211
Date Collected: 02/23/11 15:05
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:30	1
2,4-Dichlorophenol	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:30	1
Nitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:30	1
Pentachlorophenol	50	U	50		ug/L		02/28/11 14:49	03/03/11 18:30	1
2,4,6-Trichlorophenol	**63**		10		ug/L		02/28/11 14:49	03/03/11 18:30	1
1-Chloro-3-nitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:30	1
2-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:30	1
3-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:30	1
3,4-Dichloronitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:30	1
4-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:30	1
2-chloronitrobenzene / 4-chloronitrobenzene	**220**		20		ug/L		02/28/11 14:49	03/03/11 18:30	1
1-chloro-2,4-dinitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:30	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*51*		*38 - 130*	*02/28/11 14:49*	*03/03/11 18:30*	*1*
2-Fluorophenol	*40*		*25 - 130*	*02/28/11 14:49*	*03/03/11 18:30*	*1*
Nitrobenzene-d5	*42*		*39 - 130*	*02/28/11 14:49*	*03/03/11 18:30*	*1*
Phenol-d5	*38*		*25 - 130*	*02/28/11 14:49*	*03/03/11 18:30*	*1*
Terphenyl-d14	*49*		*10 - 143*	*02/28/11 14:49*	*03/03/11 18:30*	*1*
2,4,6-Tribromophenol	*67*		*31 - 141*	*02/28/11 14:49*	*03/03/11 18:30*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	9.5	U H	9.5		ug/L		03/08/11 14:38	03/15/11 13:06	1
2,4-Dichlorophenol	9.5	U H	9.5		ug/L		03/08/11 14:38	03/15/11 13:06	1
Nitrobenzene	9.5	U H	9.5		ug/L		03/08/11 14:38	03/15/11 13:06	1
Pentachlorophenol	48	U H	48		ug/L		03/08/11 14:38	03/15/11 13:06	1
2,4,6-Trichlorophenol	**91**	H	9.5		ug/L		03/08/11 14:38	03/15/11 13:06	1
1-Chloro-3-nitrobenzene	9.5	U H	9.5		ug/L		03/08/11 14:38	03/15/11 13:06	1
2-Nitrobiphenyl	9.5	U H	9.5		ug/L		03/08/11 14:38	03/15/11 13:06	1
3-Nitrobiphenyl	9.5	U H	9.5		ug/L		03/08/11 14:38	03/15/11 13:06	1
3,4-Dichloronitrobenzene	9.5	U H	9.5		ug/L		03/08/11 14:38	03/15/11 13:06	1
4-Nitrobiphenyl	9.5	U H	9.5		ug/L		03/08/11 14:38	03/15/11 13:06	1
2-chloronitrobenzene / 4-chloronitrobenzene	**290**	H	19		ug/L		03/08/11 14:38	03/15/11 13:06	1
1-chloro-2,4-dinitrobenzene	9.5	U H	9.5		ug/L		03/08/11 14:38	03/15/11 13:06	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*82*		*38 - 130*	*03/08/11 14:38*	*03/15/11 13:06*	*1*
2-Fluorophenol	*63*		*25 - 130*	*03/08/11 14:38*	*03/15/11 13:06*	*1*
Nitrobenzene-d5	*72*		*39 - 130*	*03/08/11 14:38*	*03/15/11 13:06*	*1*
Phenol-d5	*61*		*25 - 130*	*03/08/11 14:38*	*03/15/11 13:06*	*1*
Terphenyl-d14	*37*		*10 - 143*	*03/08/11 14:38*	*03/15/11 13:06*	*1*
2,4,6-Tribromophenol	*86*		*31 - 141*	*03/08/11 14:38*	*03/15/11 13:06*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	1.1	U	1.1		ug/L			03/02/11 17:47	1
Ethylene	1.0	U	1.0		ug/L			03/02/11 17:47	1
Methane	**6.1**		0.58		ug/L			03/02/11 17:47	1

4/11/11

Client: Solutia Inc.
Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

TestAmerica Job ID: 680-65900-1
SDG: KOM011

Client Sample ID: GM-58A-0211
Date Collected: 02/23/11 15:05
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	10	J	0.050		mg/L		03/02/11 12:50	03/07/11 19:53	1
Manganese	1.4		0.010		mg/L		03/02/11 12:50	03/07/11 19:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	60		1.0		mg/L			02/28/11 17:18	1
Nitrate as N	1.3		0.050		mg/L			02/24/11 16:50	1
Sulfate	110		25		mg/L			03/08/11 12:54	5
Total Organic Carbon	4.9		1.0		mg/L			03/03/11 16:54	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	510		5.0		mg/L			02/26/11 18:56	1
Carbon Dioxide, Free	39		5.0		mg/L			02/26/11 18:56	1

4/11/11

Client: Solutia Inc.
Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

TestAmerica Job ID: 680-65900-1
SDG: KOM011

Client Sample ID: GM-58A-0211-F(0.2)
Date Collected: 02/23/11 15:05
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-5
Matrix: Water

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	0.091	J	0.050		mg/L		03/02/11 12:50	03/07/11 20:05	1
Manganese, Dissolved	1.4		0.010		mg/L		03/02/11 12:50	03/07/11 20:05	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	4.3		1.0		mg/L			03/04/11 03:53	1

TestAmerica Savannah

4/11/11

Client Sample ID: GM-58A-0211-EB
Date Collected: 02/23/11 15:05
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:58	1
2,4-Dichlorophenol	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:58	1
Nitrobenzene	10	U *	10		ug/L		02/28/11 14:49	03/03/11 18:58	1
Pentachlorophenol	52	U	52		ug/L		02/28/11 14:49	03/03/11 18:58	1
2,4,6-Trichlorophenol	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:58	1
1-Chloro-3-nitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:58	1
2-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:58	1
3-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:58	1
3,4-Dichloronitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:58	1
4-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:58	1
2-chloronitrobenzene / 4-chloronitrobenzene	21	U	21		ug/L		02/28/11 14:49	03/03/11 18:58	1
1-chloro-2,4-dinitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 18:58	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*71*		*38 - 130*	*02/28/11 14:49*	*03/03/11 18:58*	*1*
2-Fluorophenol	*46*		*25 - 130*	*02/28/11 14:49*	*03/03/11 18:58*	*1*
Nitrobenzene-d5	*54*		*39 - 130*	*02/28/11 14:49*	*03/03/11 18:58*	*1*
Phenol-d5	*46*		*25 - 130*	*02/28/11 14:49*	*03/03/11 18:58*	*1*
Terphenyl-d14	*86*		*10 - 143*	*02/28/11 14:49*	*03/03/11 18:58*	*1*
2,4,6-Tribromophenol	*89*		*31 - 141*	*02/28/11 14:49*	*03/03/11 18:58*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	10	U H	10		ug/L		03/08/11 14:38	03/15/11 13:34	1
2,4-Dichlorophenol	10	U H	10		ug/L		03/08/11 14:38	03/15/11 13:34	1
Nitrobenzene	10	U H	10		ug/L		03/08/11 14:38	03/15/11 13:34	1
Pentachlorophenol	51	U H	51		ug/L		03/08/11 14:38	03/15/11 13:34	1
2,4,6-Trichlorophenol	10	U H	10		ug/L		03/08/11 14:38	03/15/11 13:34	1
1-Chloro-3-nitrobenzene	10	U H	10		ug/L		03/08/11 14:38	03/15/11 13:34	1
2-Nitrobiphenyl	10	U H	10		ug/L		03/08/11 14:38	03/15/11 13:34	1
3-Nitrobiphenyl	10	U H	10		ug/L		03/08/11 14:38	03/15/11 13:34	1
3,4-Dichloronitrobenzene	10	U H	10		ug/L		03/08/11 14:38	03/15/11 13:34	1
4-Nitrobiphenyl	10	U H	10		ug/L		03/08/11 14:38	03/15/11 13:34	1
2-chloronitrobenzene / 4-chloronitrobenzene	20	U H	20		ug/L		03/08/11 14:38	03/15/11 13:34	1
1-chloro-2,4-dinitrobenzene	10	U H	10		ug/L		03/08/11 14:38	03/15/11 13:34	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*38 - 130*	*03/08/11 14:38*	*03/15/11 13:34*	*1*
2-Fluorophenol	*62*		*25 - 130*	*03/08/11 14:38*	*03/15/11 13:34*	*1*
Nitrobenzene-d5	*65*		*39 - 130*	*03/08/11 14:38*	*03/15/11 13:34*	*1*
Phenol-d5	*60*		*25 - 130*	*03/08/11 14:38*	*03/15/11 13:34*	*1*
Terphenyl-d14	*97*		*10 - 143*	*03/08/11 14:38*	*03/15/11 13:34*	*1*
2,4,6-Tribromophenol	*88*		*31 - 141*	*03/08/11 14:38*	*03/15/11 13:34*	*1*

AC
4/11/11

Surrogate Summary

Client: Solutia Inc.
Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

TestAmerica Job ID: 680-65900-1
SDG: KOM011

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPH	TBP
Lab Sample ID	Client Sample ID	(38-130)	(25-130)	(39-130)	(25-130)	(10-143)	(31-141)
680-65900-1	GM-31A-0211	69	58	61	57	52	85
680-65900-1 - RE	GM-31A-0211	73	60	64	58	52	81
680-65900-3	GM-31A-0211-AD	67	55	59	53	42	85
680-65900-3 - RE	GM-31A-0211-AD	69	54	62	56	56	79
680-65900-4	GM-58A-0211	51	40	42	38	49	67
680-65900-4 - RE	GM-58A-0211	82	63	72	61	37	86
680-65900-4 MS	GM-58A-0211	45	41	46	41	64	63
680-65900-4 MS - RE	GM-58A-0211	83	67	71	67	66	91
680-65900-4 MS	GM-58A-0211	70	55	64	57	55	77
680-65900-4 MSD	GM-58A-0211	47	38	43	36	80	71
680-65900-4 MSD - RE	GM-58A-0211	79	66	70	65	56	89
680-65900-4 MSD	GM-58A-0211	52	48	52	48	63	64
680-65900-6	GM-58A-0211-EB	71	46	54	46	86	89
680-65900-6 - RE	GM-58A-0211-EB	78	62	65	60	97	88
LCS 680-195497/13-A	LCS 680-195497/13-A	57	40	47	41	84	84
LCS 680-195497/19-A	LCS 680-195497/19-A	53	53	55	48	86	67
LCS 680-196317/13-A	LCS 680-196317/13-A	85	73	71	71	97	89
LCSD 680-196317/14-A	LCSD 680-196317/14-A	82	69	74	67	95	89
MB 680-195497/12-A	MB 680-195497/12-A	68	56	57	51	95	87
MB 680-196317/12-A	MB 680-196317/12-A	84	70	74	69	98	88

Surrogate Legend

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

AG
4/11/11

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

Lab Sample ID: MB 680-195497/12-A
Matrix: Water
Analysis Batch: 196003

Client Sample ID: MB 680-195497/12-A
Prep Type: Total/NA
Prep Batch: 195497

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 15:42	1
2,4-Dichlorophenol	10	U	10		ug/L		02/28/11 14:49	03/03/11 15:42	1
Nitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 15:42	1
Pentachlorophenol	50	U	50		ug/L		02/28/11 14:49	03/03/11 15:42	1
2,4,6-Trichlorophenol	10	U	10		ug/L		02/28/11 14:49	03/03/11 15:42	1
1-Chloro-3-nitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 15:42	1
2-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 15:42	1
3-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 15:42	1
3,4-Dichloronitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 15:42	1
4-Nitrobiphenyl	10	U	10		ug/L		02/28/11 14:49	03/03/11 15:42	1
2-chloronitrobenzene / 4-chloronitrobenzene	20	U	20		ug/L		02/28/11 14:49	03/03/11 15:42	1
1-chloro-2,4-dinitrobenzene	10	U	10		ug/L		02/28/11 14:49	03/03/11 15:42	1

Surrogate	*MB % Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*68*		*38 - 130*	*02/28/11 14:49*	*03/03/11 15:42*	*1*
2-Fluorophenol	*56*		*25 - 130*	*02/28/11 14:49*	*03/03/11 15:42*	*1*
Nitrobenzene-d5	*57*		*39 - 130*	*02/28/11 14:49*	*03/03/11 15:42*	*1*
Phenol-d5	*51*		*25 - 130*	*02/28/11 14:49*	*03/03/11 15:42*	*1*
Terphenyl-d14	*95*		*10 - 143*	*02/28/11 14:49*	*03/03/11 15:42*	*1*
2,4,6-Tribromophenol	*87*		*31 - 141*	*02/28/11 14:49*	*03/03/11 15:42*	*1*

Lab Sample ID: LCS 680-195497/13-A
Matrix: Water
Analysis Batch: 196003

Client Sample ID: LCS 680-195497/13-A
Prep Type: Total/NA
Prep Batch: 195497

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
1,1'-Biphenyl	100	56.8		ug/L		57	54 - 130
2,4-Dichlorophenol	100	57.1		ug/L		57	54 - 130
Nitrobenzene	100	44.5	*	ug/L		44	56 - 130
Pentachlorophenol	100	83.2		ug/L		83	42 - 138
2,4,6-Trichlorophenol	100	61.0		ug/L		61	57 - 130

Surrogate	*LCS % Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*57*		*38 - 130*
2-Fluorophenol	*40*		*25 - 130*
Nitrobenzene-d5	*47*		*39 - 130*
Phenol-d5	*41*		*25 - 130*
Terphenyl-d14	*84*		*10 - 143*
2,4,6-Tribromophenol	*84*		*31 - 141*

Lab Sample ID: LCS 680-195497/19-A
Matrix: Water
Analysis Batch: 196003

Client Sample ID: LCS 680-195497/19-A
Prep Type: Total/NA
Prep Batch: 195497

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
1-Chloro-3-nitrobenzene	100	70.2		ug/L		70	10 - 130
2-Nitrobiphenyl	100	69.2		ug/L		69	10 - 130
3-Nitrobiphenyl	100	72.8		ug/L		73	10 - 130

AC
4/11/11

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

Lab Sample ID: LCS 680-195497/19-A
Matrix: Water
Analysis Batch: 196003

Client Sample ID: LCS 680-195497/19-A
Prep Type: Total/NA
Prep Batch: 195497

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
3,4-Dichloronitrobenzene	100	69.9		ug/L		70	10 - 130
4-Nitrobiphenyl	100	72.1		ug/L		72	10 - 130
2-chloronitrobenzene / 4-chloronitrobenzene	200	143		ug/L		71	10 - 130
1-chloro-2,4-dinitrobenzene	100	70.2		ug/L		70	10 - 130

Surrogate	*LCS % Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*53*		*38 - 130*
2-Fluorophenol	*53*		*25 - 130*
Nitrobenzene-d5	*55*		*39 - 130*
Phenol-d5	*48*		*25 - 130*
Terphenyl-d14	*86*		*10 - 143*
2,4,6-Tribromophenol	*67*		*31 - 141*

Lab Sample ID: 680-65900-4 MS
Matrix: Water
Analysis Batch: 196003

Client Sample ID: GM-58A-0211
Prep Type: Total/NA
Prep Batch: 195497

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
1-Chloro-3-nitrobenzene	10	U	100	64.9		ug/L		65	10 - 130
2-Nitrobiphenyl	10	U	100	72.4		ug/L		72	10 - 130
3-Nitrobiphenyl	10	U	100	66.7		ug/L		67	10 - 130
3,4-Dichloronitrobenzene	10	U	100	62.7		ug/L		63	10 - 130
4-Nitrobiphenyl	10	U	100	63.1		ug/L		63	10 - 130
2-chloronitrobenzene / 4-chloronitrobenzene	220		200	332		ug/L		110	10 - 130
1-chloro-2,4-dinitrobenzene	10	U	100	67.6		ug/L		68	10 - 130

Surrogate	*MS % Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*45*		*38 - 130*
2-Fluorophenol	*41*		*25 - 130*
Nitrobenzene-d5	*46*		*39 - 130*
Phenol-d5	*41*		*25 - 130*
Terphenyl-d14	*64*		*10 - 143*
2,4,6-Tribromophenol	*63*		*31 - 141*

Lab Sample ID: 680-65900-4 MS
Matrix: Water
Analysis Batch: 197304

Client Sample ID: GM-58A-0211
Prep Type: Total/NA
Prep Batch: 195497

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
1,1'-Biphenyl	10	U	100	71.5		ug/L		71	54 - 130
2,4-Dichlorophenol	10	U	100	75.7		ug/L		76	54 - 130
Nitrobenzene	10	U	100	74.0		ug/L		73	56 - 130
Pentachlorophenol	50	U	100	90.8		ug/L		91	42 - 138
2,4,6-Trichlorophenol	63		100	161	F	ug/L		146	57 - 130

Surrogate	*MS % Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*70*		*38 - 130*
2-Fluorophenol	*55*		*25 - 130*

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

Lab Sample ID: 680-65900-4 MS
Matrix: Water
Analysis Batch: 197304

Client Sample ID: GM-58A-0211
Prep Type: Total/NA
Prep Batch: 195497

Surrogate	MS % Recovery	MS Qualifier	Limits
Nitrobenzene-d5	64		39 - 130
Phenol-d5	57		25 - 130
Terphenyl-d14	55		10 - 143
2,4,6-Tribromophenol	77		31 - 141

Lab Sample ID: 680-65900-4 MSD
Matrix: Water
Analysis Batch: 196003

Client Sample ID: GM-58A-0211
Prep Type: Total/NA
Prep Batch: 195497

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
1-Chloro-3-nitrobenzene	10	U	100	63.7	F	ug/L		-28	10 - 130	2	50
2-Nitrobiphenyl	10	U	100	80.1		ug/L		80	10 - 130	10	50
3-Nitrobiphenyl	10	U	100	75.0		ug/L		75	10 - 130	12	50
3,4-Dichloronitrobenzene	10	U	100	64.1		ug/L		64	10 - 130	2	50
4-Nitrobiphenyl	10	U	100	71.1		ug/L		71	10 - 130	12	50
2-chloronitrobenzene / 4-chloronitrobenzene	220		200	348	F	ug/L		159	10 - 130	5	50
1-chloro-2,4-dinitrobenzene	10	U	100	70.9		ug/L		23	10 - 130	5	50

Surrogate	MSD % Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl	47		38 - 130
2-Fluorophenol	38		25 - 130
Nitrobenzene-d5	43		39 - 130
Phenol-d5	36		25 - 130
Terphenyl-d14	80		10 - 143
2,4,6-Tribromophenol	71		31 - 141

Lab Sample ID: 680-65900-4 MSD
Matrix: Water
Analysis Batch: 197304

Client Sample ID: GM-58A-0211
Prep Type: Total/NA
Prep Batch: 195497

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	10	U	100	49.8	F	ug/L		50	54 - 130	36	50
2,4-Dichlorophenol	10	U	100	55.3		ug/L		55	54 - 130	31	50
Nitrobenzene	10	U	100	56.3	F	ug/L		55	56 - 130	27	50
Pentachlorophenol	50	U	100	78.6		ug/L		79	42 - 138	14	50
2,4,6-Trichlorophenol	63		100	114		ug/L		99	57 - 130	34	50

Surrogate	MSD % Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl	52		38 - 130
2-Fluorophenol	48		25 - 130
Nitrobenzene-d5	52		39 - 130
Phenol-d5	48		25 - 130
Terphenyl-d14	63		10 - 143
2,4,6-Tribromophenol	64		31 - 141

4/11/11

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

Lab Sample ID: MB 680-196317/12-A
Matrix: Water
Analysis Batch: 197226

Client Sample ID: MB 680-196317/12-A
Prep Type: Total/NA
Prep Batch: 196317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	10	U	10		ug/L		03/08/11 14:38	03/15/11 10:45	1
2,4-Dichlorophenol	10	U	10		ug/L		03/08/11 14:38	03/15/11 10:45	1
Nitrobenzene	10	U	10		ug/L		03/08/11 14:38	03/15/11 10:45	1
Pentachlorophenol	50	U	50		ug/L		03/08/11 14:38	03/15/11 10:45	1
2,4,6-Trichlorophenol	10	U	10		ug/L		03/08/11 14:38	03/15/11 10:45	1
1-Chloro-3-nitrobenzene	10	U	10		ug/L		03/08/11 14:38	03/15/11 10:45	1
2-Nitrobiphenyl	10	U	10		ug/L		03/08/11 14:38	03/15/11 10:45	1
3-Nitrobiphenyl	10	U	10		ug/L		03/08/11 14:38	03/15/11 10:45	1
3,4-Dichloronitrobenzene	10	U	10		ug/L		03/08/11 14:38	03/15/11 10:45	1
4-Nitrobiphenyl	10	U	10		ug/L		03/08/11 14:38	03/15/11 10:45	1
2-chloronitrobenzene / 4-chloronitrobenzene	20	U	20		ug/L		03/08/11 14:38	03/15/11 10:45	1
1-chloro-2,4-dinitrobenzene	10	U	10		ug/L		03/08/11 14:38	03/15/11 10:45	1

Surrogate	*MB % Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*84*		*38 - 130*	*03/08/11 14:38*	*03/15/11 10:45*	*1*
2-Fluorophenol	*70*		*25 - 130*	*03/08/11 14:38*	*03/15/11 10:45*	*1*
Nitrobenzene-d5	*74*		*39 - 130*	*03/08/11 14:38*	*03/15/11 10:45*	*1*
Phenol-d5	*69*		*25 - 130*	*03/08/11 14:38*	*03/15/11 10:45*	*1*
Terphenyl-d14	*98*		*10 - 143*	*03/08/11 14:38*	*03/15/11 10:45*	*1*
2,4,6-Tribromophenol	*88*		*31 - 141*	*03/08/11 14:38*	*03/15/11 10:45*	*1*

Lab Sample ID: LCS 680-196317/13-A
Matrix: Water
Analysis Batch: 197226

Client Sample ID: LCS 680-196317/13-A
Prep Type: Total/NA
Prep Batch: 196317

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
1,1'-Biphenyl	100	86.7		ug/L		87	54 - 130
2,4-Dichlorophenol	100	80.8		ug/L		81	54 - 130
Nitrobenzene	100	70.7		ug/L		71	56 - 130
Pentachlorophenol	100	99.2		ug/L		99	42 - 138
2,4,6-Trichlorophenol	100	93.2		ug/L		93	57 - 130

Surrogate	*LCS % Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*85*		*38 - 130*
2-Fluorophenol	*73*		*25 - 130*
Nitrobenzene-d5	*71*		*39 - 130*
Phenol-d5	*71*		*25 - 130*
Terphenyl-d14	*97*		*10 - 143*
2,4,6-Tribromophenol	*89*		*31 - 141*

Lab Sample ID: LCSD 680-196317/14-A
Matrix: Water
Analysis Batch: 197226

Client Sample ID: LCSD 680-196317/14-A
Prep Type: Total/NA
Prep Batch: 196317

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	100	81.0		ug/L		81	54 - 130	7	50
2,4-Dichlorophenol	100	79.3		ug/L		79	54 - 130	2	50
Nitrobenzene	100	71.3		ug/L		71	56 - 130	1	50

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

Lab Sample ID: LCSD 680-196317/14-A
Matrix: Water
Analysis Batch: 197226

Client Sample ID: LCSD 680-196317/14-A
Prep Type: Total/NA
Prep Batch: 196317

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Pentachlorophenol			100	91.5		ug/L		91	42 - 138	8	50
2,4,6-Trichlorophenol			100	84.2		ug/L		84	57 - 130	10	50

Surrogate	*LCSD % Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*82*		*38 - 130*
2-Fluorophenol	*69*		*25 - 130*
Nitrobenzene-d5	*74*		*39 - 130*
Phenol-d5	*67*		*25 - 130*
Terphenyl-d14	*95*		*10 - 143*
2,4,6-Tribromophenol	*89*		*31 - 141*

Lab Sample ID: 680-65900-4 MS
Matrix: Water
Analysis Batch: 197226

Client Sample ID: GM-58A-0211
Prep Type: Total/NA
Prep Batch: 196317

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
1,1'-Biphenyl - RE	9.5	U H	94.5	81.0	H	ug/L		86	54 - 130
2,4-Dichlorophenol - RE	9.5	U H	94.5	77.5	H	ug/L		79	54 - 130
Nitrobenzene - RE	9.5	U H	94.5	75.2	H	ug/L		73	56 - 130
Pentachlorophenol - RE	48	U H	94.5	103	H	ug/L		99	42 - 138
2,4,6-Trichlorophenol - RE	91	H	94.5	182	H	ug/L		96	57 - 130

Surrogate	*MS % Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl - RE	*83*		*38 - 130*
2-Fluorophenol - RE	*67*		*25 - 130*
Nitrobenzene-d5 - RE	*71*		*39 - 130*
Phenol-d5 - RE	*67*		*25 - 130*
Terphenyl-d14 - RE	*66*		*10 - 143*
2,4,6-Tribromophenol - RE	*91*		*31 - 141*

Lab Sample ID: 680-65900-4 MSD
Matrix: Water
Analysis Batch: 197226

Client Sample ID: GM-58A-0211
Prep Type: Total/NA
Prep Batch: 196317

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl - RE	9.5	U H	94.3	76.3	H	ug/L		81	54 - 130	6	50
2,4-Dichlorophenol - RE	9.5	U H	94.3	76.6	H	ug/L		78	54 - 130	1	50
Nitrobenzene - RE	9.5	U H	94.3	75.1	H	ug/L		73	56 - 130	0	50
Pentachlorophenol - RE	48	U H	94.3	94.0	H	ug/L		90	42 - 138	9	50
2,4,6-Trichlorophenol - RE	91	H	94.3	168	H	ug/L		82	57 - 130	8	50

Surrogate	*MSD % Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl - RE	*79*		*38 - 130*
2-Fluorophenol - RE	*66*		*25 - 130*
Nitrobenzene-d5 - RE	*70*		*39 - 130*
Phenol-d5 - RE	*65*		*25 - 130*
Terphenyl-d14 - RE	*56*		*10 - 143*
2,4,6-Tribromophenol - RE	*89*		*31 - 141*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-195877/24
Matrix: Water
Analysis Batch: 195877

Client Sample ID: MB 680-195877/24
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	1.1	U	1.1		ug/L			03/02/11 12:42	1
Ethylene	1.0	U	1.0		ug/L			03/02/11 12:42	1
Methane	0.58	U	0.58		ug/L			03/02/11 12:42	1

Lab Sample ID: LCS 680-195877/22
Matrix: Water
Analysis Batch: 195877

Client Sample ID: LCS 680-195877/22
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Ethane	282	255		ug/L		90	75 - 125
Ethylene	271	240		ug/L		89	75 - 125
Methane	153	133		ug/L		87	75 - 125

Lab Sample ID: LCSD 680-195877/23
Matrix: Water
Analysis Batch: 195877

Client Sample ID: LCSD 680-195877/23
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Ethane	282	284		ug/L		101	75 - 125	11	30
Ethylene	271	266		ug/L		98	75 - 125	10	30
Methane	153	149		ug/L		97	75 - 125	11	30

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 680-195759/24-A
Matrix: Water
Analysis Batch: 196312

Client Sample ID: MB 680-195759/24-A
Prep Type: Total Recoverable
Prep Batch: 195759

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.050	U	0.050		mg/L		03/02/11 12:50	03/07/11 19:17	1
Iron, Dissolved	0.050	U	0.050		mg/L		03/02/11 12:50	03/07/11 19:17	1
Manganese	0.010	U	0.010		mg/L		03/02/11 12:50	03/07/11 19:17	1
Manganese, Dissolved	0.010	U	0.010		mg/L		03/02/11 12:50	03/07/11 19:17	1

Lab Sample ID: LCS 680-195759/23-A
Matrix: Water
Analysis Batch: 196312

Client Sample ID: LCS 680-195759/23-A
Prep Type: Total Recoverable
Prep Batch: 195759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Iron	1.00	1.01		mg/L		101	75 - 125
Iron, Dissolved	1.00	1.01		mg/L		101	75 - 125
Manganese	0.500	0.493		mg/L		99	75 - 125
Manganese, Dissolved	0.500	0.493		mg/L		99	75 - 125

4/11/11

Method: 310.1 - Alkalinity

Lab Sample ID: MB 680-195441/21
Matrix: Water
Analysis Batch: 195441

Client Sample ID: MB 680-195441/21
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0		mg/L			02/26/11 14:57	1
Carbon Dioxide, Free	5.0	U	5.0		mg/L			02/26/11 14:57	1

Lab Sample ID: MB 680-195441/45
Matrix: Water
Analysis Batch: 195441

Client Sample ID: MB 680-195441/45
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0		mg/L			02/26/11 16:54	1
Carbon Dioxide, Free	5.0	U	5.0		mg/L			02/26/11 16:54	1

Lab Sample ID: LCS 680-195441/46
Matrix: Water
Analysis Batch: 195441

Client Sample ID: LCS 680-195441/46
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Alkalinity	352	331		mg/L		94	80 - 120

Lab Sample ID: LCSD 680-195441/40
Matrix: Water
Analysis Batch: 195441

Client Sample ID: LCSD 680-195441/40
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Alkalinity	352	332		mg/L		94	80 - 120	2	30

Lab Sample ID: LCSD 680-195441/78
Matrix: Water
Analysis Batch: 195441

Client Sample ID: LCSD 680-195441/78
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Alkalinity	352	331		mg/L		94	80 - 120	0	30

Method: 325.2 - Chloride

Lab Sample ID: MB 680-195597/1
Matrix: Water
Analysis Batch: 195597

Client Sample ID: MB 680-195597/1
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0		mg/L			02/28/11 16:36	1

Lab Sample ID: LCS 680-195597/2
Matrix: Water
Analysis Batch: 195597

Client Sample ID: LCS 680-195597/2
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Chloride	50.0	50.5		mg/L		101	85 - 115

4/11/11

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-195454/1
Matrix: Water
Analysis Batch: 195454

Client Sample ID: MB 680-195454/1
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.050	U	0.050		mg/L			02/24/11 16:26	1
Nitrate Nitrite as N	0.050	U	0.050		mg/L			02/24/11 16:26	1
Nitrite as N	0.050	U	0.050		mg/L			02/24/11 16:26	1

Lab Sample ID: LCS 680-195454/2
Matrix: Water
Analysis Batch: 195454

Client Sample ID: LCS 680-195454/2
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Nitrate as N	0.500	0.511		mg/L		102	
Nitrate Nitrite as N	1.00	0.997		mg/L		100	90 - 110
Nitrite as N	0.500	0.487		mg/L		97	90 - 110

Method: 375.4 - Sulfate

Lab Sample ID: MB 680-196411/1
Matrix: Water
Analysis Batch: 196411

Client Sample ID: MB 680-196411/1
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	5.0	U	5.0		mg/L			03/08/11 10:18	1

Lab Sample ID: LCS 680-196411/2
Matrix: Water
Analysis Batch: 196411

Client Sample ID: LCS 680-196411/2
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Sulfate	20.0	21.8		mg/L		109	75 - 125

Method: 415.1 - TOC

Lab Sample ID: MB 680-196100/2
Matrix: Water
Analysis Batch: 196100

Client Sample ID: MB 680-196100/2
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0		mg/L			03/03/11 15:42	1

Lab Sample ID: LCS 680-196100/4
Matrix: Water
Analysis Batch: 196100

Client Sample ID: LCS 680-196100/4
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Total Organic Carbon	20.0	20.2		mg/L		101	80 - 120

Method: 415.1 - DOC (Continued)

Lab Sample ID: MB 680-196112/1
Matrix: Water
Analysis Batch: 196112

Client Sample ID: MB 680-196112/1
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	1.0	U	1.0		mg/L			03/04/11 03:53	1

Lab Sample ID: LCS 680-196112/2
Matrix: Water
Analysis Batch: 196112

Client Sample ID: LCS 680-196112/2
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Dissolved Organic Carbon	20.0	20.3		mg/L		102	80 - 120

Lab Sample ID: 680-65900-2 MS
Matrix: Water
Analysis Batch: 196112

Client Sample ID: GM-31A-0211-F(0.2)
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
Dissolved Organic Carbon	4.0		20.0	24.2		mg/L		101	80 - 120

Lab Sample ID: 680-65900-2 MSD
Matrix: Water
Analysis Batch: 196112

Client Sample ID: GM-31A-0211-F(0.2)
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Dissolved Organic Carbon	4.0		20.0	24.2		mg/L		101	80 - 120	0	20

GC/MS Semi VOA

Prep Batch: 195497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-65900-1	GM-31A-0211	Total/NA	Water	3520C	
MB 680-195497/12-A	MB 680-195497/12-A	Total/NA	Water	3520C	
LCS 680-195497/13-A	LCS 680-195497/13-A	Total/NA	Water	3520C	
680-65900-4 MS	GM-58A-0211	Total/NA	Water	3520C	
680-65900-4 MSD	GM-58A-0211	Total/NA	Water	3520C	
LCS 680-195497/19-A	LCS 680-195497/19-A	Total/NA	Water	3520C	
680-65900-3	GM-31A-0211-AD	Total/NA	Water	3520C	
680-65900-4 MS	GM-58A-0211	Total/NA	Water	3520C	
680-65900-4 MSD	GM-58A-0211	Total/NA	Water	3520C	
680-65900-4	GM-58A-0211	Total/NA	Water	3520C	
680-65900-6	GM-58A-0211-EB	Total/NA	Water	3520C	

Analysis Batch: 196003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-195497/19-A	LCS 680-195497/19-A	Total/NA	Water	8270C	195497
680-65900-1	GM-31A-0211	Total/NA	Water	8270C	195497
680-65900-3	GM-31A-0211-AD	Total/NA	Water	8270C	195497
680-65900-4	GM-58A-0211	Total/NA	Water	8270C	195497
680-65900-6	GM-58A-0211-EB	Total/NA	Water	8270C	195497
680-65900-4 MS	GM-58A-0211	Total/NA	Water	8270C	195497
680-65900-4 MSD	GM-58A-0211	Total/NA	Water	8270C	195497
MB 680-195497/12-A	MB 680-195497/12-A	Total/NA	Water	8270C	195497
LCS 680-195497/13-A	LCS 680-195497/13-A	Total/NA	Water	8270C	195497

Prep Batch: 196317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-65900-4 - RE	GM-58A-0211	Total/NA	Water	3520C	
680-65900-6 - RE	GM-58A-0211-EB	Total/NA	Water	3520C	
MB 680-196317/12-A	MB 680-196317/12-A	Total/NA	Water	3520C	
LCS 680-196317/13-A	LCS 680-196317/13-A	Total/NA	Water	3520C	
LCSD 680-196317/14-A	LCSD 680-196317/14-A	Total/NA	Water	3520C	
680-65900-4 MS - RE	GM-58A-0211	Total/NA	Water	3520C	
680-65900-4 MSD - RE	GM-58A-0211	Total/NA	Water	3520C	
680-65900-1 - RE	GM-31A-0211	Total/NA	Water	3520C	
680-65900-3 - RE	GM-31A-0211-AD	Total/NA	Water	3520C	

Analysis Batch: 197226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-196317/12-A	MB 680-196317/12-A	Total/NA	Water	8270C	196317
680-65900-3 - RE	GM-31A-0211-AD	Total/NA	Water	8270C	196317
680-65900-4 - RE	GM-58A-0211	Total/NA	Water	8270C	196317
680-65900-4 MS - RE	GM-58A-0211	Total/NA	Water	8270C	196317
680-65900-4 MSD - RE	GM-58A-0211	Total/NA	Water	8270C	196317
LCS 680-196317/13-A	LCS 680-196317/13-A	Total/NA	Water	8270C	196317
LCSD 680-196317/14-A	LCSD 680-196317/14-A	Total/NA	Water	8270C	196317
680-65900-6 - RE	GM-58A-0211-EB	Total/NA	Water	8270C	196317
680-65900-1 - RE	GM-31A-0211	Total/NA	Water	8270C	196317

Analysis Batch: 197304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-65900-4 MS	GM-58A-0211	Total/NA	Water	8270C	195497
680-65900-4 MSD	GM-58A-0211	Total/NA	Water	8270C	195497

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4/11/11

GC VOA

Analysis Batch: 195877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-65900-1	GM-31A-0211	Total/NA	Water	RSK-175	
680-65900-4	GM-58A-0211	Total/NA	Water	RSK-175	
LCS 680-195877/22	LCS 680-195877/22	Total/NA	Water	RSK-175	
LCSD 680-195877/23	LCSD 680-195877/23	Total/NA	Water	RSK-175	
MB 680-195877/24	MB 680-195877/24	Total/NA	Water	RSK-175	

Metals

Prep Batch: 195759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-65900-1	GM-31A-0211	Total Recoverable	Water	3005A	
LCS 680-195759/23-A	LCS 680-195759/23-A	Total Recoverable	Water	3005A	
MB 680-195759/24-A	MB 680-195759/24-A	Total Recoverable	Water	3005A	
680-65900-2	GM-31A-0211-F(0.2)	Dissolved	Water	3005A	
680-65900-4	GM-58A-0211	Total Recoverable	Water	3005A	
680-65900-5	GM-58A-0211-F(0.2)	Dissolved	Water	3005A	

Analysis Batch: 196312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-195759/24-A	MB 680-195759/24-A	Total Recoverable	Water	6010B	195759
LCS 680-195759/23-A	LCS 680-195759/23-A	Total Recoverable	Water	6010B	195759
680-65900-1	GM-31A-0211	Total Recoverable	Water	6010B	195759
680-65900-2	GM-31A-0211-F(0.2)	Dissolved	Water	6010B	195759
680-65900-4	GM-58A-0211	Total Recoverable	Water	6010B	195759
680-65900-5	GM-58A-0211-F(0.2)	Dissolved	Water	6010B	195759

General Chemistry

Analysis Batch: 195441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-195441/21	MB 680-195441/21	Total/NA	Water	310.1	
LCSD 680-195441/40	LCSD 680-195441/40	Total/NA	Water	310.1	
MB 680-195441/45	MB 680-195441/45	Total/NA	Water	310.1	
LCS 680-195441/46	LCS 680-195441/46	Total/NA	Water	310.1	
680-65900-4	GM-58A-0211	Total/NA	Water	310.1	
LCSD 680-195441/78	LCSD 680-195441/78	Total/NA	Water	310.1	

Analysis Batch: 195451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-65900-1	GM-31A-0211	Total/NA	Water	310.1	

Analysis Batch: 195454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-195454/1	MB 680-195454/1	Total/NA	Water	353.2	-
680-65900-1	GM-31A-0211	Total/NA	Water	353.2	
680-65900-4	GM-58A-0211	Total/NA	Water	353.2	
LCS 680-195454/2	LCS 680-195454/2	Total/NA	Water	353.2	

Analysis Batch: 195597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-195597/1	MB 680-195597/1	Total/NA	Water	325.2	
680-65900-1	GM-31A-0211	Total/NA	Water	325.2	

General Chemistry (Continued)

Analysis Batch: 195597 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-65900-4	GM-58A-0211	Total/NA	Water	325.2	
LCS 680-195597/2	LCS 680-195597/2	Total/NA	Water	325.2	

Analysis Batch: 196100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-196100/2	MB 680-196100/2	Total/NA	Water	415.1	
LCS 680-196100/4	LCS 680-196100/4	Total/NA	Water	415.1	
680-65900-1	GM-31A-0211	Total/NA	Water	415.1	
680-65900-4	GM-58A-0211	Total/NA	Water	415.1	

Analysis Batch: 196112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-196112/1	MB 680-196112/1	Dissolved	Water	415.1	
LCS 680-196112/2	LCS 680-196112/2	Dissolved	Water	415.1	
680-65900-5	GM-58A-0211-F(0.2)	Dissolved	Water	415.1	
680-65900-2	GM-31A-0211-F(0.2)	Dissolved	Water	415.1	
680-65900-2 MS	GM-31A-0211-F(0.2)	Dissolved	Water	415.1	
680-65900-2 MSD	GM-31A-0211-F(0.2)	Dissolved	Water	415.1	

Analysis Batch: 196411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-196411/1	MB 680-196411/1	Total/NA	Water	375.4	
680-65900-1	GM-31A-0211	Total/NA	Water	375.4	
680-65900-4	GM-58A-0211	Total/NA	Water	375.4	
LCS 680-196411/2	LCS 680-196411/2	Total/NA	Water	375.4	

4/11/11

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

TestAmerica Job ID: 680-65900-1
SDG: KOM011

Client Sample ID: GM-31A-0211

Date Collected: 02/23/11 13:30
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			195497	02/28/11 14:49	RBS	TestAmerica Savannah
Total/NA	Analysis	8270C		1	196003	03/03/11 17:34	LH	TestAmerica Savannah
Total/NA	Prep	3520C	RE		196317	03/08/11 14:38	RBS	TestAmerica Savannah
Total/NA	Analysis	8270C	RE	1	197226	03/15/11 12:10	LH	TestAmerica Savannah
Total/NA	Analysis	RSK-175		1	195877	03/02/11 17:34	AJM	TestAmerica Savannah
Total Recoverable	Prep	3005A			195759	03/02/11 12:50	JPH	TestAmerica Savannah
Total Recoverable	Analysis	6010B		1	196312	03/07/11 19:37	BCB	TestAmerica Savannah
Total/NA	Analysis	310.1		1	195451	02/27/11 12:59	TR	TestAmerica Savannah
Total/NA	Analysis	353.2		1	195454	02/24/11 16:49	JR	TestAmerica Savannah
Total/NA	Analysis	325.2		1	195597	02/28/11 17:18	JR	TestAmerica Savannah
Total/NA	Analysis	415.1		1	196100	03/03/11 16:40	KB	TestAmerica Savannah
Total/NA	Analysis	375.4		5	196411	03/08/11 12:54	JR	TestAmerica Savannah

Client Sample ID: GM-31A-0211-F(0.2)

Date Collected: 02/23/11 13:30
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			195759	03/02/11 12:50	JPH	TestAmerica Savannah
Dissolved	Analysis	6010B		1	196312	03/07/11 19:41	BCB	TestAmerica Savannah
Dissolved	Analysis	415.1		1	196112	03/04/11 03:53	KB	TestAmerica Savannah

Client Sample ID: GM-31A-0211-AD

Date Collected: 02/23/11 13:30
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			195497	02/28/11 14:49	RBS	TestAmerica Savannah
Total/NA	Analysis	8270C		1	196003	03/03/11 18:02	LH	TestAmerica Savannah
Total/NA	Prep	3520C	RE		196317	03/08/11 14:38	RBS	TestAmerica Savannah
Total/NA	Analysis	8270C	RE	1	197226	03/15/11 12:38	LH	TestAmerica Savannah

Client Sample ID: GM-58A-0211

Date Collected: 02/23/11 15:05
Date Received: 02/24/11 09:23

Lab Sample ID: 680-65900-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			195497	02/28/11 14:49	RBS	TestAmerica Savannah
Total/NA	Analysis	8270C		1	196003	03/03/11 18:30	LH	TestAmerica Savannah
Total/NA	Prep	3520C	RE		196317	03/08/11 14:38	RBS	TestAmerica Savannah
Total/NA	Analysis	8270C	RE	1	197226	03/15/11 13:06	LH	TestAmerica Savannah
Total/NA	Analysis	RSK-175		1	195877	03/02/11 17:47	AJM	TestAmerica Savannah
Total Recoverable	Prep	3005A			195759	03/02/11 12:50	JPH	TestAmerica Savannah
Total Recoverable	Analysis	6010B		1	196312	03/07/11 19:53	BCB	TestAmerica Savannah

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4/11/11

Lab Chronicle

Client: Solutia Inc.
Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

TestAmerica Job ID: 680-65900-1
SDG: KOM011

Client Sample ID: GM-58A-0211

Lab Sample ID: 680-65900-4

Date Collected: 02/23/11 15:05
Date Received: 02/24/11 09:23

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	310.1		1	195441	02/26/11 18:56	TR	TestAmerica Savannah
Total/NA	Analysis	353.2		1	195454	02/24/11 16:50	JR	TestAmerica Savannah
Total/NA	Analysis	325.2		1	195597	02/28/11 17:18	JR	TestAmerica Savannah
Total/NA	Analysis	415.1		1	196100	03/03/11 16:54	KB	TestAmerica Savannah
Total/NA	Analysis	375.4		5	196411	03/08/11 12:54	JR	TestAmerica Savannah

Client Sample ID: GM-58A-0211-F(0.2)

Lab Sample ID: 680-65900-5

Date Collected: 02/23/11 15:05
Date Received: 02/24/11 09:23

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			195759	03/02/11 12:50	JPH	TestAmerica Savannah
Dissolved	Analysis	6010B		1	196312	03/07/11 20:05	BCB	TestAmerica Savannah
Dissolved	Analysis	415.1		1	196112	03/04/11 03:53	KB	TestAmerica Savannah

Client Sample ID: GM-58A-0211-EB

Lab Sample ID: 680-65900-6

Date Collected: 02/23/11 15:05
Date Received: 02/24/11 09:23

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			195497	02/28/11 14:49	RBS	TestAmerica Savannah
Total/NA	Analysis	8270C		1	196003	03/03/11 18:58	LH	TestAmerica Savannah
Total/NA	Prep	3520C	RE		196317	03/08/11 14:38	RBS	TestAmerica Savannah
Total/NA	Analysis	8270C	RE	1	197226	03/15/11 13:34	LH	TestAmerica Savannah

TestAmerica Savannah

4/11/11

Serial Number 038173

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

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

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE: WGK - Drum site - 1Q11	PROJECT NO.: Drum site	PROJECT LOCATION (STATE): IL
TAL (LAB) PROJECT MANAGER: Gm Rinaldi	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Gm Rinaldi	CLIENT PHONE: 314-674-3312	CLIENT FAX: 314-674-8808
CLIENT NAME: Solutia, Inc	CLIENT E-MAIL: gmrina@solutia.com	
CLIENT ADDRESS: 575 Maryville Center Dr, St. Louis, MO 63141		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY: X
DATE DUE:

EXPEDITED REPORT DELIVERY (SURCHARGE): O
DATE DUE:

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS / NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	SVOC 8270 (none)	Total Fe/mn 6010B (HNO3)	Alka/Co2 310.1 (none)	Chloride 325.2 Sulfate 375.4 (none)	Methane Ethane Ethene RSK 175 (none)	Nitrate 353.2 (none)	TOC 415.1 (none)	Diss Fe/mn 6010B (none)	Diss DOC 415.1 (HCl)		REMARKS
2-23-11	1330	GM-31A-0211	6	X				2	1	1	1	3	1	1				
	1330	GM-31A-0211-F(0.2)	6	X											1	1		Filtered
	1330	GM-31A-0211-AD	6	X				2										
	1505	GM-58A-0211	6	X				2	1	1	1	3	1	1				
	1505	GM-58A-0211-F(0.2)	6	X											1	1		Filtered
	1505	GM-58A-0211-MS	6	X				2										
	1505	GM-58A-0211-MSD	6	X				2										
	1505	GM-58A-0211-EB	6	X				2										

PRESERVATIVE

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2-23-11	16:40						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	2/24/11	0923	YES O NO O		680-65900	3.6/4.0/1.2/2.2

TAL 8240-680 (1008)

Ale 4/11/11

Login Sample Receipt Checklist

Client: Solutia Inc.

Job Number: 680-65900-1
SDG Number: KOM011

Login Number: 65900
List Number: 1
Creator: Conner, Keaton

List Source: TestAmerica Savannah

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	4 coolers rec'd on ice
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.6, 4.0, 1.2, 2.2 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
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	

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4/11/11

Certification Summary

Client: Solutia Inc.
Project/Site: WGK Route 3 Drum Site O&M - GW 1Q11

TestAmerica Job ID: 680-65900-1
SDG: KOM011

Laboratory	Authority	Program	EPA Region	Certification ID	* Expiration Date
TestAmerica Savannah		USDA		SAV 3-04	10/29/10
TestAmerica Savannah	A2LA	DoD ELAP	0	0399-01	03/31/11
TestAmerica Savannah	A2LA	ISO/IEC 17025	0	399.01	03/31/11
TestAmerica Savannah	Alabama	State Program	4	41450	06/30/11
TestAmerica Savannah	Arkansas	Arkansas DOH	6	N/A	06/30/10
TestAmerica Savannah	Arkansas	State Program	6	88-0692	02/01/12
TestAmerica Savannah	California	NELAC	9	3217CA	07/31/11
TestAmerica Savannah	Colorado	State Program	8	N/A	12/31/11
TestAmerica Savannah	Connecticut	State Program	1	PH-0161	03/31/11
TestAmerica Savannah	Delaware	State Program	3	N/A	06/30/11
TestAmerica Savannah	Florida	NELAC	4	E87052	06/30/11
TestAmerica Savannah	Georgia	Georgia EPD	4	N/A	06/30/11
TestAmerica Savannah	Georgia	State Program	4	803	06/30/11
TestAmerica Savannah	Guam	State Program	9	09-005r	04/17/11
TestAmerica Savannah	Hawaii	State Program	9	N/A	06/30/11
TestAmerica Savannah	Illinois	NELAC	5	200022	11/30/11
TestAmerica Savannah	Indiana	State Program	5	N/A	06/30/11
TestAmerica Savannah	Iowa	State Program	7	353	07/01/11
TestAmerica Savannah	Kansas	NELAC	7	E-10322	10/31/11
TestAmerica Savannah	Kentucky	Kentucky UST	4	18	11/17/11
TestAmerica Savannah	Kentucky	State Program	4	90084	12/31/11
TestAmerica Savannah	Louisiana	NELAC	6	30690	06/30/11
TestAmerica Savannah	Louisiana	NELAC	6	LA100015	12/31/11
TestAmerica Savannah	Maine	State Program	1	GA00006	08/16/12
TestAmerica Savannah	Maryland	State Program	3	250	12/31/11
TestAmerica Savannah	Massachusetts	State Program	1	M-GA006	06/30/11
TestAmerica Savannah	Michigan	State Program	5	9925	06/30/11
TestAmerica Savannah	Mississippi	State Program	4	N/A	06/30/10
TestAmerica Savannah	Montana	State Program	8	CERT0081	01/01/11
TestAmerica Savannah	Nebraska	State Program	7	TestAmerica-Savannah	06/30/11
TestAmerica Savannah	Nevada	State Program	9	GA6	07/31/11
TestAmerica Savannah	New Jersey	NELAC	2	GA769	06/30/11
TestAmerica Savannah	New Mexico	State Program	6	N/A	06/30/10
TestAmerica Savannah	New York	NELAC	2	10842	04/01/11
TestAmerica Savannah	North Carolina	North Carolina DENR	4	269	12/31/11
TestAmerica Savannah	North Carolina	North Carolina PHL	4	13701	07/31/11
TestAmerica Savannah	Oklahoma	State Program	6	9984	08/31/11
TestAmerica Savannah	Pennsylvania	NELAC	3	68-00474	06/30/11
TestAmerica Savannah	Puerto Rico	State Program	2	GA00006	01/01/12
TestAmerica Savannah	Rhode Island	State Program	1	LAO00244	12/30/11
TestAmerica Savannah	South Carolina	State Program	4	98001	06/30/11
TestAmerica Savannah	Tennessee	State Program	4	TN02961	12/31/11
TestAmerica Savannah	Texas	NELAC	6	T104704185-08-TX	11/30/11
TestAmerica Savannah	Vermont	State Program	1	87052	11/16/11
TestAmerica Savannah	Virginia	State Program	3	302	06/30/11
TestAmerica Savannah	Washington	State Program	10	C1794	06/10/11
TestAmerica Savannah	West Virginia	West Virginia DEP	3	94	06/30/11
TestAmerica Savannah	West Virginia	West Virginia DHHR (DW)	3	9950C	12/31/10
TestAmerica Savannah	Wisconsin	State Program	5	999819810	08/31/11
TestAmerica Savannah	Wyoming	State Program	8	8TMS-Q	06/30/11

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.
* Any expired certifications in this list are currently pending renewal and are considered valid.

AG
4/11/11

MJW CORPORATION
Radiation Consulting Professionals

April 21, 2011

Mr. Duane T. Kreuger
Geotechnology, Inc.
11816 Lackland Road Suite 150
St. Louis, MO 63146

Dear Mr. Kreuger:

The data reported by Test America Laboratories under SDG KOM011 has been reviewed for quality assurance validation. Data was reported for Volatiles (dissolved gases), Semi-Volatiles, ICP Metals (total and dissolved), Chloride, Nitrate, Sulfate, Organic Carbon (total and dissolved), Alkalinity, and Carbon Dioxide for 8 samples as requested by Geotechnology, Inc. The 8 samples listed below were validated by MJW. The samples in **bold type** have been validated for level IV validation. The data in this report has either been approved for use, or approved with qualification.

- **GM-31A-0211 (Lab ID: 680-65900-1)**
- **GM-31A-F(0.2)-0211 (Lab ID: 680-65900-2)**
- GM-31A-0211 AD (Lab ID: 680-65900-3 FD)
- **GM-58A-0211 (Lab ID: 680-65900-4)**
- GM-58A-0211-MS (Lab ID: 680-65900-4MS)
- GM-58A-0211-MSD (Lab ID: 680-65900-4MSD)
- **GM-58A-F(0.2)-1210 (Lab ID: 680-65900-5)**
- GM-58A-1210-EB (Lab ID: 680-65900-6EB)

If you have any questions concerning this data validation report, please contact me at 585-344-7197.

Very truly yours,

MJW Corporation Inc.

Annette Guilds, CES
Senior Scientist

Approved by:

David A. Dooley, Ph.D., CHP
President, MJW Corporation Inc.

University Park, 1900 Sweet Home Road
Amherst, NY 14228-3359
Voice: (716) 631.8291 Fax: (716) 631.5631 Toll Free: 1 (888) MJW.CORP www.mjwcorp.com

QUALITY ASSURANCE REPORT

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

1st Quarter 2011 Data Validation Report
Illinois Route 3 Drum Site
SDG: KOM011

Prepared for

GEOTECHNOLOGY, INC.
11816 Lackland Road, Suite 150
St. Louis, MO 63146

April 2011

MJW

MJW Corporation, Inc.
1900 Sweet Home Road
Amherst, NY 14228
(716)-631-8291
Project # 2010-1918

DATA ASSESSMENT NARRATIVE
(ORGANICS)

ORGANIC DATA ASSESSMENT

Functional Guidelines for Evaluating Organic Analysis

CASE NO.: _____ SDG NO.: KOM011 _____ LABORATORY: Test America _____
SITE: Solutia W.G. Krummrich Plant (Drum Site) _____

DATA ASSESSMENT

The current SOP No. HW-6 (Revision 11), June 1996 for CLP Organics Review and Preliminary Review has been applied.

All data were found to be valid and acceptable except those analytes that have been rejected, "R" (unusable). Due to various QC problems some analytes may have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material), "U" (non-detect), or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Data is fully usable and acceptable.

.

Reviewer's Signature: _____ Date: 4/21/2011

MJW Approval: _____ Date: 4/21/2011

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

No action necessary.

2. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

No action necessary.

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

No action necessary.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

No action necessary.

B) Field or rinse blank contamination:

No action necessary.

C) Trip blank contamination:

No action necessary.

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene and for semi-volatiles Decafluorotriphenyl-phosphine (DFTPP).

If the mass calibration is in error, all associated data will be classified as unusable "R".

No action necessary.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be ≥ 0.05 in both initial and continuing calibrations. A value < 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

No action necessary.

7. CALIBRATION:

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 30% and %D must be < 25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R".

For the PEST/PCB fraction, if %RSD exceeds 20% for all analytes except for the two surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

No action necessary.

8. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction.

No action necessary.

9. COMPOUND IDENTIFICATION:

A) Volatile and Semi-Volatile Fractions:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

No action necessary.

B) Pesticide Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

N/A

10. CONTRACT PROBLEMS NON-COMPLIANCE: **None**

11. FIELD DOCUMENTATION: **A field duplicate was analyzed for sample GM-31A-1210. The RPD was 53.3% for 2,4,6-Trichlorophenol and 1.0% for 2-Nitrobiphenyl. All other analytes were non-detect and therefore were not evaluated.**

12. OTHER PROBLEMS: **None**

13. This package contains reextractions, reanalyses or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified to be used.

None

DATA ASSESSMENT NARRATIVE
(INORGANICS)

INORGANIC DATA ASSESSMENT NARRATIVE

Site: Solutia W.G. Krummich Plant (Drum Site) **Matrix:** Soil

SDG# KOM011 **Lab** Test America **Water** X

Contractor Geotechnology Inc. **Reviewer** Annette Guilds-MJW **Other**

A.2.1 Validation **Flags-** The following flags have been applied in red by the data validator and must be considered by the data user.

J- This flag indicates the result qualified as **estimated**

Red- Line- A red line drawn through a sample result indicates **unusable** value. The red lined data are known to contain significant errors based on documented information and must not be used by the data user.

Fully Usable Data- The results that do not carry "J" or "red-line" are fully **usable**.

Contractual Qualifiers- The legend of contractual qualifiers applied by the lab on Form I's is found on page B-20 of SOW ILM01.0.

A.2.2 The data assessment is given below.

- **Data is fully usable with the exception of Iron (Total and Dissolved), which has been estimated "J" for samples GM-31A-0211, GM-31A-0211-F(0.2), GM-58A-0211, and GM-58A-0211-F(0.2) due to out of control limits for the matrix spike.**

The following bulleted items summarize additional comments where data has not been qualified but it is recommended that additional communication with the laboratory be conducted to further assess the data.

- No CCV/CCB data provided on Form II for Alkalinity and Carbon Dioxide. Communication with the laboratory clarified that CCV's/CCB's are not analyzed for Alkalinity and Carbon Dioxide. These analyses are checked for quality with LCS/LCSD. Thus Form II was prepared in error and pages 613 and 614 should be ignored or eliminated. On Form XIII (Analysis Run Log) pages 633-635 the entries for CCV and CCB should also be ignored or eliminated.

- Page 44 has the wrong method blank listed and page 45 is missing an LCS/LCSD for Alkalinity/Carbon Dioxide. Refer to pages 616, 619, and 620 for the correct values.

A.2.3 Contract-Problem/Non-Compliance

- Matrix Spike was out of control for Iron but the laboratory did not report this in the case narrative nor did they flag the sample results (Form I's). Only the matrix spike results were flagged (Form V).

Data Reviewer: Annette Guilds Date: 4/21/2011
Signature

MJW Approval: David A. Cooley Date: 4/21/2011
Signature

Summary Data Qualifiers

Summary of Sample Data Qualifiers

SDG # KOM011 Site Name Solutia W.G. Krummrich Plant (Drum Site)

Client ID	Lab ID	Matrix	Fe			
GM-31A-0211	680-65900-1	Water	J			
GM-31A-0211-F(0.2)	680-65900-2	Water	J			
GM-31A-0211-AD	680-65900-3FD	Water				
GM-58A-0211	680-65900-4	Water	J			
GM-58A-0211-F(0.2)	680-65900-5	Water	J			
GM-58A-1210-EB	680-65900-6EB	Water				

Data Outlier Forms

Matrix Spike Recovery

Samples Affected	Matrix	Analyte	Percent Recovery	Control Limits	Qualifier
GM-58A-0211	Water	Iron	50.0%	75-125%	J
GM-58A-0211-F(0.2)	Water	Iron	50.0%	75-125%	J
GM-31A-0211	Water	Iron	50.0%	75-125%	J
GM-31A-0211-F(0.2)	Water	Iron	50.0%	75-125%	J

Data Package: KOM011

Date: 4/21/11

Total and Dissolved Analyses

Sample	Analyte	Total Amt (mg/L)	Dissolved Amt (mg/L)	Qualifier
GM-31A-0211	Iron	6.90	0.05	none
GM-31A-0211	Manganese	0.910	0.79	none
GM-58A-0211	Iron	10.00	0.09	none
GM-58A-0211	Manganese	1.400	1.40	none
GM-31A-0211	Organic Carbon	3.70	4.0	none
GM-58A-0211	Organic Carbon	4.900	4.3	none

Data Package: KOM011

Date: 4/21/11

CERTIFICATES OF ANALYSIS (COA's)

with Data Validation Qualifiers Added

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: GM-31A-0211 Lab Sample ID: 680-65900-1

Lab Name: TestAmerica Savannah Job No.: 680-65900-1

SDG ID.: KOM011

Matrix: Water Date Sampled: 02/23/2011 13:30

Reporting Basis: WET Date Received: 02/24/2011 09:23

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	6.9	0.050	0.024	mg/L		J	1	6010B
7439-96-5	Manganese	0.91	0.010	0.0030	mg/L			1	6010B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GM-31A-0211-F(0.2) Lab Sample ID: 680-65900-2

Lab Name: TestAmerica Savannah Job No.: 680-65900-1

SDG ID.: KOM011

Matrix: Water Date Sampled: 02/23/2011 13:30

Reporting Basis: WET Date Received: 02/24/2011 09:23

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron, Dissolved	0.050	0.050	0.024	mg/L	U	J	1	6010B
7439-96-5	Manganese, Dissolved	0.79	0.010	0.0030	mg/L			1	6010B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: GM-58A-0211 Lab Sample ID: 680-65900-4

Lab Name: TestAmerica Savannah Job No.: 680-65900-1

SDG ID.: KOM011

Matrix: Water Date Sampled: 02/23/2011 15:05

Reporting Basis: WET Date Received: 02/24/2011 09:23

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	10	0.050	0.024	mg/L		J	1	6010B
7439-96-5	Manganese	1.4	0.010	0.0030	mg/L			1	6010B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GM-58A-0211-F(0.2) Lab Sample ID: 680-65900-5

Lab Name: TestAmerica Savannah Job No.: 680-65900-1

SDG ID.: KOM011

Matrix: Water Date Sampled: 02/23/2011 15:05

Reporting Basis: WET Date Received: 02/24/2011 09:23

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron, Dissolved	0.091	0.050	0.024	mg/L		J	1	6010B
7439-96-5	Manganese, Dissolved	1.4	0.010	0.0030	mg/L			1	6010B