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March 15, 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: PCB Groundwater Quality Assessment Program
4th Quarter 2010 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

Dear Mr. Bardo:

Enclosed please find the PCB Groundwater Quality Assessment Program 4th Quarter 2010 Data Report for Solutia Inc.'s W. G. Krummrich Plant, Sauget, IL.

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

Sincerely,

Gerald M. Rinaldi
Manager, Remediation Services

Enclosure

cc: Distribution List

DISTRIBUTION LIST

PCB Groundwater Quality Assessment Program
4th Quarter 2010 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

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FOURTH QUARTER 2010
DATA REPORT
PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM
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. J017210.07

March 15, 2011

J017210.07

FOURTH QUARTER 2010
DATA REPORT
PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM
SOLUTIA INC.
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

TABLE OF CONTENTS

		Page
1.0	INTRODUCTION	1
2.0	FIELD PROCEDURES	2
3.0	LABORATORY PROCEDURES	3
4.0	QUALITY ASSURANCE	3
5.0	OBSERVATIONS	4
6.0	REFERENCES	5

TABLES

	Table
Monitoring Well Gauging Information	1
Groundwater Analytical Detections	2
Monitoring Well PMA MW-1M Mann-Kendall Trend Analysis	3
Monitoring Well PMA MW-2M Mann-Kendall Trend Analysis	4
Monitoring Well PMA MW-3S Mann-Kendall Trend Analysis	5
Monitoring Well PMA MW-3M Mann-Kendall Trend Analysis	6
Monitoring Well PMA MW-4D Mann-Kendall Trend Analysis	7
Monitoring Well PMA MW-6D Mann-Kendall Trend Analysis	8

ILLUSTRATIONS

	Figure
Site Location and Topography	1
Former PCB Manufacturing Area Monitoring Well Locations	2
Potentiometric Surface Map – Middle / Deep Hydrogeologic Unit	3
PCB Results – SHU Wells	4
PCB Results – MHU / DHU Wells	5

J017210.07

FOURTH QUARTER 2010
DATA REPORT
PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM
SOLUTIA INC.
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

TABLE OF CONTENTS
-continued-

APPENDICES

Appendix

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

J017210.07

FOURTH QUARTER 2010
DATA REPORT
PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM
SOLUTIA INC.
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

1.0 INTRODUCTION

This report presents the results of the 4th Quarter 2010 (4Q10) sampling event performed at the Solutia Inc. (Solutia) W.G. Krummrich Facility located in Sauget, Illinois (Site). This sampling event was conducted in accordance with the Revised PCB Groundwater Quality Assessment Program Work Plan (Solutia 2009). The Site location map is presented in Figure 1.

The PCB Groundwater Quality Assessment Program well network consists of ten monitoring wells, as follows (Figure 2):

- Two source area wells, PMA-MW-4S and PMA-MW-4D, are screened in the Shallow Hydrogeologic Unit (SHU) (designated with an "S") and Deep Hydrogeologic Unit (DHU) (designated with a "D"), respectively.

- Three well clusters (PMA-MW-1S/M, PMA-MW-2S/M and PMA-MW-3S/M) are located down-gradient of the source area. These clusters include wells screened in the SHU and Middle Hydrogeologic Unit (MHU) (designated with an "M").

- Two individual wells designated PMA-MW-5M and PMA-MW-6D are located further down-gradient of the source area, with PMA-MW-5M screened in the MHU and PMA-MW-6D screened in the DHU.

Groundwater samples were collected from the ten monitoring wells during the 4Q10 sampling event.

Field sampling activities were conducted in accordance with the procedures outlined in the Revised PCB Groundwater Quality Assessment Program Work Plan, including the collection of appropriate quality assurance and quality control (QA/QC) samples. The following section summarizes the field investigative procedures.

2.0 FIELD PROCEDURES

Geotechnology, Inc. (Geotechnology) conducted the 4Q10 PCB Groundwater Quality Assessment Program field activities between December 9 and 14, 2010.

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) in the PCB Groundwater Quality Assessment Program well network. Periodically, well PMA-MW-4S has contained measurable DNAPL, however none was observed in this well during the fourth quarter sampling event. Depth to groundwater measurements were collected from accessible existing wells (i.e., GM-, K- , PSMW- and PMA-series) and piezometers clusters (installed for the Sauget Area 2 RI/FS and WGK CA-750 Environmental Indicator projects) specified in the Revised PCB Groundwater Quality Assessment Program Work Plan.

Well gauging information for the 4Q10 event is presented in Table 1. As the middle and deep hydrogeologic units are the primary migration pathway for constituents present in groundwater at the WGK Facility, a groundwater potentiometric surface map based on water level data from wells screened in the MHU and DHU is presented as Figure 3.

Groundwater Sampling. Low-flow sampling techniques were used for groundwater sample collection. At each monitoring well, disposable, low-density polyethylene tubing was attached to a submersible pump, which was then lowered into the well to the middle of the screened interval. Monitoring wells were purged at a rate of 200 to 250 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-thru 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-thru cell was bypassed to allow for collection of uncompromised groundwater. Consistent with the work plan, samples were collected at a flow rate less than or equal to the rate at which stabilization was achieved.

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%, complying with the work plan. All samples were submitted to TestAmerica for PCB analysis.

Each sample was labeled immediately following collection. The sample identification system used for each sample involved the following nomenclature "PMA-MW#-MMYY-QAC" where:

- PMA-MW# – Monitoring Well Location (PCB Manufacturing Area (PMA)) and Number
- MMYY – Month and year of sampling quarter, e.g.: December (fourth quarter), 2010 (1210)
- QAC – denotes QA/QC samples (when applicable):
  - EB – equipment blank
  - AD – analytical duplicate
  - MS or MSD – Matrix Spike or Matrix Spike Duplicate

Upon collection and labeling, sample containers were immediately placed inside an iced cooler, packed in such a way as to help prevent breakage and maintain inside temperature at or below approximately 4°C. Field personnel recorded the project identification and number, sample description/location, required analysis, date and time of sample collection, type and matrix of sample, number of sample containers, 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 (FedEx). 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 PCBs using Method 680.

4.0 QUALITY ASSURANCE

Analytical data were reviewed for quality and completeness, as described in the Revised PCB Groundwater Quality Assessment Work Plan (Solutia 2009). Data qualifiers were added, as appropriate, and are included on the data tables and the laboratory result pages. The Quality Assurance report is included as Appendix C. The laboratory report and data review sheets are included in Appendix D.

A total of 14 samples (ten investigative groundwater samples, one field duplicate pair, one MS/MSD, one equipment blank) were prepared and analyzed by TestAmerica for PCBs. Results for the various analyses were submitted as sample delivery group (SDG) KPM.

The samples contained in SDG KPM040 are listed below:

KPM040

PMA-MW-01M-1210
PMA-MW-01S-1210
PMA-MW-01S MS-1210
PMA-MW-01S MSD-1210
PMA-MW-02M-1210
PMA-MW-02M AD-1210
PMA-MW-02S-1210
PMA-NW-02S EB-1210
PMA-MW-3M-1210
PMA-MW-3S-1210
PMA-MW-04D-1210
PMA-MW-04S-1210
PMA-MW-5M-1210
PMA-MW-6D-1210

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 Revised PCB Groundwater Quality Assessment Work Plan (Solutia 2009). 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 (J) data was 100 percent.

5.0 OBSERVATIONS

This section presents a brief summary of the groundwater analytical results from the 4Q10 PCB Groundwater Quality Assessment sampling event. A summary of the laboratory results is provided in Table 2 and the entire laboratory data package is provided in Appendix D.

SHALLOW HYDROGEOLOGIC UNIT

Historically, measurable DNAPL has been periodically observed in the source area SHU monitoring well PMA-MW-4S during previous sampling events however, none was observed in this well during the fourth quarter sampling event. Laboratory analytical results for monitoring well PMA-MW-4S, located in the Former PCB Manufacturing Area, indicated a total PCB concentration of 20,670 µg/L for the 4Q10 event. PCBs were detected in two of the three down-gradient PCB Groundwater Quality Assessment Program SHU monitoring wells at total concentrations of 0.11 µg/L (PMA-MW-1S) and 0.68 µg/L (PMA-MW-3S). Such data do not indicate that PCBs in the SHU are attenuating over the 300 to 400 ft distance between PMA-MW-4S and the three downgradient monitoring wells. PCB sampling results for the SHU are presented on Figure 4.

MIDDLE/DEEP HYDROGEOLOGIC UNIT

Laboratory analytical results for monitoring well PMA-MW-4D, located in the Former PCB Manufacturing Area, indicated a total PCB concentration of 0.31 µg/L for the 4Q10 sampling event. PCBs were also detected in all five of the downgradient monitoring wells at concentrations of 0.31 µg/L (PMA-MW-1M), 2.1/2.0 µg/L (PMA-MW-2M/duplicate), 0.64 µg/L (PMA-MW-3M), 0.59 µg/L (PMA-MW-5M) and 0.65 µg/L (PMA-MW-6D). Figure 5 displays the 4Q10 PCB sampling results for the MHU/DHU.

The 4Q10 sampling event was the tenth event conducted under the PCB Groundwater Quality Assessment Program. Mann-Kendall trend analyses data forms of total PCBs in unfiltered samples of groundwater from monitoring wells within (PMA-MW-4D) or downgradient of (PMA-MW-1M, -2M, -3S, -3M, and -6D) the former PCB Manufacturing Area are presented in Appendix A. The data do not indicate upward trends in PCB concentrations in the wells.

6.0 REFERENCES

Solutia Inc, 2009. Revised PCB Groundwater Quality Assessment Program Work Plan, W.G. Krummrich Facility, Sauget, IL, Prepared by URS Corporation, May 2009.

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

See last page of table for notes.

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						November 2010		
	Ground Elevation* (feet)	Casing Elevation* (feet)	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Top of Screen Elevation* (feet)	Bottom of Screen Elevation* (feet)	Depth to Water (feet btoc)	Depth to Bottom (feet btoc)	Water Elevation* (feet)
Shallow Hydrogeologic Unit (SHU 395-380 feet NAVD 88)									
PMA-MW-1S	410.30	410.06	20.18	25.18	390.12	385.12	11.27	25.01	398.79
PMA-MW-2S	412.27	411.66	22.94	27.94	389.33	384.33	13.26	27.5	398.40
PMA-MW-3S	412.37	412.06	22.71	27.71	389.66	384.66	13.55	27.6	398.51
PMA-MW-4S	411.09	410.43	20.99	25.99	390.10	385.10	11.95	25.4	398.48
Middle Hydrogeologic Unit (MHU 380-350 feet NAVD 88)									
PMA-MW-1M	410.32	410.08	54.54	59.54	355.78	350.78	11.76	59.7	398.32
PMA-MW-2M	412.26	411.93	56.87	61.87	355.39	3.50.39	13.56	61.77	398.37
PMA-MW-3M	412.36	412.10	57.07	62.07	355.29	350.29	13.61	61.9	398.49
PMA-MW-4M	411.27	410.97	52.17	57.17	359.10	354.10	12.08	57.13	398.89
PMA-MW-1	409.37	412.59	37.78	42.78	371.59	366.59	13.57	46.26	399.02
Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock)									
BSA-MW-2D	412.00	415.13	68.92	73.92	343.08	338.08	18.22	77.3	396.91
BSA-MW-3D	412.91	415.74	107.02	112.02	305.89	300.89	20.33	116	395.41
BSA-MW-4D	425.00	424.69	118.54	123.54	306.46	301.46	30.70	123.75	393.99
BSA-MW-5D	420.80	420.49	115.85	120.85	304.95	299.95	26.00	122.45	394.49
CPA-MW-1D	408.62	408.32	66.12	71.12	342.50	337.50	10.00	71.3	398.32
CPA-MW-2D	408.51	408.20	96.96	104.96	308.55	303.55	10.70	105.3	397.50
CPA-MW-3D	410.87	410.67	108.20	113.20	302.67	297.67	13.15	114.45	397.52
CPA-MW-4D	421.57	421.20	116.44	121.44	305.13	300.13	26.60	122.4	394.60
CPA-MW-5D	411.03	413.15	107.63	112.63	303.40	298.40	20.95	114.75	392.20
DNAPL-K-1	413.07	415.56	108.20	123.20	304.87	289.87	16.67	124	398.89
DNAPL-K-2	407.94	407.72	97.63	112.63	310.31	295.31	9.21	112.42	398.51
DNAPL-K-3	412.13	411.91	104.80	119.80	307.33	292.33	12.80	120.4	399.11
DNAPL-K-4	409.48	409.15	102.55	117.55	306.93	291.93	11.24	115.31	397.91
DNAPL-K-5	412.27	411.91	102.15	117.15	310.12	295.12	13.45	117.54	398.46
DNAPL-K-6	410.43	410.09	102.47	117.47	307.96	292.96	11.71	118	398.38
DNAPL-K-7	408.32	407.72	100.40	115.40	307.92	292.92	9.53	116.32	398.19
DNAPL-K-8	408.56	411.38	102.65	117.65	305.91	290.91	13.54	117.8	397.84
DNAPL-K-9	406.45	405.97	97.42	112.42	309.03	294.03	7.58	111.15	398.39
DNAPL-K-10	413.50	413.25	105.43	120.43	308.07	293.07	14.45	121.5	398.80
DNAPL-K-11	412.20	411.78	105.46	120.46	306.74	291.74	13.57	121.5	398.21
GM-9C	409.54	411.21	88.00	108.00	321.54	301.54	12.88	110.9	398.33

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						November 2010		
	Ground Elevation* (feet)	Casing Elevation* (feet)	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Top of Screen Elevation* (feet)	Bottom of Screen Elevation* (feet)	Depth to Water (feet btoc)	Depth to Bottom (feet btoc)	Water Elevation* (feet)
Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock)									
GWE-1D (PIEZ-1D)	412.80	415.60	117.00	127.00	295.80	285.80	24.35	130.35	391.25
GWE-2D (PIEZ-2D)	417.45	417.14	127.00	137.00	290.45	280.45	24.22	137.55	392.92
GWE-4D (TRA3-PZADHU)	406.05	405.74	74.00	80.00	332.05	326.05	9.70	79.20	396.04
GWE-10D (PIEZ 6D)	410.15	412.87	102.50	112.50	307.65	297.65	15.65	115.50	397.22
GWE-14D (TRA5-PZCDHU)	420.47	422.90	90.00	96.00	330.47	324.47	28.35	97.50	394.55
PMA-MW-4D	411.22	410.88	68.84	73.84	342.38	337.38	12.50	73.80	398.38
PMA-MW-6D	407.63	407.32	96.49	101.49	311.14	306.14	8.90	102.00	398.42
PSMW-6	404.11	406.63	99.80	104.80	304.31	299.31	11.75	110.65	394.88
PSMW-9	403.92	403.52	100.40	105.40	303.52	298.52	5.80	106.15	397.72
PSMW-10	409.63	412.18	101.23	106.23	308.40	303.40	17.95	112.15	394.23
PSMW-13	405.80	405.53	106.08	111.08	299.72	294.72	9.30	111.60	396.23
PSMW-17	420.22	423.26	121.25	126.25	298.97	293.97	30.90	136.00	392.36

Table 2
Groundwater Analytical Detections

Sample ID	Sample Date	Units	Monochlorobiphenyl	Dichlorobiphenyl	Trichlorobiphenyl	Tetrachlorobiphenyl	Pentachlorobiphenyl	Hexachlorobiphenyl	Heptachlorobiphenyl	Octachlorobiphenyl	Nonachlorobiphenyl	Decachlorobiphenyl
Shallow Hydrologic Unit												
PMA-MW-1S-1210	12/13/10	µg/L	<0.097	<0.097	**0.11**	<0.19	<0.19	<0.19	<0.29	<0.29	<0.49	<0.49
PMA-MW-2S-1210	12/14/10	µg/L	**0.14**	<0.094	**0.14**	<0.19	<0.19	<0.19	<0.28	<0.28	<0.47	<0.47
PMA-MW-3S-1210	12/10/10	µg/L	**0.38**	**0.16**	**0.14**	<0.19	<0.19	<0.19	<0.29	<0.29	<0.49	<0.49
PMA-MW-4S-1210	12/09/10	µg/L	**120**	**830**	**2,700**	**4,300**	**3,300**	**4,700**	**4,100**	**620**	<490	<490
Middle / Deep Hydrologic Unit												
PMA-MW-1M-1210	12/13/10	µg/L	**0.31**	<0.094	<0.094	<0.19	<0.19	<0.19	<0.28	<0.28	<0.47	<0.47
PMA-MW-2M-1210	12/14/10	µg/L	**2.1**	<0.094	0.099	<0.19	<0.19	<0.19	<0.28	<0.28	<0.47	<0.47
PMA-MW-2M-1210-AD	12/14/10	µg/L	**2.0**	<0.097	<0.097	<0.19	<0.19	<0.19	<0.29	<0.29	<0.49	<0.49
PMA-MW-3M-1210	12/10/10	µg/L	**0.63**	<0.095	**0.1**	<0.19	<0.19	<0.19	<0.29	<0.29	<0.48	<0.48
PMA-MW-4D-1210	12/09/10	µg/L	**0.16**	**0.15**	<0.094	<0.19	<0.19	<0.19	<0.28	<0.28	<0.47	<0.47
PMA-MW-5M-1210	12/10/10	µg/L	<0.098	<0.098	**0.29**	**0.3**	<0.20	<0.20	<0.29	<0.29	<0.49	<0.49
PMA-MW-6D-1210	12/10/10	µg/L	**0.13**	<0.095	**0.26**	**0.26**	<0.19	<0.19	<0.29	<0.29	<0.48	<0.48

Notes:
µg/L = micrograms per liter
< = Result is non-detect, less than the reporting limit
AD = Analytical Duplicate
BOLD indicates concentration greater than the reporting limit

Table 3
Monitoring Well PMA MW-1M Mann-Kendall Trend Analysis

W.G.Krummrich Facility PCB Mfg. Area Monitoring Well MW-1M Mann-Kendall Trend Analysis																			
	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Event 11	Event 12	Event 13	Event 14	Event 15	Event 16	Event 17	Event 18	Event 19	Row
	2Q06	3Q06	4Q06	1Q07	2Q07	3Q07	4Q07	1Q08	2Q08	3Q08	4Q08	1Q09	2Q09	3Q09	4Q09	1Q10	2Q10	3Q10	4Q10	Total
Total PCBs, µg/L	ND	0.24	0.21	0.17	0.26	0.29	48	ND	0.18	0.38	0.26	0.16	0.21	0.27	0.27	0.20	ND	0.29	0.31	
Compare to Event 1		1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	16
Compare to Event 2			-1	-1	1	1	1	-1	-1	1	1	-1	-1	1	1	-1	-1	1	1	1
Compare to Event 3				-1	1	1	1	-1	-1	1	1	-1	0	1	1	-1	-1	1	1	3
Compare to Event 4					1	1	1	-1	1	1	1	-1	1	1	1	1	-1	1	1	9
Compare to Event 5						1	1	-1	-1	1	0	-1	-1	1	1	-1	-1	1	1	1
Compare to Event 6							1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	0	1	-6
Compare to Event 7								-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-12
Compare to Event 8									1	1	1	1	1	1	1	1	0	1	1	10
Compare to Event 9										1	1	-1	1	1	1	1	-1	1	1	6
Compare to Event 10											-1	-1	-1	-1	-1	-1	-1	-1	-1	-9
Compare to Event 11												-1	-1	1	1	-1	-1	1	1	0
Compare to Event 12													1	1	1	1	-1	1	1	5
Compare to Event 13														1	1	-1	-1	1	1	2
Compare to Event 14															0	-1	-1	1	1	0
Compare to Event 15																-1	-1	1	1	0
Compare to Event 16																	-1	1	1	1
Compare to Event 17																		1	1	2
Compare to Event 18																			1	1

Mann-Kendall Statistic (S)	30

90 % Confidence Mann-Kendall Statistic	39

Table 4
Monitoring Well PMA MW-2M Mann-Kendall Trend Analysis

W.G.Krummrich Facility PCB Mfg. Area Monitoring Well MW-2M Mann-Kendall Trend Analysis																			
	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Event 11	Event 12	Event 13	Event 14	Event 15	Event 16	Event 17	Event 18	Event 19	Row
	2Q06	3Q06	4Q06	1Q07	2Q07	3Q07	4Q07	1Q08	2Q08	3Q08	4Q08	1Q09	2Q09	3Q09	4Q09	1Q10	2Q10	3Q10	4Q10	Total
Total PCBs, µg/L	2.3	2.4	2.8	2.1	3.3	2.5	3.1	1.7	3.0	4.3	2.5	2.9	4.14	3.1	2.7	2.4	3.9	2.25	2.10	
Compare to Event 1		1	1	-1	1	1	1	-1	1	1	1	1	1	1	1	1	1	-1	-1	10
Compare to Event 2			1	-1	1	1	1	-1	1	1	1	1	1	1	1	0	1	-1	-1	8
Compare to Event 3				-1	1	-1	1	-1	1	1	-1	1	1	1	-1	-1	1	-1	-1	0
Compare to Event 4					1	1	1	-1	1	1	1	1	1	1	1	1	1	1	0	12
Compare to Event 5						-1	-1	-1	-1	1	-1	-1	1	-1	-1	-1	1	-1	-1	-8
Compare to Event 6							1	-1	1	1	0	1	1	1	1	-1	1	-1	-1	4
Compare to Event 7								-1	-1	1	-1	-1	1	0	-1	-1	1	-1	-1	-5
Compare to Event 8									1	1	1	1	1	1	1	1	1	1	1	11
Compare to Event 9										1	-1	-1	1	1	-1	-1	1	-1	-1	-2
Compare to Event 10											-1	-1	-1	-1	-1	-1	-1	-1	-1	-9
Compare to Event 11												1	1	1	1	-1	1	-1	-1	2
Compare to Event 12													1	1	-1	-1	1	-1	-1	-1
Compare to Event 13														-1	-1	-1	-1	-1	-1	-6
Compare to Event 14															-1	-1	1	-1	-1	-3
Compare to Event 15																-1	1	-1	-1	-2
Compare to Event 16																	1	-1	-1	-1
Compare to Event 17																		-1	-1	-2
Compare to Event 18																			-1	-1

Mann-Kendall Statistic (S)	**7**
90 % Confidence Mann-Kendall Statistic	**39**

Table 5
Monitoring Well PMA MW-3S Mann-Kendall Trend Analysis

W.G.Krummrich Facility PCB Mfg. Area Monitoring Well MW-3S Mann-Kendall Trend Analysis																			
	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Event 11	Event 12	Event 13	Event 14	Event 15	Event 16	Event 17	Event 18	Event 19	Row
	2Q06	3Q06	4Q06	1Q07	2Q07	3Q07	4Q07	1Q08	2Q08	3Q08	4Q08	1Q09	2Q09	3Q09	4Q09	1Q10	2Q10	3Q10	4Q10	Total
Total PCBs, µg/L	0.66	0.32	0.2	0.35	0.8	0.3	0.21	0.25	0.64	0.26	0.24	0.79	ND	0.34	2.0	ND	0.63	0.28	0.68	
Compare to Event 1		-1	-1	-1	1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1	-1	-1	1	-10
Compare to Event 2			-1	1	1	-1	-1	-1	1	-1	-1	1	-1	1	1	-1	1	-1	1	-1
Compare to Event 3				1	1	1	1	1	1	1	1	1	-1	1	1	-1	1	1	1	12
Compare to Event 4					1	-1	-1	-1	1	-1	-1	1	-1	-1	1	-1	1	-1	1	-3
Compare to Event 5						-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-12
Compare to Event 6							-1	-1	1	-1	-1	1	-1	1	1	-1	1	-1	1	-1
Compare to Event 7								1	1	1	1	1	-1	1	1	-1	1	1	1	8
Compare to Event 8									1	1	-1	1	-1	1	1	-1	1	1	1	5
Compare to Event 9										-1	-1	1	-1	-1	1	-1	-1	-1	1	-4
Compare to Event 10											-1	1	-1	1	1	-1	1	1	1	3
Compare to Event 11												1	-1	1	1	-1	1	1	1	4
Compare to Event 12													-1	-1	1	-1	-1	-1	-1	-5
Compare to Event 13														1	1	0	1	1	1	5
Compare to Event 14															1	-1	1	-1	1	1
Compare to Event 15																-1	-1	-1	-1	-4
Compare to Event 16																	1	1	1	3
Compare to Event 17																		-1	1	0
Compare to Event 18																			1	1

Mann-Kendall Statistic (S)	**2**
90 % Confidence Mann-Kendall Statistic	**39**

Table 6
Monitoring Well PMA MW-3M Mann-Kendall Trend Analysis

W.G.Krummrich Facility PCB Mfg. Area Monitoring Well MW-3M Mann-Kendall Trend Analysis																			
	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Event 11	Event 12	Event 13	Event 14	Event 15	Event 16	Event 17	Event 18	Event 19	Row
	2Q06	3Q06	4Q06	1Q07	2Q07	3Q07	4Q07	1Q08	2Q08	3Q08	4Q08	1Q09	2Q09	3Q09	4Q09	1Q10	2Q10	3Q10	4Q10	Total
Total PCBs, µg/L	5.18	1.9	ND	0.77	ND	0.86	0.76	0.39	0.92	1.3	0.71	1.4	1.3	0.85	0.85	0.87	0.82	0.75	0.73	
Compare to Event 1		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-18
Compare to Event 2			-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-17
Compare to Event 3				1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15
Compare to Event 4					-1	1	-1	-1	1	1	-1	1	1	1	1	1	1	-1	-1	3
Compare to Event 5						1	1	1	1	1	1	1	1	1	1	1	1	1	1	14
Compare to Event 6							-1	-1	1	1	-1	1	1	-1	-1	1	-1	-1	-1	-3
Compare to Event 7								-1	1	1	-1	1	1	1	1	1	1	-1	-1	4
Compare to Event 8									1	1	1	1	1	1	1	1	1	1	1	11
Compare to Event 9										1	-1	1	1	-1	-1	-1	-1	-1	-1	-4
Compare to Event 10											-1	1	0	-1	-1	-1	-1	-1	-1	-6
Compare to Event 11												1	1	1	1	1	1	1	1	8
Compare to Event 12													-1	-1	-1	-1	-1	-1	-1	-7
Compare to Event 13														-1	-1	-1	-1	-1	-1	-6
Compare to Event 14															0	1	-1	-1	-1	-2
Compare to Event 15																1	-1	-1	-1	-2
Compare to Event 16																	-1	-1	-1	-3
Compare to Event 17																		-1	-1	-2
Compare to Event 18																			-1	-1

Mann-Kendall Statistic (S)	-16

90 % Confidence Mann-Kendall Statistic	-39

Table 7
Monitoring Well PMA MW-4D Mann-Kendall Trend Analysis

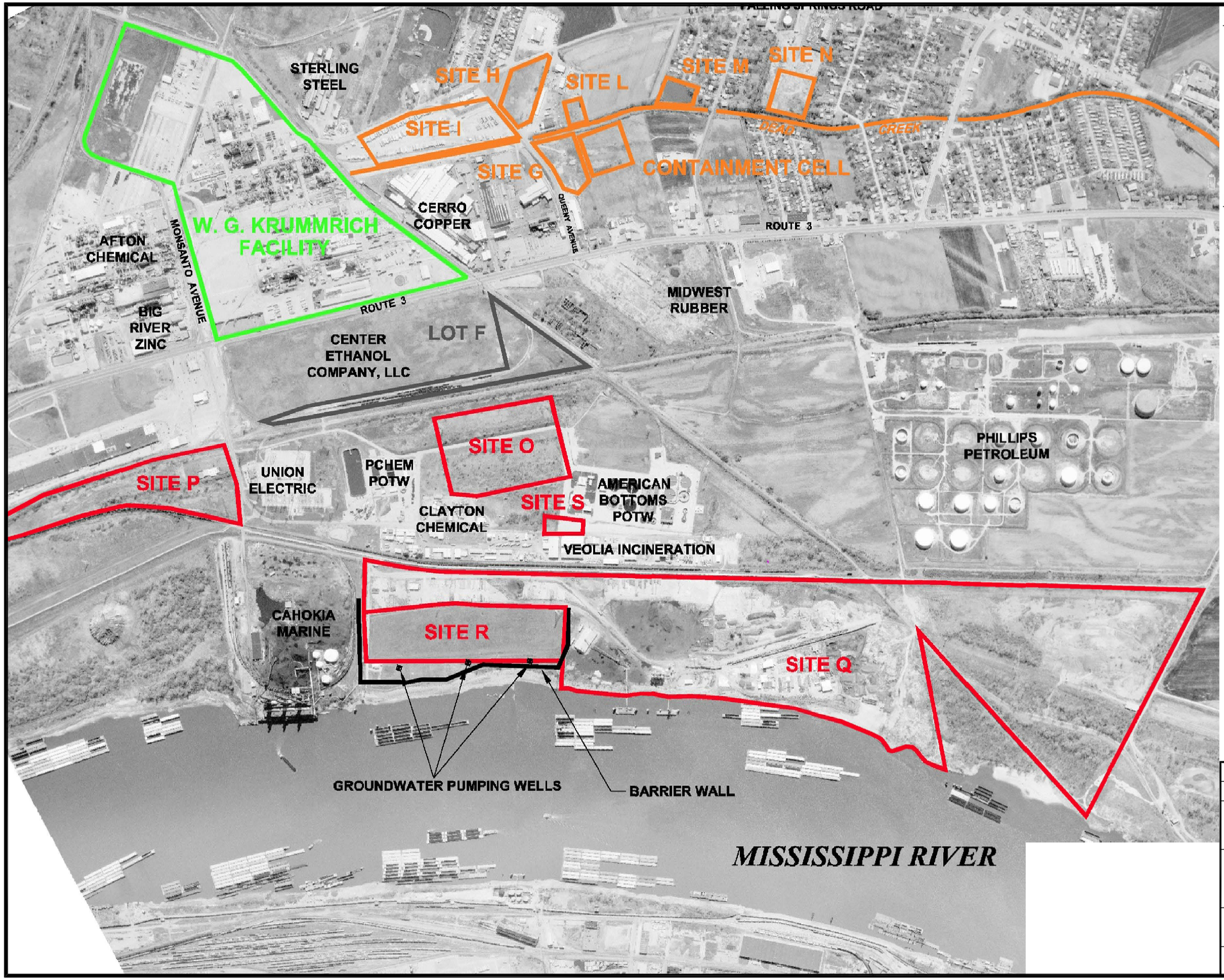
W.G.Krummrich Facility PCB Mfg. Area Monitoring Well MW-4D Mann-Kendall Trend Analysis																		
	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Event 11	Event 12	Event 13	Event 14	Event 15	Event 16	Event 17	Event 18	Row
	2Q06	3Q06	4Q06	1Q07	2Q07	3Q07	4Q07	1Q08	2Q08	4Q08	1Q09	2Q09	3Q09	4Q09	1Q10	2Q10	3Q10	4Q10	Total
Total PCBs, µg/L	0.34	0.10	2.07	0.33	0.50	0.35	0.23	0.27	0.44	0.27	2.73	0.59	0.37	0.61	0.54	0.72	0.42	0.31	
Compare to Event 1		-1	1	-1	1	1	-1	-1	1	-1	1	1	1	1	1	1	1	-1	5
Compare to Event 2			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
Compare to Event 3				-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-13
Compare to Event 4					1	1	-1	-1	1	-1	1	1	1	1	1	1	1	-1	6
Compare to Event 5						-1	-1	-1	-1	-1	1	1	-1	1	1	1	-1	-1	-3
Compare to Event 6							-1	-1	1	-1	1	1	1	1	1	1	1	-1	4
Compare to Event 7								1	1	1	1	1	1	1	1	1	1	1	11
Compare to Event 8									1	0	1	1	1	1	1	1	1	1	9
Compare to Event 9										-1	1	1	-1	1	1	1	-1	-1	1
Compare to Event 10											1	1	1	1	1	1	1	1	8
Compare to Event 11												-1	-1	-1	-1	-1	-1	-1	-7
Compare to Event 12													-1	1	-1	1	-1	-1	-2
Compare to Event 13														1	1	1	1	-1	3
Compare to Event 14															-1	1	-1	-1	-2
Compare to Event 15																1	-1	-1	-1
Compare to Event 16																	-1	-1	-2
Compare to Event 17																		-1	-1

Mann-Kendall Statistic (S)	**32**
90 % Confidence Mann-Kendall Statistic	**35**

Table 8
Monitoring Well PMA MW-6D Mann-Kendall Trend Analysis

W.G.Krummrich Facility Well PMA MW-6D Mann-Kendall Trend Analysis											
	Event 1 3Q08	Event 2 4Q08	Event 3 1Q09	Event 4 2Q09	Event 5 3Q09	Event 6 4Q09	Event 7 1Q10	Event 8 2Q10	Event 9 3Q10	Event 10 4Q10	Row Total
Total PCBs, ug/L	0.21	0.43	0.32	0.29	0.20	0.30	0.19	0.33	0.10	0.65	
Compare to Event 1		1	1	1	-1	1	-1	1	-1	1	3
Compare to Event 2			-1	-1	-1	-1	-1	-1	-1	1	-6
Compare to Event 3				-1	-1	-1	-1	1	-1	1	-3
Compare to Event 4					-1	1	-1	1	-1	1	0
Compare to Event 5						1	-1	1	-1	1	1
Compare to Event 6							-1	1	-1	1	0
Compare to Event 7								1	-1	1	1
Compare to Event 8									-1	1	0
Compare to Event 9										1	1

Mann-Kendall Statistic (S)	**-3**
90 % Confidence Mann-Kendall Statistic	**-17**



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

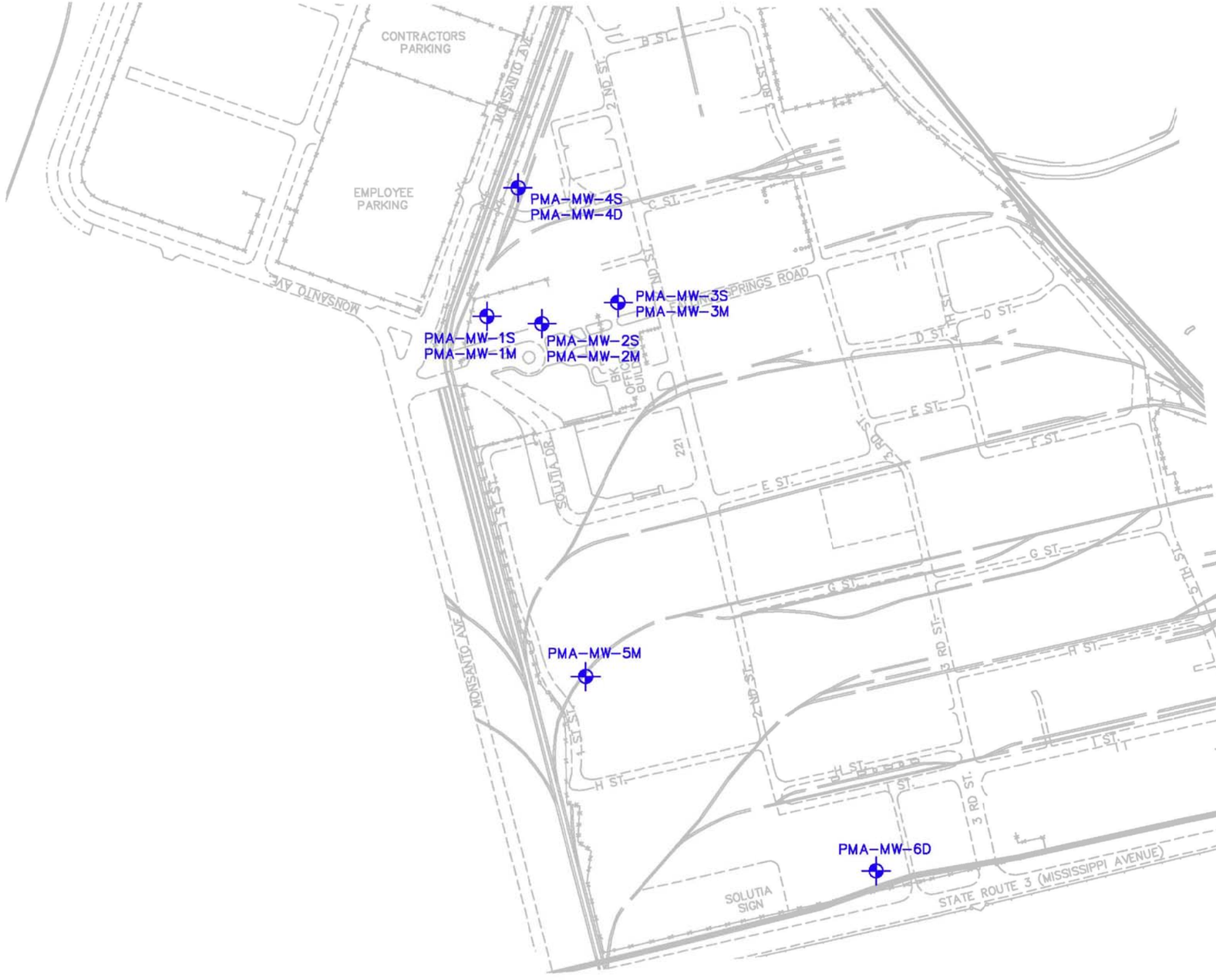
Drawn By: SLC	Ck'd By: AMS	App'vd By: DTK
Date: 03-09-11	Date: 03-09-11	Date: 03-09-11

GEOTECHNOLOGY INC
FROM THE GROUND UP

4Q 2010
PCB Monitoring Program
Sauget, Illinois

SITE LOCATION MAP

Project Number J017210.07	PLATE 1



NOTES:

1. Plan adapted from a drawing titled "Former PCB Manufactoring Area Monitoring Well Locations" 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: 03-09-11	Date: 03-09-11	Date: 03-09-11

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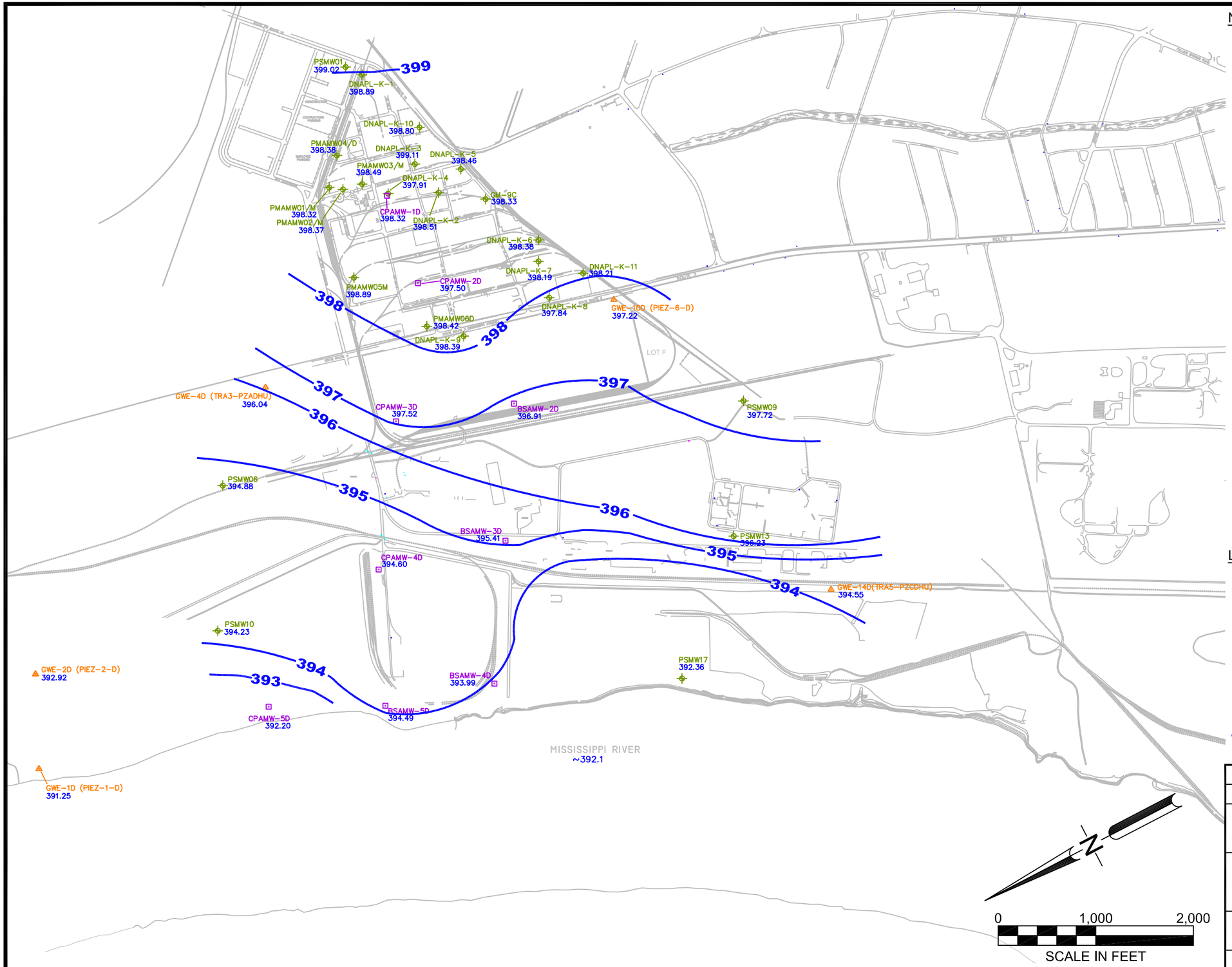
PCB Monitoring Program
Sauget, Illinois

FORMER PCB MANUFACTORING AREA MONITORING WELL LOCATIONS

Project Number	PLATE 2
J017210.07	



NOTES:

1. Plan adapted from a drawing titled "Potentiometric Surface Map Middle/Deep Hydrogeologic Unit" provide by URS.

2. Groundwater levels were measured November 22, 2010.

3. Contours generated primarily using surfer software version 8. Some interpretation was done using professional judgment and contour lines were modified by hand.

4. The Mississippi River stage elevation presented on the figure is an average elevation for the time of the gauging event. The information was obtained from the site R Bubbler.

5. Locations with wells screened in both the MHU and DHU utilized the DHU well for development of the potentiometric surface map.

LEGEND:

- Long Term Monitoring Well used for Groundwater Contouring
- Other Monitoring Well used for Goundwater Contouring
- Piezometer Cluster used for Groundwater Contouring
- —402— Groundwater Elevation Contour (ft NAVD)

Drawn By: SLC	Ck'd By: AMS	App'vd By: DTK
Date: 03-09-11	Date: 03-09-11	Date: 03-09-11

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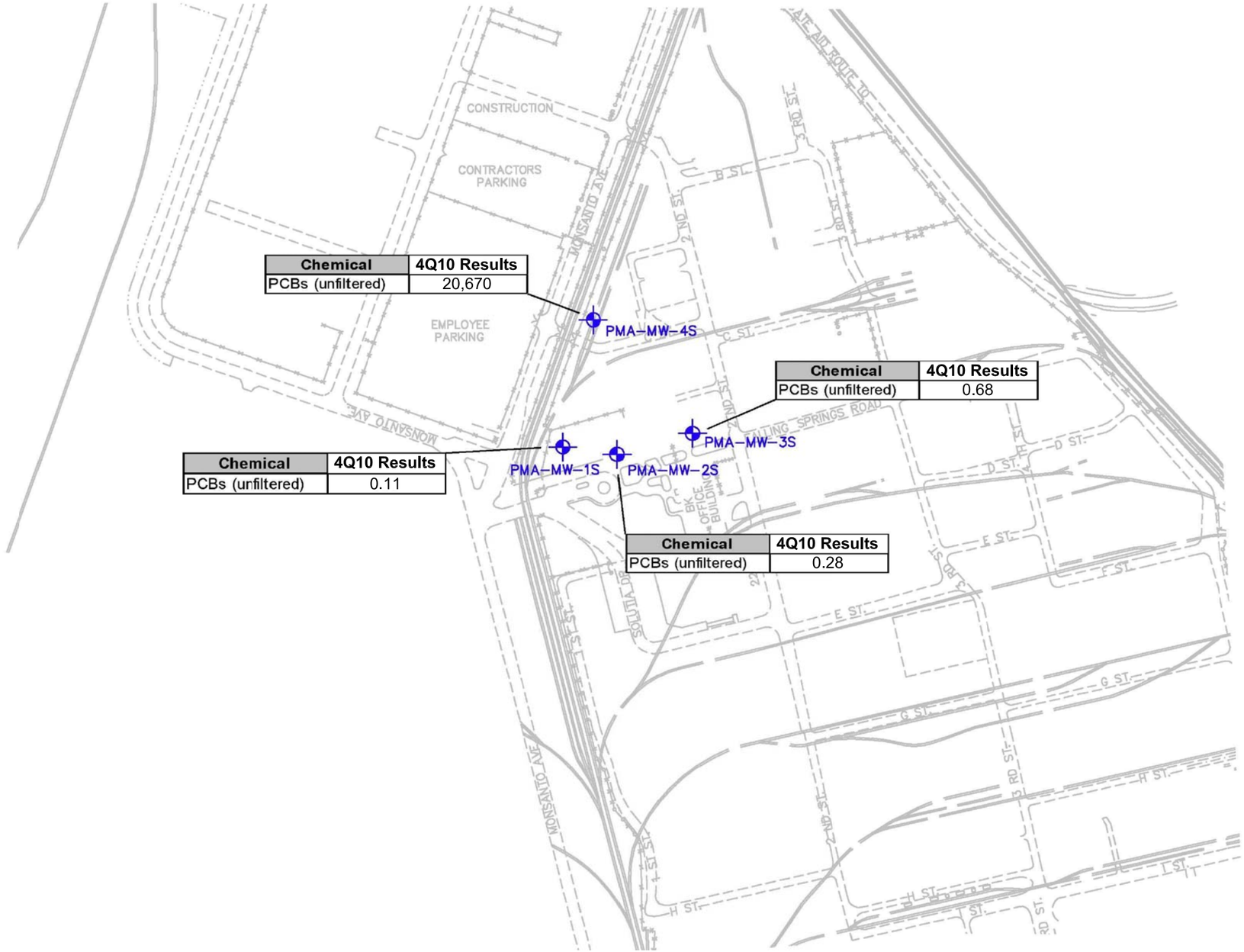
4Q 2010
PCB Monitoring Program
Sauget, Illinois

POTENTIOMETRIC SURFACE MAP MIDDLE/DEEP HYDROGEOLOGIC UNIT

Project Number J017210.07	PLATE 3



NOTES:

1. Plan adapted from a drawing titled "PCB Results - SHU Wells" provided by URS.
2. Total PCB results include the sum of all method 680 Homologs.
3. Results are shown in ug/L.
4. ND = Not Detected.
5. PMA-MW-4S: DNAPL present-groundwater sampled inadvertently.

LEGEND:

Monitoring Well Location

N

0 300 600

SCALE IN FEET

Drawn By: SLC	Ck'd By: AMS	App'vd By: DTK
Date: 03-09-11	Date: 03-09-11	Date: 03-09-11

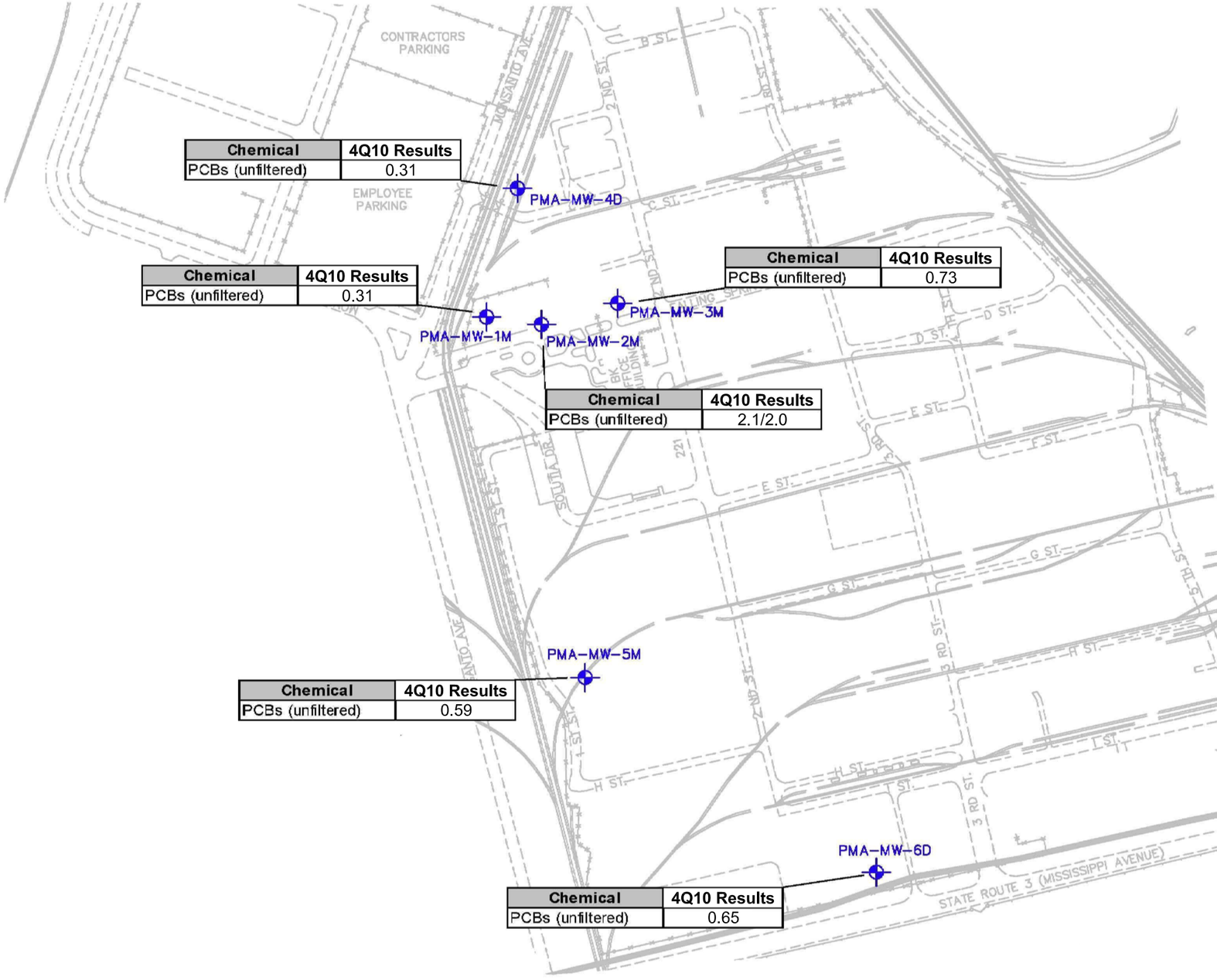
GEOTECHNOLOGY INC
FROM THE GROUND UP

4Q 2010
PCB Monitoring Program
Sauget, Illinois

PCB RESULTS
SHU WELLS

Project Number
J017210.07

PLATE 4



Chemical	4Q10 Results
PCBs (unfiltered)	0.31

Chemical	4Q10 Results
PCBs (unfiltered)	0.31

Chemical	4Q10 Results
PCBs (unfiltered)	0.73

Chemical	4Q10 Results
PCBs (unfiltered)	2.1/2.0

Chemical	4Q10 Results
PCBs (unfiltered)	0.59

Chemical	4Q10 Results
PCBs (unfiltered)	0.65

NOTES:

1. Plan adapted from a drawing titled "PCB Results - MHU/DHU Wells" provided by URS.
2. Total PCB results include the sum of all method 680 Homologs.
3. Results are shown in ug/L.
4. ND = Not Detected.

LEGEND:

Monitoring Well Location

N

0 300 600

SCALE IN FEET

Drawn By: SLC	Ck'd By: AMS	App'vd By: DTK
Date: 03-09-11	Date: 03-09-11	Date: 03-09-11

GEOTECHNOLOGY INC
FROM THE GROUND UP

4Q 2010
PCB Monitoring Program
Sauget, Illinois

PCB RESULTS
MHU/DHU WELLS

Project Number
J017210.07

PLATE 5

APPENDIX A

GROUNDWATER PURGING AND SAMPLING FORMS

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: WGK-PCB-4RID
PROJECT NUMBER: J017210.07
FIELD PERSONNEL: JENNA VUNK
DATE: 12-13-10
WEATHER: 5°F SUNNY
MONITORING WELL ID: PMA-MW-01S
SAMPLE ID: PMA-MW-01S-1210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 25.01 ft
Constructed Well Depth (btoc): 24.94 ft
Depth to Water (btock): 11.90 ft
Depth to LNAPL/DNAPL (btoc): - ft
Depth to Top of Screen (btoc): 19.94 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 20.30 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) = 22.44 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 ND If Present, Do Not Sample

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

PURGE DATA

Pump Type: QED BLADDER PUMP

	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	1436	11.90	CLEAR	NONE						
1000	1440	11.90			6.92	13.15	1.4	46.60	0.00	-72
2000	1444	11.90			6.95	14.92	1.4	27.40	0.00	-74
3000	1448	11.90			6.97	13.44	1.5	13.70	0.00	-71
4000	1452	11.90			6.99	11.06	1.5	16.30	0.00	-64
5000	1456	11.90			6.98	10.90	1.5	13.70	0.00	-63
6000	1500	11.90	↓	↓	6.95	12.64	1.4	15.60	0.00	-61
								JSV		

Start Time: 1436
Stop Time: 1500
Elapsed Time: 24 min
Average Purge Rate (mL/min): 250
Water Quality Meter ID: HORIBA U-22
Date Calibrated: 12-13-10

SAMPLING DATA

Sample Date: 12-13-10
Sample Method: LOW FLOW BLADDER
Sample Time: 1510
Sample Flow Rate: 250 mL/min
Analysis: TOTAL PCBs 6080
QA/QC Samples: MS/MSD

VOA Vials, No Headspace ☐ Initials: NA

COMMENTS: DO meter checked - OK
Ferrous Iron (Filtered 0.2 micron) = NA

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: WGK-PCB-4Q10
PROJECT NUMBER: J017210.07
FIELD PERSONNEL: JENNA VUIL
DATE: 12-14-10
WEATHER: 14°F OVERCAST
MONITORING WELL ID: PMA-MW-02S
SAMPLE ID: PMA-MW-02S-12.10

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 27.50 ft
Constructed Well Depth (btoc): 27.33 ft
Depth to Water (btock): 13.34 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 22.33 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 14.16 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) = 24.83 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 NA 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: 0.0 ppm

PURGE DATA

Pump Type: QED BLADDER PUMP

	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	1224		CLEAR/PALE							
1000	1228		YELLOW	CHEMICAL	7.22	18.15	0.90	42.6	0.00	-52
2000	1232		↓	SMELL	7.16	18.92	0.85	40.5	0.00	-48
3000	1236			↓	7.14	18.92	0.85	31.3	0.00	-46
4000	1240				7.12	19.15	0.86	30.4	0.00	-42
5000	1244		↓		7.11	19.30	0.86	29.2	0.00	-39
							USV			

Start Time: 1224
Stop Time: 1244
Elapsed Time: 20 min
Average Purge Rate (mL/min): 250
Water Quality Meter ID: HORIBA-U22
Date Calibrated: 12-14-10

SAMPLING DATA

Sample Date: 12-14-10
Sample Method: LOW FLOW BLADDER
Sample Time: 1245
Sample Flow Rate: 250 mL/min
Analysis: TOTAL PCBs 680
QA/QC Samples: NONE

VOA Vials, No Headspace ☐ Initials: NA

COMMENTS:

Ferrous Iron (Filtered 0.2 micron) = NA

400 meter ck'd

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: WBK-PCB-4Q10 PROJECT NUMBER: J017210.07 FIELD PERSONNEL: JENNA VUNK
DATE: 12-10-10 WEATHER: 45°F SUNNY
MONITORING WELL ID: PMA-MW-03S SAMPLE ID: PMA-MW-03S-1210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 27.60 ft
Constructed Well Depth (btoc): 27.40 ft
Depth to Water (btock): 13.30 ft
Depth to LNAPL/DNAPL (btoc): - ft
Depth to Top of Screen (btoc): 22.40 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 14.30 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) = 24.90 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 NA 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: 0.0 ppm

PURGE DATA

Pump Type: QED BLADDER PUMP

					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)
3000	1450	13.30	CLOUDY	NONE	6.83	18.11	2.9	49.2	0.00	43
4000	1454	13.30	↓	↓	6.80	18.07	2.9	45.0	0.00	26
5000	1458	13.30			6.80	18.02	2.9	34.2	0.00	20
6000	1502	13.30			6.81	17.99	2.9	27.5	0.00	15
								<15		

Start Time: 1450
Stop Time: 1502
Elapsed Time: 12 min
Average Purge Rate (mL/min): 250
Water Quality Meter ID: HORIBA-U22
Date Calibrated: 12-10-10

SAMPLING DATA

Sample Date: 12-10-10
Sample Method: LOW FLOW BLADDER
Sample Time: 1510
Sample Flow Rate: 250 ml/min
Analysis: TOTAL PCB
QA/QC Samples: none

VOA Vials, No Headspace ☐ Initials: NA

COMMENTS:

Ferrous Iron (Filtered 0.2 micron) = NA

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: WGIC-PCB-4Q10 PROJECT NUMBER: J017210.07 FIELD PERSONNEL: JENNA VUJIC
DATE: 12-9-10 WEATHER: 25°F OVERCAST
MONITORING WELL ID: PMA-MW-04S SAMPLE ID:

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 25.40 ft
Constructed Well Depth (btoc): 25.33 ft
Depth to Water (btock): 11.50 ft
Depth to LNAPL/DNAPL (btoc): - ft
Depth to Top of Screen (btoc): 20.33 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 13.90 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) = 22.83 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: 3.0 ppm

PURGE DATA
Pump Type: QED BLADDER PUMP

					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)
2000	1550	11.50	NONE	CHEMICAL	6.90	16.06	3.1	44.4	2.07	-85
3000	1555	11.50	↓	SMELL	6.83	15.81	3.3	36.8	0.00	-88
4000	1659	11.50		↓	6.82	15.95	3.3	26.6	0.00	-90
5000	1603	11.50	↓		6.83	16.00	3.3	32.4	0.00	-92
				JSV					JSV	

Start Time: 1550
Stop Time: 1603
Elapsed Time: 13 min
Average Purge Rate (mL/min): 230.77
Water Quality Meter ID: HORIBA U22
Date Calibrated: 12-9-10

SAMPLING DATA

Sample Date: 12-9-10
Sample Method: LOW FLOW BLADDER
Sample Time: 1610
Sample Flow Rate: 230.77 mL/min
Analysis: TOTAL PCBs
QA/QC Samples: NONE

VOA Vials, No Headspace ☐ Initials: NA

COMMENTS: THICK, OILY SCHEEN ON OUTSIDE OF BLADDER PUMP WHEN REMOVED FROM WELL
Ferrous Iron (Filtered 0.2 micron) = NA

rinsed probe periodically

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: WGK-PCB-4B1D
PROJECT NUMBER: J017210-07
FIELD PERSONNEL: JENNA VOJK
DATE: 12-13-10
WEATHER: 5°F SUNNY
MONITORING WELL ID: PMA-MW-01M
SAMPLE ID: PMA-MW-01M-1210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 59.70 ft
Constructed Well Depth (btoc): 59.30 ft
Depth to Water (btock): 12.06 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 54.30 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 22.44 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) = 56.80 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 = 2100 mL
(3 x Flow Through Cell Volume)
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: QED BLADDER PUMP

					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)
3000	1228		CLEAR	CHEMICAL	6.99	14.36	2.3	48.90	0.08	-91
4000	1233			SMELL	6.96	13.65	2.4	19.8	0.00	-99
5000	1238				6.98	13.59	2.4	21.6	0.00	-109
6000	1243				6.97	13.20	2.4	30.9	0.00	-113

Start Time: 1228
Stop Time: 1243
Elapsed Time: 15 min
Average Purge Rate (mL/min): 200
Water Quality Meter ID: HORIBA U-22
Date Calibrated: 12-13-10

SAMPLING DATA

Sample Date: 12-13-10
Sample Method: LOW FLOW BLADDER
Sample Time: 1245
Sample Flow Rate: 200 mL/min
Analysis: TOTAL PCB 6B0
QA/QC Samples: none

VOA Vials, No Headspace ☐ Initials: NA

COMMENTS:

Ferrous Iron (Filtered 0.2 micron) = NA

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: WGK-PCB-4Q10 PROJECT NUMBER: J017210.07 FIELD PERSONNEL: JENNA WUJIG
DATE: 12-14-10 WEATHER: 15°F OVERCAST
MONITORING WELL ID: PMA-MW-02M SAMPLE ID: PMA-MW-02M-1210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 61.77 ft
Constructed Well Depth (btoc): 61.54 ft
Depth to Water (btock): 12.30 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 56.54 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 49.47 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) = 59.04 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 NA If Present, Do Not Sample

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

PURGE DATA

Pump Type:

	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)
1000	1107		PALE YELLOW	CHEMICAL	7.21	16.36	2.1	42.9	4.58	-107
2000	1111		CLEAR	SMELL	7.21	16.54	2.1	47.7	0.00	-117
3000	1115		↓	↓	7.23	15.94	2.1	20.5	0.00	-120
4000	1119				7.23	16.02	2.1	20.3	0.00	-123
5000	1123				7.25	15.94	2.1	14.0	0.00	-122
								USD		

Start Time: 1103
Stop Time: 1123
Elapsed Time: 20 min
Average Purge Rate (mL/min): 250
Water Quality Meter ID: HORIBA U-22
Date Calibrated: 12-14-10

SAMPLING DATA

Sample Date:
Sample Method: LOW FLOW BLADDER
Sample Time: 1130
Sample Flow Rate: 250 mL/min
Analysis: TOTAL PCBs 680
QA/QC Samples: AD

VOA Vials, No Headspace ☐ Initials: NA

COMMENTS:
Ferrous Iron (Filtered 0.2 micron) = NA

rinsed probe periodically

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: WGK- PCB- 4Q10 | PROJECT NUMBER: J017210.07 | FIELD PERSONNEL: JENNA VOJK
DATE: 12-10-10 | WEATHER: 40'F SUNNY
MONITORING WELL ID: PMA-MW-3M | SAMPLE ID: PMA-MW-3M-1210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 61.90 ft
Constructed Well Depth (btoc): 61.81 ft
Depth to Water (btock): 13.40 ft
Depth to LNAPL/DNAPL (btoc): - ft
Depth to Top of Screen (btoc): 56.81 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 48.50 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) = 59.31 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: 0.0 ppm

PURGE DATA

Pump Type: QED BLADDER PUMP

					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	1325	13.40								
1000	1330	13.40	BROWN	CHEMICAL	8.70	17.87	2.8	48.6	1.47	-97
2000	1335	13.40	↓	SMELL	8.71	17.90	2.8	28.1	0.38	-107
3000	1340	13.40		↓	8.73	17.90	2.8	25.3	0.00	-116
4000	1345	13.40			8.77	17.81	2.8	24.7	0.00	-126
5000	1350	13.40	↓		8.79	17.76	2.8	44.1	0.00	-135
								↓		

Start Time: 1325
Stop Time: 1350
Elapsed Time: 25 min
Average Purge Rate (mL/min): 200
Water Quality Meter ID: HORIBA U22
Date Calibrated: 12-10-10

SAMPLING DATA

Sample Date: 12-10-10
Sample Method: LOW FLOW BLADDER
Sample Time: 1400
Sample Flow Rate: 200 mL /min
Analysis: TOTAL PCBs 680
QA/QC Samples:

VOA Vials, No Headspace ☐ Initials: NA

COMMENTS:

Ferrous Iron (Filtered 0.2 micron) = NA

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: WGK-PCB-4Q10 | PROJECT NUMBER: J017210.07 | FIELD PERSONNEL: JENNA WUNK
DATE: 12-9-10 | WEATHER: 25°F OVERCAST
MONITORING WELL ID: PMA-MW-04D | SAMPLE ID:

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 73.80 ft
Constructed Well Depth (btoc): 73.50 ft
Depth to Water (btock): 12.00 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 68.50 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 61.80 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) = 66.00 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 ND 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: 0.0 ppm

PURGE DATA

Pump Type: QED BLADDER PUMP

	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)
		12.00								
3000	1433	12.00	NONE	CHEMICAL	6.76	15.20	2.3	28.0	0.00	-126
4000	1438	12.00	Clear, no	SMELL	6.75	15.17	2.3	48.6	0.00	-128
5000	1443	12.00	sediment	↓	6.76	15.11	2.3	42.9	0.00	-129
6000	1448	12.00	↓	↓	6.76	15.14	2.3	42.8	0.00	-126
			JSV						JSV	

Start Time: 1433
Stop Time: 1448
Elapsed Time: 15 min
Average Purge Rate (mL/min): 200
Water Quality Meter ID: HORIBA U22
Date Calibrated: 12-9-10

SAMPLING DATA

Sample Date: 12-9-10
Sample Method: LOW FLOW BLADDER
Sample Time: 1500
Sample Flow Rate: 200 mL/min
Analysis: TOTAL PCBs
QA/QC Samples: none

VOA Vials, No Headspace ☐ Initials: NA

COMMENTS:

Ferrous Iron (Filtered 0.2 micron) = NA

probe rinsed periodically, DO meter OK

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: NGK-PCB-4Q10 PROJECT NUMBER: J017210.07 FIELD PERSONNEL: JENNA VUNK
DATE: 12-10-10 WEATHER: 35°F, SUNNY
MONITORING WELL ID: PMA-MW-5M SAMPLE ID: PMA-MW-5M-1210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 57.13 ft
Constructed Well Depth (btoc): 56.87 ft
Depth to Water (btock): 12.10 ft
Depth to LNAPL/DNAPL (btoc): - ft
Depth to Top of Screen (btoc): 51.87 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 45.03 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) = 54.37 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 ND If Present, Do Not Sample

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

PURGE DATA

Pump Type: QED BLADDER PUMP

	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)
1000	1014	12.10	NONE	CHEMICAL						
2000	1019	12.10	CLEAR	SMELL	7.01	15.92	2.4	12.7	5.46	-52
3000	1024	12.10	↓	↓	7.00	16.07	2.4	4.50	9.45	-61
4000	1029	12.10			7.00	15.84	2.5	26.2	6.99	-69
5000	1034	12.10			6.99	15.91	2.5	0.0	5.00	-73
6000	1039	12.10			7.01	16.07	2.5	0.0	0.00	-76
7000	1044	12.10			7.02	15.90	2.5	0.0	0.00	-76
					7.02	16.12	2.5	0.0	0.00	-77

Start Time: 1014 Elapsed Time: 30min Water Quality Meter ID: HORIBA U-22
Stop Time: 1044 Average Purge Rate (mL/min): 200 Date Calibrated: 12-10-10

SAMPLING DATA

Sample Date: 12-10-10 Sample Time: 1045 Analysis: PCB 680
Sample Method: LOW FLOW BLADDER Sample Flow Rate: 200 mL/min QA/QC Samples: none

VOA Vials, No Headspace ☐ Initials: NA

COMMENTS: Ferrous Iron (Filtered 0.2 micron) = NA

rinsed probe periodically

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

J017210.02

PROJECT NAME: WGK-PCB-4Q10 PROJECT NUMBER: J017210.07 FIELD PERSONNEL: JENNA VUJIC
DATE: 12-10-10 WEATHER: 40°F SUNNY
MONITORING WELL ID: PMA-MW-6D SAMPLE ID: PCB-MW-D6D-1210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 102.00 ft
Constructed Well Depth (btoc): 101.18 ft
Depth to Water (btock): 9.05 ft
Depth to LNAPL/DNAPL (btoc): - ft
Depth to Top of Screen (btoc): 96.18 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): 92.13 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) = 98.68 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: 0.0 ppm

PURGE DATA
Pump Type: QED BLADDER PUMP

	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	1149	9.05	NONE	CHEMICAL						
1000	1154	9.05	CLEAR	SMELL	7.23	17.96	1.2	18.00	2.00	-84
2000	1159	9.05			7.12	17.86	1.4	23.00	2.13	-109
3000	1204	9.05			7.10	17.85	1.4	26.70	0.36	-115
4000	1209	9.05			7.13	18.11	1.4	12.00	0.31	-123
5000	1214	9.05			7.10	18.16	1.4	10.90	0.56	-123
6000	1219	9.05			7.09	18.11	1.4	19.40	0.13	-126
7000	1224	9.05			7.08	18.05	1.4	29.30	0.00	-128
8000	1229	9.05			7.08	18.26	1.4	40.10	0.00	-129

Start Time: 1149
Stop Time:
Elapsed Time: 40 min
Average Purge Rate (mL/min): 200
Water Quality Meter ID: HORIBA U22
Date Calibrated: 12-10-10

SAMPLING DATA

Sample Date: 12-10-10
Sample Method: LOW FLOW
Sample Time: 1230
Sample Flow Rate: 200 mL/min
Analysis: PCB 680
QA/QC Samples: none

VOA Vials, No Headspace ☐ Initials: NA

COMMENTS: Ferrous Iron (Filtered 0.2 micron) = NA

* last turb. reading is inconsistant when comparing the visual clarity of sample.

APPENDIX B

CHAINS-OF-CUSTODY

Serial Number 033940

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	PROJECT NO.	PROJECT LOCATION (STATE)
TAL (LAB) PROJECT MANAGER: LIDYA GULIZIA	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM	CLIENT PHONE: 314 674-3312	CLIENT FAX
CLIENT NAME: GM RINALDI	CLIENT E-MAIL: gmrina@solutia.com	
CLIENT ADDRESS: SOLUTIA / 575 MARYVILLE CTR, STL MO		
COMPANY CONTRACTING THIS WORK (if applicable)		

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

REQUIRED ANALYSIS: TOTAL PCB 680

PRESERVATIVE: none

PAGE 1 OF 1

STANDARD REPORT DELIVERY

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE)

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
12-8-10	1100	PMA-MW-05M-1210	G	W				2	

Page 681 of 685

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Emad Nujic	12-8-10	2000						
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
Beth McDaughtry	12/9/10	0912	YES ○ NO ○		680-63899	Temp 0.6

TAL-8240-680 (1008)

Serial Number U33942

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	PROJECT NO.	PROJECT LOCATION (STATE)
WGK PCB 4Q10		IL
TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
LIDYA G.		
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
GM RWTLDI	314-674-3312	314-674-[illegible]
CLIENT NAME	CLIENT E-MAIL	
SOLUTIA	gmrina@solutia.com	
CLIENT ADDRESS		
575 MARYVILLE CENTRE DR ST. LOUIS MO 63141		
COMPANY CONTRACTING THIS WORK (if applicable)		

MATRIX TYPE (INDICATE)

REQUIRED ANALYSIS

PAGE 1 OF 1

STANDARD REPORT DELIVERY ☒

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	TOTAL PCBS 680	PRESERVATIVE: none	NUMBER OF CONTAINERS SUBMITTED	REMARKS
12-9-10	1500	PMA-MW-04D-1210	G	W						2	
12-9-10	1610	PMA-MW-04S-1210	G	W						2	

Page 682 of 685

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	12-9-10	1800						
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
	12/10/10	0933	YES ○ NO ○		680-63929	3.7°C

Serial Number 033125

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	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS	PAGE	OF
WGK-PCB-4Q10						

TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
GIDYA RG		

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
GM RINALDI	314-674-3312	314-674-8808

CLIENT NAME	CLIENT E-MAIL
SOLUTIA	gmrina@solutia.com

CLIENT ADDRESS

COMPANY CONTRACTING THIS WORK (if applicable)

STANDARD REPORT DELIVERY ◯ DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ◯ DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

PRESERVATIVE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NONA TOTAL PCB 680									REMARKS
12-10-10	1645	PMA-MW-5M-1210	G	W				2									
	1230	PMA-MW-6D-1210	G	W				2									
	1400	PMA-MW-3M-1210	G	W				2									
	1510	PMA-MW-3S-1210	G	W				2									

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	12-10-10	1700						
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]	12/11/10	0953	YES ◯ NO ◯		680-64004	1.2°C

TAL8240-680 (1207)

Serial Number 033126

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-PCB-4Q10	PROJECT NO.	PROJECT LOCATION (STATE): IL	PAGE ___ OF ___
TAL (LAB) PROJECT MANAGER: LIDYA G	P.O. NUMBER	CONTRACT NO.	STANDARD REPORT DELIVERY: X DATE DUE ___
CLIENT (SITE) PM: GM RINALDI	CLIENT PHONE: 314-674-3312	CLIENT FAX: 314-674-8800	EXPEDITED REPORT DELIVERY (SURCHARGE): ○ DATE DUE ___
CLIENT NAME: SOLUTIA	CLIENT E-MAIL: gmrina@solutia.com		
CLIENT ADDRESS: 575 MARYVILLE CTR DR STL, MO 63141			
COMPANY CONTRACTING THIS WORK (if applicable)			NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

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

REQUIRED ANALYSIS: TOTAL PCBs 680; none

PRESERVATIVE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	TOTAL PCBs 680	NUMBER OF CONTAINERS SUBMITTED	REMARKS
12-13-10	1245	PMA-MW-01M-1210	G	W				2		
↓	1510	PMA-MW-01S-MS-1210	G	W				2		
↓	1510	PMA-MW-01S-MSD-1210	G	W				2		
12-13-10	1510	PMA-MW-01S-1210	G	W				2		

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	12-13-10	1800						
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]	12/14/10	0954	YES ○ NO ○		680-64048	0.2

TAL8240-680 (1207)

Serial Number 032441

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	PROJECT NO.	PROJECT LOCATION (STATE) IL
TAL (LAB) PROJECT MANAGER: LIDYA G.	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: GM RINALDI	CLIENT PHONE: 314-674-3312	CLIENT FAX: 314-674-8808
CLIENT NAME: SOLUTIA	CLIENT E-MAIL: gmrina@solutia.com	
CLIENT ADDRESS: 575 MARYVILLE CTR DR STE, MO 63141		
COMPANY CONTRACTING THIS WORK (if applicable)		

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

REQUIRED ANALYSIS: Total PCB 680; None; PRESERVATIVE

PAGE: OF

STANDARD REPORT DELIVERY ⊘

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
12-14-10	1130	PMA-MW-02M-1210	G	W				2	Rinsed $Na_2S_2O_3$
12-14-10	1130	PMA-MW-02M-AD-1210	G	W				2	
12-14-10	1245	PMA-MW-02S-1210	G	W				2	
12-14-10	1245	PMA-MW-02S-1210-EB	G	W				2	

Page 685 of 685

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	12-14-10	1800						
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
	12/15/10	0957	YES ○ NO ○		680-14006	3.8

TAL.8240-680 (1207)

APPENDIX C

QUALITY ASSURANCE REPORT

FOURTH QUARTER 2010
PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM
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. J017210.07

March 15, 2011

J017210.07

FOURTH QUARTER 2010
PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM
QUALITY ASSURANCE REPORT
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	3
5.0	LABORATORY CONTROL SAMPLE RECOVERIES	3
6.0	MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) SAMPLES	4
7.0	FIELD DUPLICATE RESULTS	4
8.0	INTERNAL STANDARD RESPONSES	5
9.0	RESULTS REPORTED FROM DILUTIONS	5
10.0	MASS SPECTROMETER TUNING	5
11.0	CALIBRATION	5
12.0	COMPOUND IDENTIFICATION	6
13.0	OTHER PROBLEMS/DOCUMENTATION	6

J017210.07

FOURTH QUARTER 2010
PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM
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 December of 2010 at the Solutia W.G. Krummrich plant as part of the 4th Quarter 2010 PCB Groundwater Quality Assessment Program. 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 polychlorinated biphenyls (PCBs).

Geotechnology subcontracted with the M.J.W. Corporation to conduct third party Level III and Level IV 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 (PMA-MW-4D-1210, PMA-MW-4S-1210, PMA-MW-5M-1210 and PMA-MW-6D-1210.) The Level III and Level 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 14 samples (ten 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) KPM040 utilizing the following USEPA SW-846 Methods:

- Method 680 for PCBs

Samples were reviewed following procedures outlined in the USEPA National Functional Guidelines for Superfund Organic Methods Data Review (USEPA 2008) and the Revised PCB Groundwater Quality Assessment Work Plan (Solutia 2009).

The above guidelines provided the criteria to review the data. Additional quantitative criteria are given in the analytical methods. The data reviewed by the MJW Corporation has been approved for use as no samples required qualification. The various Test America qualifiers are explained in Table 1:

Table 1 – Laboratory Data Qualifiers

Lab Qualifier	Definition
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD exceeds the control limits.
F	MS or MSD exceeds the control limits.
H	Sample was prepped or analyzed beyond the specified holding time
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D.

Based on the criteria outlined, it is recommended that the results reported for these analyses are accepted for their intended use. Acceptable levels of accuracy, precision, and representativeness (based on MS/MSD, LCS, surrogate compounds and field duplicate results) were achieved for this data set, except where noted in this report. In addition, analytical completeness, defined to be the percentage of analytical results which are judged to be valid, including estimated detect/nondetect (J/UJ) values was 100 percent, which meets the completeness of goal of 95 percent.

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

2.0 RECEIPT CONDITION AND SAMPLE HOLDING TIMES

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

Extractions and/or analyses were conducted within the recommended holding time requirements except for water samples PMA-MW-5M-1210, PMA-MW-6D-1210, PMA-MW-3M-1210, PMA-MW-3S-1210, PMA-MW-1S-1210, PMA-MW-2M-1210 and PMA-MW-2S-1210.

The cooler receipt form indicated that the five coolers were received by the laboratory at temperatures below the 4°C $\pm$ 2°C criteria. Samples received were in good condition and not frozen; therefore, no qualification of data was required.

3.0 LABORATORY METHOD BLANK 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 blanks.

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 PCBs 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; therefore, 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. All LCS recoveries were within evaluation criteria except for

the following: nonachlorobiphenyl results for water samples PMA-MW-4D-1210, PMA-MW-4S-1210, PMA-MW-5M-1210, PMA-MW-5M-1210, PMA-MW-6D-1210, PMA-MW-6D-1210, PMA-MW-3M-1210, PMA-MW-3S-1210, PMA-MW-1M-1210, PMA-MW-1S-1210, PMA-MW-2M-1210, PMA-MW-2S-1210. The laboratory qualified the results for those samples, and no other 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 ten 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. The MS/MSD duplicate recoveries for batch 189105 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Sample PMA-MW-2M-1210 was spiked and analyzed for PCBs in SDG KPM040. All MS/MSD recoveries were within evaluation criteria. No qualification of data was required.

7.0 FIELD DUPLICATE RESULTS

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

One field duplicate sample was collected for the ten 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 PCBs (Method 680), the IS areas must be within +/- 30 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. If the IS area count is outside criteria, Method 680 indicates the mean IS area obtained during the initial calibration (ICAL) (+/- 50 percent) should be used.

The internal standards area responses for PCBs were verified for the data reviews. IS responses met the criteria as described above.

9.0 RESULTS REPORTED FROM DILUTIONS

Sample PMA-MW-4S-1210 was diluted due to abundance of target analytes. The diluted sample results for PCBs were reported at the lowest possible reporting limit.

10. MASS SPECTROMETER TUNING

Instrument performance was determined to be satisfactory; therefore, 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%. Instrument calibration was determined to be satisfactory; therefore, no qualifications of data were required.

12.0 COMPOUND IDENTIFICATION

Compound identification was determined to be satisfactory; therefore, no qualifications of data were required.

13.0 OTHER PROBLEMS/DOCUMENTATION

Other problems with non-compliance, field documentation, etc., were not identified; therefore, no qualifications of data were required.

APPENDIX D

GROUNDWATER ANALYTICAL RESULTS (WITH DATA REVIEW SHEETS)

SDG KPM040

Results of Samples from Monitoring Wells:
PMA-MW-1M
PMA-MW-1S
PMA-MW-2M
PMA-MW-2S
PMA-MW-3M
PMA-MW-3S
PMA-MW-4D
PMA-MW-4S
PMA-MW-5M
PMA-MW-6D

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-63899-1

SDG Number: KPM040

Job Description: WGK PCB GW Quality 4Q10 - DEC 2010

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

Attention: Mr. Jerry Rinaldi

Lidya Gulizia

Approved for release.
Lidya Gulizia
Project Manager I
1/31/2011 10:55 AM

Lidya Gulizia
Project Manager I
lidya.gulizia@testamericainc.com
01/31/2011

cc: Mr. Duane Kreuger

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

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

Job Narrative
680-63899-1 / SDG KPM040

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

GC/MS Semi VOA
Method(s) 680: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 189105 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 680: The following sample(s) was diluted due to the nature of the sample matrix : PMA-MW-04S-1210 (680-63929-2). As such, surrogate recoveries are not reported, and elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Comments
Select samples were re-extracted outside of the holding time at the instruction of the laboratory project manager to confirm reported detections in the original analysis. Both sets of data are reported for these samples.

No additional comments.

AP 3/1/11

METHOD SUMMARY

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Polychlorinated Biphenyls (PCBs) (GC/MS)	TAL SAV	EPA 680	
Liquid-Liquid Extraction (Separatory Funnel)	TAL SAV		EPA 680

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

EPA = US Environmental Protection Agency

3/1/11

METHOD / ANALYST SUMMARY

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Method	Analyst	Analyst ID
EPA 680	Davis, Nancy	ND

3/1/11

SAMPLE SUMMARY

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-63929-1	PMA-MW-04D-1210	Water	12/09/2010 1500	12/10/2010 0933
680-63929-2	PMA-MW-04S-1210	Water	12/09/2010 1610	12/10/2010 0933
680-64004-1	PMA-MW-5M-1210	Water	12/10/2010 1045	12/11/2010 0953
680-64004-2	PMA-MW-6D-1210	Water	12/10/2010 1230	12/11/2010 0953
680-64004-3	PMA-MW-3M-1210	Water	12/10/2010 1400	12/11/2010 0953
680-64004-4	PMA-MW-3S-1210	Water	12/10/2010 1510	12/11/2010 0953
680-64048-1	PMA-MW-01M-1210	Water	12/13/2010 1245	12/14/2010 0954
680-64048-2	PMA-MW-01S-1210	Water	12/13/2010 1510	12/14/2010 0954
680-64048-2MS	PMA-MW-01S-1210	Water	12/13/2010 1510	12/14/2010 0954
680-64048-2MSD	PMA-MW-01S-1210	Water	12/13/2010 1510	12/14/2010 0954
680-64106-1	PMA-MW-02M-1210	Water	12/14/2010 1130	12/15/2010 1850
680-64106-2FD	PMA-MW-02M-AD-1210	Water	12/14/2010 1130	12/15/2010 1850
680-64106-3	PMA-MW-02S-1210	Water	12/14/2010 1245	12/15/2010 1850
680-64106-4EB	PMA-MW-02S-1210-EB	Water	12/14/2010 1245	12/15/2010 1850

3/1/11

SAMPLE RESULTS

AO 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-04D-1210**

Lab Sample ID: 680-63929-1
Client Matrix: Water

Date Sampled: 12/09/2010 1500
Date Received: 12/10/2010 0933

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-190572		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-189105		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	01/01/2011 0400			Final Weight/Volume:	1 mL
Date Prepared:	12/15/2010 1451			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.16		0.094
Dichlorobiphenyl	0.15		0.094
Trichlorobiphenyl	0.094	U	0.094
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.28	U	0.28
Octachlorobiphenyl	0.28	U	0.28
Nonachlorobiphenyl	0.47	U *	0.47
DCB Decachlorobiphenyl	0.47	U	0.47

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	58		25 - 113

AP 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-04S-1210**

Lab Sample ID: 680-63929-2
Client Matrix: Water

Date Sampled: 12/09/2010 1610
Date Received: 12/10/2010 0933

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-190610		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-189105		Lab File ID:	N/A
Dilution:	1000			Initial Weight/Volume:	1030 mL
Date Analyzed:	01/03/2011 1652			Final Weight/Volume:	1 mL
Date Prepared:	12/15/2010 1451			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	120		97
Dichlorobiphenyl	830		97
Trichlorobiphenyl	2700		97
Tetrachlorobiphenyl	4300		190
Pentachlorobiphenyl	3300		190
Hexachlorobiphenyl	4700		190
Heptachlorobiphenyl	4100		290
Octachlorobiphenyl	620		290
Nonachlorobiphenyl	490	U *	490
DCB Decachlorobiphenyl	490	U	490

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	0	D	25 - 113

AL 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-5M-1210**

Lab Sample ID: 680-64004-1
Client Matrix: Water

Date Sampled: 12/10/2010 1045
Date Received: 12/11/2010 0953

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method: 680
Preparation: 680
Dilution: 1.0
Date Analyzed: 01/01/2011 0501
Date Prepared: 12/15/2010 1451

Analysis Batch: 680-190572
Prep Batch: 680-189105

Instrument ID: MSF
Lab File ID: N/A
Initial Weight/Volume: 1020 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.098	U	0.098
Dichlorobiphenyl	0.098	U	0.098
Trichlorobiphenyl	0.29		0.098
Tetrachlorobiphenyl	0.30		0.20
Pentachlorobiphenyl	0.20	U	0.20
Hexachlorobiphenyl	0.20		0.20
Heptachlorobiphenyl	0.29	U	0.29
Octachlorobiphenyl	0.29	U	0.29
Nonachlorobiphenyl	0.49	U *	0.49
DCB Decachlorobiphenyl	0.49	U	0.49

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	62		25 - 113

AS 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-5M-1210**

Lab Sample ID: 680-64004-1
Client Matrix: Water

Date Sampled: 12/10/2010 1045
Date Received: 12/11/2010 0953

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-192387		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-190477		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	01/21/2011 1645	Run Type: RE		Final Weight/Volume:	1 mL
Date Prepared:	01/03/2011 1437			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.094	U H	0.094
Dichlorobiphenyl	0.094	U H	0.094
Trichlorobiphenyl	0.27	H	0.094
Tetrachlorobiphenyl	0.24	H	0.19
Pentachlorobiphenyl	0.19	U H	0.19
Hexachlorobiphenyl	0.19	U H	0.19
Heptachlorobiphenyl	0.28	U H	0.28
Octachlorobiphenyl	0.28	U H	0.28
Nonachlorobiphenyl	0.47	U H *	0.47
DCB Decachlorobiphenyl	0.47	U H	0.47

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	66		25 - 113

AD 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-6D-1210**

Lab Sample ID: 680-64004-2
Client Matrix: Water

Date Sampled: 12/10/2010 1230
Date Received: 12/11/2010 0953

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-190572		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-189105		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	01/01/2011 0531			Final Weight/Volume:	1 mL
Date Prepared:	12/15/2010 1451			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.13		0.095
Dichlorobiphenyl	0.095	U	0.095
Trichlorobiphenyl	0.26		0.095
Tetrachlorobiphenyl	0.26		0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.29	U	0.29
Octachlorobiphenyl	0.29	U	0.29
Nonachlorobiphenyl	0.48	U *	0.48
DCB Decachlorobiphenyl	0.48	U	0.48

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	62		25 - 113

AO 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-6D-1210**

Lab Sample ID: 680-64004-2
Client Matrix: Water

Date Sampled: 12/10/2010 1230
Date Received: 12/11/2010 0953

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-192387		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-191838		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1051 mL
Date Analyzed:	01/21/2011 1715	Run Type:	RE	Final Weight/Volume:	1 mL
Date Prepared:	01/18/2011 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.15	H	0.095
Dichlorobiphenyl	0.095	U H	0.095
Trichlorobiphenyl	0.21	H	0.095
Tetrachlorobiphenyl	0.24	H	0.19
Pentachlorobiphenyl	0.19	U H	0.19
Hexachlorobiphenyl	0.22	H	0.19
Heptachlorobiphenyl	0.29	U H	0.29
Octachlorobiphenyl	0.29	U H	0.29
Nonachlorobiphenyl	0.48	U H *	0.48
DCB Decachlorobiphenyl	0.48	U H	0.48

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	65		25 - 113

AO 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-3M-1210**

Lab Sample ID: 680-64004-3
Client Matrix: Water

Date Sampled: 12/10/2010 1400
Date Received: 12/11/2010 0953

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-190572	Instrument ID: MSF
Preparation:	680	Prep Batch: 680-189105	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 1050 mL
Date Analyzed:	01/01/2011 0601		Final Weight/Volume: 1 mL
Date Prepared:	12/15/2010 1451		Injection Volume:

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.63		0.095
Dichlorobiphenyl	0.095	U	0.095
Trichlorobiphenyl	0.10		0.095
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.29	U	0.29
Octachlorobiphenyl	0.29	U	0.29
Nonachlorobiphenyl	0.48	U *	0.48
DCB Decachlorobiphenyl	0.48	U	0.48

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	59		25 - 113

AL 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-3M-1210**

Lab Sample ID: 680-64004-3
Client Matrix: Water

Date Sampled: 12/10/2010 1400
Date Received: 12/11/2010 0953

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-192387		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-191838		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1042 mL
Date Analyzed:	01/21/2011 1746	Run Type:	RE	Final Weight/Volume:	1 mL
Date Prepared:	01/18/2011 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.25	H	0.096
Dichlorobiphenyl	0.096	U H	0.096
Trichlorobiphenyl	0.12	H	0.096
Tetrachlorobiphenyl	0.19	U H	0.19
Pentachlorobiphenyl	0.19	U H	0.19
Hexachlorobiphenyl	0.19	U H	0.19
Heptachlorobiphenyl	0.29	U H	0.29
Octachlorobiphenyl	0.29	U H	0.29
Nonachlorobiphenyl	0.48	U H *	0.48
DCB Decachlorobiphenyl	0.48	U H	0.48

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	64		25 - 113

AP 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-3S-1210**

Lab Sample ID: 680-64004-4
Client Matrix: Water

Date Sampled: 12/10/2010 1510
Date Received: 12/11/2010 0953

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-190572		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-189105		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	01/01/2011 0632			Final Weight/Volume:	1 mL
Date Prepared:	12/15/2010 1451			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.38		0.097
Dichlorobiphenyl	0.16		0.097
Trichlorobiphenyl	0.14		0.097
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.29	U	0.29
Octachlorobiphenyl	0.29	U	0.29
Nonachlorobiphenyl	0.49	U *	0.49
DCB Decachlorobiphenyl	0.49	U	0.49

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	69		25 - 113

AC 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-3S-1210**

Lab Sample ID: 680-64004-4
Client Matrix: Water

Date Sampled: 12/10/2010 1510
Date Received: 12/11/2010 0953

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-192387		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-191838		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1049 mL
Date Analyzed:	01/21/2011 1816	Run Type:	RE	Final Weight/Volume:	1 mL
Date Prepared:	01/18/2011 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.095	U H	0.095
Dichlorobiphenyl	0.095	U H	0.095
Trichlorobiphenyl	0.095	U H	0.095
Tetrachlorobiphenyl	0.19	U H	0.19
Pentachlorobiphenyl	0.19	U H	0.19
Hexachlorobiphenyl	0.19	U H	0.19
Heptachlorobiphenyl	0.29	U H	0.29
Octachlorobiphenyl	0.29	U H	0.29
Nonachlorobiphenyl	0.48	U H *	0.48
DCB Decachlorobiphenyl	0.48	U H	0.48

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	62		25 - 113

AO 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-01M-1210**

Lab Sample ID: 680-64048-1
Client Matrix: Water

Date Sampled: 12/13/2010 1245
Date Received: 12/14/2010 0954

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-190572		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-189105		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	01/01/2011 1036			Final Weight/Volume:	1 mL
Date Prepared:	12/15/2010 1451			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.31		0.094
Dichlorobiphenyl	0.094	U	0.094
Trichlorobiphenyl	0.094	U	0.094
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.28	U	0.28
Octachlorobiphenyl	0.28	U	0.28
Nonachlorobiphenyl	0.47	U	0.47
DCB Decachlorobiphenyl	0.47	U	0.47

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	70		25 - 113

3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-01S-1210**

Lab Sample ID: 680-64048-2
Client Matrix: Water

Date Sampled: 12/13/2010 1510
Date Received: 12/14/2010 0954

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-190572		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-189105		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	01/01/2011 0732			Final Weight/Volume:	1 mL
Date Prepared:	12/15/2010 1451			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.097	U	0.097
Dichlorobiphenyl	0.097	U	0.097
Trichlorobiphenyl	0.11		0.097
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.29	U	0.29
Octachlorobiphenyl	0.29	U	0.29
Nonachlorobiphenyl	0.49	U *	0.49
DCB Decachlorobiphenyl	0.49	U	0.49

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	68		25 - 113

AG 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-01S-1210**

Lab Sample ID: 680-64048-2
Client Matrix: Water

Date Sampled: 12/13/2010 1510
Date Received: 12/14/2010 0954

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-192387		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-191838		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1015 mL
Date Analyzed:	01/21/2011 1846	Run Type:	RE	Final Weight/Volume:	1 mL
Date Prepared:	01/18/2011 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.099	U H	0.099
Dichlorobiphenyl	0.099	U H	0.099
Trichlorobiphenyl	0.099	U H	0.099
Tetrachlorobiphenyl	0.20	U H	0.20
Pentachlorobiphenyl	0.20	U H	0.20
Hexachlorobiphenyl	0.20	U H	0.20
Heptachlorobiphenyl	0.30	U H	0.30
Octachlorobiphenyl	0.30	U H	0.30
Nonachlorobiphenyl	0.49	U H *	0.49
DCB Decachlorobiphenyl	0.49	U H	0.49

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	68		25 - 113

3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-02M-1210**

Lab Sample ID: 680-64106-1
Client Matrix: Water

Date Sampled: 12/14/2010 1130
Date Received: 12/15/2010 1850

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-190621		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-189561		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	12/31/2010 1923			Final Weight/Volume:	1 mL
Date Prepared:	12/20/2010 1506			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	2.1		0.094
Dichlorobiphenyl	0.094	U	0.094
Trichlorobiphenyl	0.099		0.094
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.28	U	0.28
Octachlorobiphenyl	0.28	U	0.28
Nonachlorobiphenyl	0.47	U	0.47
DCB Decachlorobiphenyl	0.47	U	0.47

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	63		25 - 113

AD 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-02M-1210**

Lab Sample ID: 680-64106-1
Client Matrix: Water

Date Sampled: 12/14/2010 1130
Date Received: 12/15/2010 1850

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-192387		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-191838		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1056 mL
Date Analyzed:	01/21/2011 1917	Run Type:	RE	Final Weight/Volume:	1 mL
Date Prepared:	01/18/2011 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	2.6	H	0.095
Dichlorobiphenyl	0.095	U H	0.095
Trichlorobiphenyl	0.10	H	0.095
Tetrachlorobiphenyl	0.19	U H	0.19
Pentachlorobiphenyl	0.19	U H	0.19
Hexachlorobiphenyl	0.19	U H	0.19
Heptachlorobiphenyl	0.28	U H	0.28
Octachlorobiphenyl	0.28	U H	0.28
Nonachlorobiphenyl	0.47	U H *	0.47
DCB Decachlorobiphenyl	0.47	U H	0.47

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	52		25 - 113

AC 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-02M-AD-1210**

Lab Sample ID: 680-64106-2FD
Client Matrix: Water

Date Sampled: 12/14/2010 1130
Date Received: 12/15/2010 1850

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-190621		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-189561		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	12/31/2010 1953			Final Weight/Volume:	1 mL
Date Prepared:	12/20/2010 1506			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	2.0		0.097
Dichlorobiphenyl	0.097	U	0.097
Trichlorobiphenyl	0.097	U	0.097
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.29	U	0.29
Octachlorobiphenyl	0.29	U	0.29
Nonachlorobiphenyl	0.49	U	0.49
DCB Decachlorobiphenyl	0.49	U	0.49

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	61		25 - 113

AO 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-02S-1210**

Lab Sample ID: 680-64106-3
Client Matrix: Water

Date Sampled: 12/14/2010 1245
Date Received: 12/15/2010 1850

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-190621	Instrument ID: MSF
Preparation:	680	Prep Batch: 680-189561	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 1060 mL
Date Analyzed:	12/31/2010 2023		Final Weight/Volume: 1 mL
Date Prepared:	12/20/2010 1506		Injection Volume:

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.14		0.094
Dichlorobiphenyl	0.094	U	0.094
Trichlorobiphenyl	0.14		0.094
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.28	U	0.28
Octachlorobiphenyl	0.28	U	0.28
Nonachlorobiphenyl	0.47	U	0.47
DCB Decachlorobiphenyl	0.47	U	0.47

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	80		25 - 113

AC 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-02S-1210**

Lab Sample ID: 680-64106-3
Client Matrix: Water

Date Sampled: 12/14/2010 1245
Date Received: 12/15/2010 1850

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-192387		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-191838		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1052 mL
Date Analyzed:	01/21/2011 1948	Run Type:	RE	Final Weight/Volume:	1 mL
Date Prepared:	01/18/2011 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.14	H	0.095
Dichlorobiphenyl	0.095	U H	0.095
Trichlorobiphenyl	0.10	H	0.095
Tetrachlorobiphenyl	0.19	U H	0.19
Pentachlorobiphenyl	0.19	U H	0.19
Hexachlorobiphenyl	0.19	U H	0.19
Heptachlorobiphenyl	0.29	U H	0.29
Octachlorobiphenyl	0.29	U H	0.29
Nonachlorobiphenyl	0.48	U H *	0.48
DCB Decachlorobiphenyl	0.48	U H	0.48

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	47		25 - 113

3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Client Sample ID: **PMA-MW-02S-1210-EB**

Lab Sample ID: 680-64106-4EB
Client Matrix: Water

Date Sampled: 12/14/2010 1245
Date Received: 12/15/2010 1850

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-190621		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-189561		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	12/31/2010 2054			Final Weight/Volume:	1 mL
Date Prepared:	12/20/2010 1506			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.095	U	0.095
Dichlorobiphenyl	0.095	U	0.095
Trichlorobiphenyl	0.095	U	0.095
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.29	U	0.29
Octachlorobiphenyl	0.29	U	0.29
Nonachlorobiphenyl	0.48	U	0.48
DCB Decachlorobiphenyl	0.48	U	0.48

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	63		25 - 113

AG 3/1/11

DATA REPORTING QUALIFIERS

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	*	LCS or LCSD exceeds the control limits
	F	MS or MSD exceeds the control limits
	H	Sample was prepped or analyzed beyond the specified holding time
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

AL 3/1/11

QUALITY CONTROL RESULTS

AR 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 680-189105					
LCS 680-189105/11-A	Lab Control Sample	T	Water	680	
MB 680-189105/10-A	Method Blank	T	Water	680	
680-63929-1	PMA-MW-04D-1210	T	Water	680	
680-63929-2	PMA-MW-04S-1210	T	Water	680	
680-64004-1	PMA-MW-5M-1210	T	Water	680	
680-64004-2	PMA-MW-6D-1210	T	Water	680	
680-64004-3	PMA-MW-3M-1210	T	Water	680	
680-64004-4	PMA-MW-3S-1210	T	Water	680	
680-64048-1	PMA-MW-01M-1210	T	Water	680	
680-64048-2	PMA-MW-01S-1210	T	Water	680	
680-64048-2MS	Matrix Spike	T	Water	680	
680-64048-2MSD	Matrix Spike Duplicate	T	Water	680	
Prep Batch: 680-189561					
LCS 680-189561/18-A	Lab Control Sample	T	Water	680	
MB 680-189561/17-A	Method Blank	T	Water	680	
680-64106-1	PMA-MW-02M-1210	T	Water	680	
680-64106-2FD	PMA-MW-02M-AD-1210	T	Water	680	
680-64106-3	PMA-MW-02S-1210	T	Water	680	
680-64106-4EB	PMA-MW-02S-1210-EB	T	Water	680	
Prep Batch: 680-190477					
LCS 680-190477/3-A	Lab Control Sample	T	Water	680	
MB 680-190477/2-A	Method Blank	T	Water	680	
680-64004-1RE	PMA-MW-5M-1210	T	Water	680	
Analysis Batch:680-190572					
LCS 680-189105/11-A	Lab Control Sample	T	Water	680	680-189105
MB 680-189105/10-A	Method Blank	T	Water	680	680-189105
680-63929-1	PMA-MW-04D-1210	T	Water	680	680-189105
680-64004-1	PMA-MW-5M-1210	T	Water	680	680-189105
680-64004-2	PMA-MW-6D-1210	T	Water	680	680-189105
680-64004-3	PMA-MW-3M-1210	T	Water	680	680-189105
680-64004-4	PMA-MW-3S-1210	T	Water	680	680-189105
680-64048-1	PMA-MW-01M-1210	T	Water	680	680-189105
680-64048-2	PMA-MW-01S-1210	T	Water	680	680-189105
680-64048-2MS	Matrix Spike	T	Water	680	680-189105
Analysis Batch:680-190610					
680-63929-2	PMA-MW-04S-1210	T	Water	680	680-189105
680-64048-2MSD	Matrix Spike Duplicate	T	Water	680	680-189105

AO 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Analysis Batch:680-190621					
LCS 680-189561/18-A	Lab Control Sample	T	Water	680	680-189561
MB 680-189561/17-A	Method Blank	T	Water	680	680-189561
680-64106-1	PMA-MW-02M-1210	T	Water	680	680-189561
680-64106-2FD	PMA-MW-02M-AD-1210	T	Water	680	680-189561
680-64106-3	PMA-MW-02S-1210	T	Water	680	680-189561
680-64106-4EB	PMA-MW-02S-1210-EB	T	Water	680	680-189561
Analysis Batch:680-191343					
LCS 680-190477/3-A	Lab Control Sample	T	Water	680	680-190477
MB 680-190477/2-A	Method Blank	T	Water	680	680-190477
Prep Batch: 680-191838					
LCS 680-191838/8-A	Lab Control Sample	T	Water	680	
LCSD 680-191838/9-A	Lab Control Sample Duplicate	T	Water	680	
MB 680-191838/7-A	Method Blank	T	Water	680	
680-64004-2RE	PMA-MW-6D-1210	T	Water	680	
680-64004-3RE	PMA-MW-3M-1210	T	Water	680	
680-64004-4RE	PMA-MW-3S-1210	T	Water	680	
680-64048-2RE	PMA-MW-01S-1210	T	Water	680	
680-64106-1RE	PMA-MW-02M-1210	T	Water	680	
680-64106-3RE	PMA-MW-02S-1210	T	Water	680	
Analysis Batch:680-192387					
LCS 680-191838/8-A	Lab Control Sample	T	Water	680	680-191838
LCSD 680-191838/9-A	Lab Control Sample Duplicate	T	Water	680	680-191838
MB 680-191838/7-A	Method Blank	T	Water	680	680-191838
680-64004-1RE	PMA-MW-5M-1210	T	Water	680	680-190477
680-64004-2RE	PMA-MW-6D-1210	T	Water	680	680-191838
680-64004-3RE	PMA-MW-3M-1210	T	Water	680	680-191838
680-64004-4RE	PMA-MW-3S-1210	T	Water	680	680-191838
680-64048-2RE	PMA-MW-01S-1210	T	Water	680	680-191838
680-64106-1RE	PMA-MW-02M-1210	T	Water	680	680-191838
680-64106-3RE	PMA-MW-02S-1210	T	Water	680	680-191838

Report Basis
T = Total

AG 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Surrogate Recovery Report

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	13DCB %Rec
680-63929-1	PMA-MW-04D-1210	58
680-63929-2	PMA-MW-04S-1210	0D
680-64004-1	PMA-MW-5M-1210	62
680-64004-1 RE	PMA-MW-5M-1210 RE	66
680-64004-2	PMA-MW-6D-1210	62
680-64004-2 RE	PMA-MW-6D-1210 RE	65
680-64004-3	PMA-MW-3M-1210	59
680-64004-3 RE	PMA-MW-3M-1210 RE	64
680-64004-4	PMA-MW-3S-1210	69
680-64004-4 RE	PMA-MW-3S-1210 RE	62
680-64048-1	PMA-MW-01M-1210	70
680-64048-2	PMA-MW-01S-1210	68
680-64048-2 RE	PMA-MW-01S-1210 RE	68
680-64106-1	PMA-MW-02M-1210	63
680-64106-1 RE	PMA-MW-02M-1210 RE	52
680-64106-2	PMA-MW-02M-AD-1210	61
680-64106-3	PMA-MW-02S-1210	80
680-64106-3 RE	PMA-MW-02S-1210 RE	47
680-64106-4	PMA-MW-02S-1210-EB	63
MB 680-189105/10-A		74
MB 680-189561/17-A		78
MB 680-190477/2-A		68
MB 680-191838/7-A		66
LCS 680-189105/11-A		78

Surrogate	Acceptance Limits
13DCB = Decachlorobiphenyl-13C12	25-113

AG 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Surrogate Recovery Report

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	13DCB %Rec
LCS 680-189561/18-A		74
LCS 680-190477/3-A		87
LCS 680-191838/8-A		91
LCSD 680-191838/9-A		70
680-64048-2 MS	PMA-MW-01S-1210 MS	65
680-64048-2 MSD	PMA-MW-01S-1210 MSD	68

Surrogate	Acceptance Limits
13DCB = Decachlorobiphenyl-13C12	25-113

3/11/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Method Blank - Batch: 680-189105

Method: 680
Preparation: 680

Lab Sample ID: MB 680-189105/10-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/01/2011 0230
Date Prepared: 12/15/2010 1451

Analysis Batch: 680-190572
Prep Batch: 680-189105
Units: ug/L

Instrument ID: MSF
Lab File ID: N/A
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Result	Qual	RL
Monochlorobiphenyl	0.10	U	0.10
Dichlorobiphenyl	0.10	U	0.10
Trichlorobiphenyl	0.10	U	0.10
Tetrachlorobiphenyl	0.20	U	0.20
Pentachlorobiphenyl	0.20	U	0.20
Hexachlorobiphenyl	0.20	U	0.20
Heptachlorobiphenyl	0.30	U	0.30
Octachlorobiphenyl	0.30	U	0.30
Nonachlorobiphenyl	0.50	U	0.50
DCB Decachlorobiphenyl	0.50	U	0.50

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl-13C12	74	25 - 113

Lab Control Sample - Batch: 680-189105

Method: 680
Preparation: 680

Lab Sample ID: LCS 680-189105/11-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/01/2011 0300
Date Prepared: 12/15/2010 1451

Analysis Batch: 680-190572
Prep Batch: 680-189105
Units: ug/L

Instrument ID: MSF
Lab File ID: N/A
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Monochlorobiphenyl	2.00	1.45	72	10 - 125	
Dichlorobiphenyl	2.00	1.46	73	10 - 110	
Trichlorobiphenyl	2.00	1.44	72	17 - 110	
Tetrachlorobiphenyl	4.00	2.91	73	18 - 110	
Pentachlorobiphenyl	4.00	3.05	76	34 - 110	
Hexachlorobiphenyl	4.00	3.02	76	31 - 110	
Heptachlorobiphenyl	6.00	4.68	78	33 - 110	
Octachlorobiphenyl	6.00	4.71	78	33 - 110	
Nonachlorobiphenyl	10.0	11.8	118	26 - 115	*
DCB Decachlorobiphenyl	10.0	7.41	74	26 - 115	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl-13C12	78	25 - 113

AS 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-189105

Method: 680
Preparation: 680

MS Lab Sample ID:	680-64048-2	Analysis Batch: 680-190572	Instrument ID: MSF
Client Matrix:	Water	Prep Batch: 680-189105	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 1020 mL
Date Analyzed:	01/01/2011 0832		Final Weight/Volume: 1 mL
Date Prepared:	12/15/2010 1451		Injection Volume:

MSD Lab Sample ID:	680-64048-2	Analysis Batch: 680-190610	Instrument ID: MSF
Client Matrix:	Water	Prep Batch: 680-189105	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 1030 mL
Date Analyzed:	01/03/2011 1352		Final Weight/Volume: 1 mL
Date Prepared:	12/15/2010 1451		Injection Volume:

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Monochlorobiphenyl	66	51	10 - 125	26	40		
Dichlorobiphenyl	71	55	10 - 110	25	40		
Trichlorobiphenyl	71	55	17 - 110	25	40		
Tetrachlorobiphenyl	69	56	18 - 110	21	40		
Pentachlorobiphenyl	207	173	34 - 110	19	40	F	F
Hexachlorobiphenyl	71	63	31 - 110	12	40		
Heptachlorobiphenyl	73	66	33 - 110	10	40		
Octachlorobiphenyl	68	64	33 - 110	6	40		
Nonachlorobiphenyl	94	100	26 - 115	5	40		
DCB Decachlorobiphenyl	62	67	26 - 115	7	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Decachlorobiphenyl-13C12	65	68	25 - 113

AO 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Method Blank - Batch: 680-189561

Method: 680
Preparation: 680

Lab Sample ID: MB 680-189561/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/31/2010 1823
Date Prepared: 12/20/2010 1506

Analysis Batch: 680-190621
Prep Batch: 680-189561
Units: ug/L

Instrument ID: MSF
Lab File ID: N/A
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Result	Qual	RL
Monochlorobiphenyl	0.10	U	0.10
Dichlorobiphenyl	0.10	U	0.10
Trichlorobiphenyl	0.10	U	0.10
Tetrachlorobiphenyl	0.20	U	0.20
Pentachlorobiphenyl	0.20	U	0.20
Hexachlorobiphenyl	0.20	U	0.20
Heptachlorobiphenyl	0.30	U	0.30
Octachlorobiphenyl	0.30	U	0.30
Nonachlorobiphenyl	0.50	U	0.50
DCB Decachlorobiphenyl	0.50	U	0.50

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl-13C12	78	25 - 113

Lab Control Sample - Batch: 680-189561

Method: 680
Preparation: 680

Lab Sample ID: LCS 680-189561/18-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/31/2010 1853
Date Prepared: 12/20/2010 1506

Analysis Batch: 680-190621
Prep Batch: 680-189561
Units: ug/L

Instrument ID: MSF
Lab File ID: N/A
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Monochlorobiphenyl	2.00	1.38	69	10 - 125	
Dichlorobiphenyl	2.00	1.45	73	10 - 110	
Trichlorobiphenyl	2.00	1.49	75	17 - 110	
Tetrachlorobiphenyl	4.00	2.96	74	18 - 110	
Pentachlorobiphenyl	4.00	3.14	78	34 - 110	
Hexachlorobiphenyl	4.00	3.00	75	31 - 110	
Heptachlorobiphenyl	6.00	4.54	76	33 - 110	
Octachlorobiphenyl	6.00	4.44	74	33 - 110	
Nonachlorobiphenyl	10.0	11.3	113	26 - 115	
DCB Decachlorobiphenyl	10.0	7.26	73	26 - 115	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl-13C12	74	25 - 113

AG 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Method Blank - Batch: 680-190477

Method: 680
Preparation: 680

Lab Sample ID: MB 680-190477/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/11/2011 2044
Date Prepared: 01/03/2011 1437

Analysis Batch: 680-191343
Prep Batch: 680-190477
Units: ug/L

Instrument ID: MSF
Lab File ID: N/A
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Result	Qual	RL
Monochlorobiphenyl	0.10	U	0.10
Dichlorobiphenyl	0.10	U	0.10
Trichlorobiphenyl	0.10	U	0.10
Tetrachlorobiphenyl	0.20	U	0.20
Pentachlorobiphenyl	0.20	U	0.20
Hexachlorobiphenyl	0.20	U	0.20
Heptachlorobiphenyl	0.30	U	0.30
Octachlorobiphenyl	0.30	U	0.30
Nonachlorobiphenyl	0.50	U	0.50
DCB Decachlorobiphenyl	0.50	U	0.50

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl-13C12	68	25 - 113

Lab Control Sample - Batch: 680-190477

Method: 680
Preparation: 680

Lab Sample ID: LCS 680-190477/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/11/2011 2114
Date Prepared: 01/03/2011 1437

Analysis Batch: 680-191343
Prep Batch: 680-190477
Units: ug/L

Instrument ID: MSF
Lab File ID: N/A
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Monochlorobiphenyl	2.00	1.25	63	10 - 125	
Dichlorobiphenyl	2.00	1.46	73	10 - 110	
Trichlorobiphenyl	2.00	1.52	76	17 - 110	
Tetrachlorobiphenyl	4.00	3.10	78	18 - 110	
Pentachlorobiphenyl	4.00	3.34	83	34 - 110	
Hexachlorobiphenyl	4.00	3.38	84	31 - 110	
Heptachlorobiphenyl	6.00	5.14	86	33 - 110	
Octachlorobiphenyl	6.00	5.12	85	33 - 110	
Nonachlorobiphenyl	10.0	11.7	117	26 - 115	*
DCB Decachlorobiphenyl	10.0	8.18	82	26 - 115	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl-13C12	87	25 - 113

AG 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Method Blank - Batch: 680-191838

Method: 680
Preparation: 680

Lab Sample ID: MB 680-191838/7-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/21/2011 1514
Date Prepared: 01/18/2011 1417

Analysis Batch: 680-192387
Prep Batch: 680-191838
Units: ug/L

Instrument ID: MSF
Lab File ID: N/A
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Result	Qual	RL
Monochlorobiphenyl	0.10	U	0.10
Dichlorobiphenyl	0.10	U	0.10
Trichlorobiphenyl	0.10	U	0.10
Tetrachlorobiphenyl	0.20	U	0.20
Pentachlorobiphenyl	0.20	U	0.20
Hexachlorobiphenyl	0.20	U	0.20
Heptachlorobiphenyl	0.30	U	0.30
Octachlorobiphenyl	0.30	U	0.30
Nonachlorobiphenyl	0.50	U	0.50
DCB Decachlorobiphenyl	0.50	U	0.50

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl-13C12	66	25 - 113

AG 3/1/11

Client: Solutia Inc.

Job Number: 680-63899-1
Sdg Number: KPM040

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-191838

Method: 680
Preparation: 680

LCS Lab Sample ID:	LCS 680-191838/8-A	Analysis Batch:	680-192387	Instrument ID:	MSF
Client Matrix:	Water	Prep Batch:	680-191838	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	01/21/2011 1544			Final Weight/Volume:	1 mL
Date Prepared:	01/18/2011 1417			Injection Volume:	

LCSD Lab Sample ID:	LCSD 680-191838/9-A	Analysis Batch:	680-192387	Instrument ID:	MSF
Client Matrix:	Water	Prep Batch:	680-191838	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	01/21/2011 1614			Final Weight/Volume:	1 mL
Date Prepared:	01/18/2011 1417			Injection Volume:	

	% Rec.					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Monochlorobiphenyl	80	70	10 - 125	13	40		
Dichlorobiphenyl	85	78	10 - 110	8	40		
Trichlorobiphenyl	86	80	17 - 110	6	40		
Tetrachlorobiphenyl	88	82	18 - 110	7	40		
Pentachlorobiphenyl	89	87	34 - 110	3	40		
Hexachlorobiphenyl	95	90	31 - 110	6	40		
Heptachlorobiphenyl	94	89	33 - 110	6	40		
Octachlorobiphenyl	96	87	33 - 110	9	40		
Nonachlorobiphenyl	143	138	26 - 115	4	40	*	*
DCB Decachlorobiphenyl	93	84	26 - 115	11	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Decachlorobiphenyl-13C12	91	70	25 - 113

AG 3/1/11

Serial Number 033940

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	PROJECT NO.	PROJECT LOCATION (STATE)
TAL (LAB) PROJECT MANAGER: LIDYA GULIZIA	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM	CLIENT PHONE: 314 674-3312	CLIENT FAX
CLIENT NAME: GM RINALDI	CLIENT E-MAIL: gmrina@solutia.com	
CLIENT ADDRESS: SOLUTIA / 575 MARYVILLE CTR, STL MO		
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:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	REQUIRED ANALYSIS: TOTAL PCB	REQUIRED ANALYSIS: PRESERVATIVE	NUMBER OF CONTAINERS SUBMITTED	REMARKS
								none	PRESERVATIVE		
12-8-10	1100	PMA-MW-05M-121D	G	W						2	

Page 38 of 47

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Emma L Rinaldi	12-8-10	2000						
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
Ruth McKnight	12/9/10	0912	YES ○ NO ○		680-63899	Temp 0.6

TAL 8240-680 (1008)

RG 12/11/10

Serial Number 033942

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	PROJECT NO.	PROJECT LOCATION (STATE)
WGK PCB 4Q10		IL
TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
LIDIA G.		
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
GM RWALDI	314-674-3312	314-674-8
CLIENT NAME	CLIENT E-MAIL	
SOLUTIA	gmrina@solutia.com	
CLIENT ADDRESS		
575 MARYVILLE CENTRE DR ST. LOUIS MO 63141		
COMPANY CONTRACTING THIS WORK (if applicable)		

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

REQUIRED ANALYSIS: TOTAL PCBs 680

PRESERVATIVE: none

PAGE 1 OF 1

STANDARD REPORT DELIVERY ☒

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ◯

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX	NUMBER OF CONTAINERS SUBMITTED	REMARKS
12-9-10	1500	PMA-MW-04D-1210	GW	2	
12-9-10	1610	PMA-MW-04S-1210	GW	2	

Page 39 of 47

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	12-9-10	1800						
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
	12/10/10	0933	YES ◯ NO ◯		680-63929	3.7°C

TAL 8240-680 (1008)

Serial Number 033125

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	PROJECT NO.	PROJECT LOCATION (STATE)	PAGE	OF
WGK-PCB-4Q10				

TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
GIDYA B		

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
GM RINALDI	314-674-3312	314-674-8808

CLIENT NAME	CLIENT E-MAIL
SOLUTIA	gmrina@solutia.com

CLIENT ADDRESS

COMPANY CONTRACTING THIS WORK (if applicable)

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: none TOTAL PCB 680

PRESERVATIVE

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
12-10-10	1645	PMA-MW-5M-1210	G	W				2	
	1230	PMA-MW-6D-1210	G	W				2	
	1400	PMA-MW-3M-1210	G	W				2	
	1510	PMA-MW-3S-1210	G	W				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	12-10-10	1700						
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]	12/11/10	0953	YES ◯ NO ◯		680-64004	1.2°C

TAL8240-680 (1207)

AG 3/1/11

Serial Number 033126

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	PROJECT NO.	PROJECT LOCATION (STATE)
WGK-PCB-4Q10		IL
TAL (LAB) PROJECT MANAGER	**P.O. NUMBER**	**CONTRACT NO.**
LIDIA G		
CLIENT (SITE) PM	**CLIENT PHONE**	**CLIENT FAX**
GM RINALDI	314-674-3312	314-674-8820
CLIENT NAME	**CLIENT E-MAIL**	
SOLUTIA	grinal@solutia.com	
CLIENT ADDRESS		
575 MARYVILLE CTR DR SST, MO 63141		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE ____ OF ____

STANDARD REPORT DELIVERY ☒

DATE DUE ____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE ____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: ____

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) (INDICATE)	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	REQUIRED ANALYSIS: TOTAL PCBs 680	REQUIRED ANALYSIS: PRESERVATIVE	NUMBER OF CONTAINERS SUBMITTED	REMARKS
12-13-10	1245	PMA-MW-01M-1210	G	W				none		2	
Page 41	1510	PMA-MW-01S-MS-1210	G	W						2	
↓	1510	PMA-MW-01S-MSD-1210	G	W						2	
of 12-13-10	1510	PMA-MW-01S-1210	G	W						2	
47											

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	12-13-10	1800						
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]	12/14/10	0954	YES ○ NO ○		680-64048	0.2

TAL-8240-680 (1207)

AC 3/1/11

Serial Number 032441

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

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Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE) IL
TAL (LAB) PROJECT MANAGER: LIDYA G.	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: GM RINALDI	CLIENT PHONE: 314-674-3312	CLIENT FAX: 314-674-8808
CLIENT NAME: SOLUTIA	CLIENT E-MAIL: gmrina@solutia.com	
CLIENT ADDRESS: 575 MARYVILLE CTR DR STL, MO 63141		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE ___ OF ___

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: Total PCB 680; None

PRESERVATIVE

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, ...)	Total PCB 680	REMARKS
12-14-10	1130	PMA-MW-02M-1210	G	W				2	Rinsed $Na_2S_2O_3$
12-14-10	1130	PMA-MW-02M-AD-1210	G	W				2	↓
12-14-10	1245	PMA-MW-02S-1210	G	W				2	↓
12-14-10	1245	PMA-MW-02S-1210-EB	G	W				2	↓

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	12-14-10	1800						
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]	12/15/10	0957	YES ○ NO ○		680-64106	3.8

TAL8240-680 (1207)

Login Sample Receipt Check List

Client: Solutia Inc.

Job Number: 680-63899-1
SDG Number: KPM040

Login Number: 63899
Creator: Daughtry, Beth
List Number: 1

List Source: TestAmerica Savannah

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	MS/MSD not received in sample receipt for SDG.
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
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	

3/1/11

Login Sample Receipt Check List

Client: Solutia Inc.

Job Number: 680-63899-1
SDG Number: KPM040

Login Number: 63929
Creator: Hornsby, Jess
List Number: 1

List Source: TestAmerica Savannah

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.7 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	MS/MSD not received in sample receipt.
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

AG 3/1/11

Login Sample Receipt Check List

Client: Solutia Inc.

Job Number: 680-63899-1
SDG Number: KPM040

Login Number: 64004
Creator: Hornsby, Jess
List Number: 1

List Source: TestAmerica Savannah

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2 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	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	MS/MSD not received in client receipt.
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

AO 3/1/11

Login Sample Receipt Check List

Client: Solutia Inc.

Job Number: 680-63899-1
SDG Number: KPM040

Login Number: 64048
Creator: Stokes, Mark E
List Number: 1

List Source: TestAmerica Savannah

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2 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	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	Received MS/MSD for SDG in sample receipt.
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

3/1/11

Login Sample Receipt Check List

Client: Solutia Inc.

Job Number: 680-63899-1
SDG Number: KPM040

Login Number: 64106
Creator: Stokes, Mark E
List Number: 1

List Source: TestAmerica Savannah

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.8 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	N/A	
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.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

AC 3/1/11

MJW CORPORATION
Radiation Consulting Professionals

March 7, 2011

Mr. Duane T. Kreuger
Geotechnology, Inc.
11816 Lackland Road Suite 150
St. Louis, MO63146

Dear Mr. Kreuger:

The data reported by Test America Laboratories under SDG KPM040 has been reviewed for quality assurance validation. Data was reported for PCB's for 14 samples as requested by Geotechnology, Inc. The 14 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 been approved for use as no samples required qualification.

- **PMA-MW-4D-1210 (Lab ID: 680-63929-1)**
- **PMA-MW-4S-1210 (Lab ID: 680-63929-2)**
- **PMA-MW-5M-1210 (Lab ID: 680-64004-1)**
- **PMA-MW-6D-1210 (Lab ID: 680-64004-2)**
- PMA-MW-3M-1210 (Lab ID: 680-64004-3)
- PMA-MW-3S-1210 (Lab ID: 680-64004-4)
- PMA-MW-1M-1210 (Lab ID: 680-64048-1)
- PMA-MW-1S-1210 (Lab ID: 680-64048-2)
- PMA-MW-1S-1210 MS (Lab ID: 680-64048-2 MS)
- PMA-MW-1S-1210 MSD (Lab ID: 680-64048-2 MSD)
- PMA-MW-2M-1210 (Lab ID: 680-64106-1)
- PMA-MW-2M-1210-AD (Lab ID: 680-64106-2 FD)
- PMA-MW-2S-1210 (Lab ID: 680-64106-3)
- PMA-MW-2S-1210-EB (Lab ID: 680-64106-4 EB)

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

Annette Guilds, CES
Senior Scientist

Approved by:

David A. Dooley

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

4th Quarter 2010 Data Validation Report
PCB Groundwater Quality Assessment Program
SDG: KPM040

Prepared for

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

March 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.: KPM040 LABORATORY: Test America
SITE: Solutia W.G. Krummrich Plant (PCB Site)

DATA ASSESSMENT

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.

All data is fully acceptable and usable.

Reviewer's Signature: Annette Cerlich Date: 3/07/2011

MJW Approval: David A. Dooley Date: 3/07/2011

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.

Samples PMA-MW-5M-1210, PMA-MW-6D-1210, PMA-MW-3M-1210, PMA-MW-3S-1210, PMA-MW-01S-1210, PMA-MW-02M-1210, and PMA-MW-02S-1210 were re-extracted outside of the holding time at the instruction of the laboratory project manager and re-analyzed to confirm reported detections in the original analysis. The validator recommends using only the original analysis results and thus has not applied any qualifiers to the re-extracted/re-analyzed data.

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.

The surrogate recovery for sample PMA-MW-04S-1210 is 0%. This was due to the fact that the sample results were out of range and had to be diluted and rerun. Thus, qualification of this sample is not required.

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.

Although both the MS and MSD were out of control for Pentachlorobiphenyl, no data was qualified as all other QC was acceptable.

4. LABORATORY CONTROL SAMPLE/DUPLICATE, LCS/LCSD

Although both the LCS and LCSD were out of control for Nonachlorobiphenyl, no data was qualified as all other QC was acceptable.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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.

Form X was not completed for those samples in which there was a positive hit for PCB's.

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

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

12. FIELD DOCUMENTATION:

A field duplicate was analyzed for sample PMA-MW-02M-1210 and all %RPD's were acceptable.

13. OTHER PROBLEMS: **None**

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

Samples PMA-MW-5M-1210, PMA-MW-6D-1210, PMA-MW-3M-1210, PMA-MW-3S-1210, PMA-MW-01S-1210, PMA-MW-02M-1210, and PMA-MW-02S-1210 were re-extracted and re-analyzed at the instruction of the laboratory project manager to confirm reported detections in the original analysis. The validator recommends to only report/use the original analysis results as the re-extractions were beyond the acceptable holding time.

Data Outlier Forms

Accuracy Statements, LCS

Samples Affected	Matrix	Analyte	Percent Recovery	Control Limits	Qualifier
PMA-MW-4D-1210	Water	Nonachlorobiphenyl	118.0%	26-115%	none
PMA-MW-4S-1210	Water	Nonachlorobiphenyl	118.0%	26-115%	none
PMA-MW-5M-1210	Water	Nonachlorobiphenyl	118.0%	26-115%	none
PMA-MW-6D-1210	Water	Nonachlorobiphenyl	118.0%	26-115%	none
PMA-MW-3M-1210	Water	Nonachlorobiphenyl	118.0%	26-115%	none
PMA-MW-5S-1210	Water	Nonachlorobiphenyl	118.0%	26-115%	none
PMA-MW-1M-1210	Water	Nonachlorobiphenyl	118.0%	26-115%	none
PMA-MW-1S-1210	Water	Nonachlorobiphenyl	118.0%	26-115%	none
PMA-MW-5S-1210 RE	Water	Nonachlorobiphenyl	117.0%	26-115%	none
PMA-MW-6D-1210 RE	Water	Nonachlorobiphenyl	143.0%	26-115%	none
PMA-MW-3M-1210 RE	Water	Nonachlorobiphenyl	143.0%	26-115%	none
PMA-MW-5S-1210 RE	Water	Nonachlorobiphenyl	143.0%	26-115%	none
PMA-MW-1S-1210 RE	Water	Nonachlorobiphenyl	143.0%	26-115%	none
PMA-MW-2M-1210 RE	Water	Nonachlorobiphenyl	143.0%	26-115%	none
PMA-MW-2S-1210 RE	Water	Nonachlorobiphenyl	143.0%	26-115%	none
PMA-MW-6D-1210 RE	Water	Nonachlorobiphenyl	138.0%	26-115%	none
PMA-MW-3M-1210 RE	Water	Nonachlorobiphenyl	138.0%	26-115%	none
PMA-MW-5S-1210 RE	Water	Nonachlorobiphenyl	138.0%	26-115%	none
PMA-MW-1S-1210 RE	Water	Nonachlorobiphenyl	138.0%	26-115%	none
PMA-MW-2M-1210 RE	Water	Nonachlorobiphenyl	138.0%	26-115%	none
PMA-MW-2S-1210 RE	Water	Nonachlorobiphenyl	138.0%	26-115%	none

Samples Affected	Matrix	Analyte	Percent Recovery	Control Limits	Qualifier
PMA-MW-4D-1210	Water	Pentachlorobiphenyl	207.0%	34-110%	none
PMA-MW-4S-1210	Water	Pentachlorobiphenyl	207.0%	34-110%	none
PMA-MW-5M-1210	Water	Pentachlorobiphenyl	207.0%	34-110%	none
PMA-MW-6D-1210	Water	Pentachlorobiphenyl	207.0%	34-110%	none
PMA-MW-3M-1210	Water	Pentachlorobiphenyl	207.0%	34-110%	none
PMA-MW-5S-1210	Water	Pentachlorobiphenyl	207.0%	34-110%	none
PMA-MW-1M-1210	Water	Pentachlorobiphenyl	207.0%	34-110%	none
PMA-MW-1S-1210	Water	Pentachlorobiphenyl	207.0%	34-110%	none
PMA-MW-4D-1210	Water	Pentachlorobiphenyl	173.0%	34-110%	none
PMA-MW-4S-1210	Water	Pentachlorobiphenyl	173.0%	34-110%	none
PMA-MW-5M-1210	Water	Pentachlorobiphenyl	173.0%	34-110%	none
PMA-MW-6D-1210	Water	Pentachlorobiphenyl	173.0%	34-110%	none
PMA-MW-3M-1210	Water	Pentachlorobiphenyl	173.0%	34-110%	none
PMA-MW-5S-1210	Water	Pentachlorobiphenyl	173.0%	34-110%	none
PMA-MW-1M-1210	Water	Pentachlorobiphenyl	173.0%	34-110%	none
PMA-MW-1S-1210	Water	Pentachlorobiphenyl	173.0%	34-110%	none