SOLUTIA

Solutions for a better life.

Solutia Inc.
575 Maryville Centre Drive
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April 27, 2010

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

VIA FEDEX

Re: PCB Groundwater Quality Assessment Program
1st Quarter 2010 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

Dear Mr. Bardo:

Enclosed please find the PCB Groundwater Quality Assessment Program 1st Quarter 2010 Data Report for Solutia Inc.'s W. G. Krummrich Plant, Sauget, IL.

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

Sincerely,

Gerald M. Rinaldi
Manager, Remediation Services

Enclosure

cc: Distribution List

DISTRIBUTION LIST

PCB Groundwater Quality Assessment Program
1st Quarter 2010 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

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1ST QUARTER 2010
DATA REPORT

PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM

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

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

April 2010

URS Corporation
1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100
Project # **21562401.00002**

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1.0 INTRODUCTION

This report presents the results of the 1st Quarter 2010 (1Q10) 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 1Q10 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

URS Corporation (URS) conducted the 1Q10 PCB Groundwater Quality Assessment Program field activities between February 12 and 23, 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. 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 1Q10 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 no more than 400 mL/minute to minimize drawdown. If significant drawdown occurred, flow rates were reduced.

Drawdown was measured periodically throughout purging to ensure that it did not exceed 25% of the distance between the pump intake and the top of the screen. Once the flow rate and drawdown were stable, field measurements were collected approximately every three to five minutes. Purging of a well was considered complete when the following water quality parameters remained stable over three consecutive flow-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.: February (first quarter), 2010 (0210)
- **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**. Laboratory reports and data validation review sheets are included in **Appendix D**.

A total of 14 samples (ten investigative groundwater samples, one field duplicate, one MS/MSD pair, one equipment blank) were prepared and analyzed by TestAmerica for PCBs. Results for the various analyses were submitted as sample delivery group (SDG) KPM037.

The samples contained in SDG KPM037 are listed below:

KPM037

PMA-MW-1S-0210
PMA-MW-1M-0210
PMA-MW-2M-0210
PMA-MW-2M-0210-AD
PMA-MW-2S-0210-EB
PMA-MW-2S-0210
PMA-MW-5M-0210
PMA-MW-6D-0210
PMA-MW-3M-0210
PMA-MW-3S-0210
PMA-MW-4D-0210
PMA-MW-4S-0210

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 these SDGs 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/nondetect (**J/UJ**) data was 100 percent.

5.0 OBSERVATIONS

This section presents a brief summary of the groundwater analytical results from the 1Q10 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

PCBs were detected in the source area SHU monitoring well PMA-MW-4S, at an estimated concentration of 200.55 µg/L. Historically, measurable DNAPL has been observed in PMA-MW-4S during previous sampling events.PCBs were not detected in the three down-gradient PCB Groundwater Quality Assessment Program SHU monitoring wells. Such data 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 0.54 µg/L for the 1Q10 sampling event. PCBs were also detected in four of the five downgradient monitoring wells at concentrations of 0.2 µg/L (PMA-MW-1M), 2.4 µg/L (PMA-MW-2M/duplicate), estimated 0.87 µg/L (PMA-MW-3M), and 0.19 µg/L (PMA-MW-6D). PCBs were not detected in the groundwater sample collected from monitoring well PMA-MW-5M. **Figure 5** displays the 1Q10 PCB sampling results for the MHU/DHU.

The 1Q10 sampling event was the seventh event conducted under the PCB Groundwater Quality Assessment Program. Mann-Kendall trend analyses 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 **Tables 3** through **8**. The data appear to exhibit an upward trend in concentrations at monitoring well PMA-MW-4D at this time, but no trends at any of the other wells.

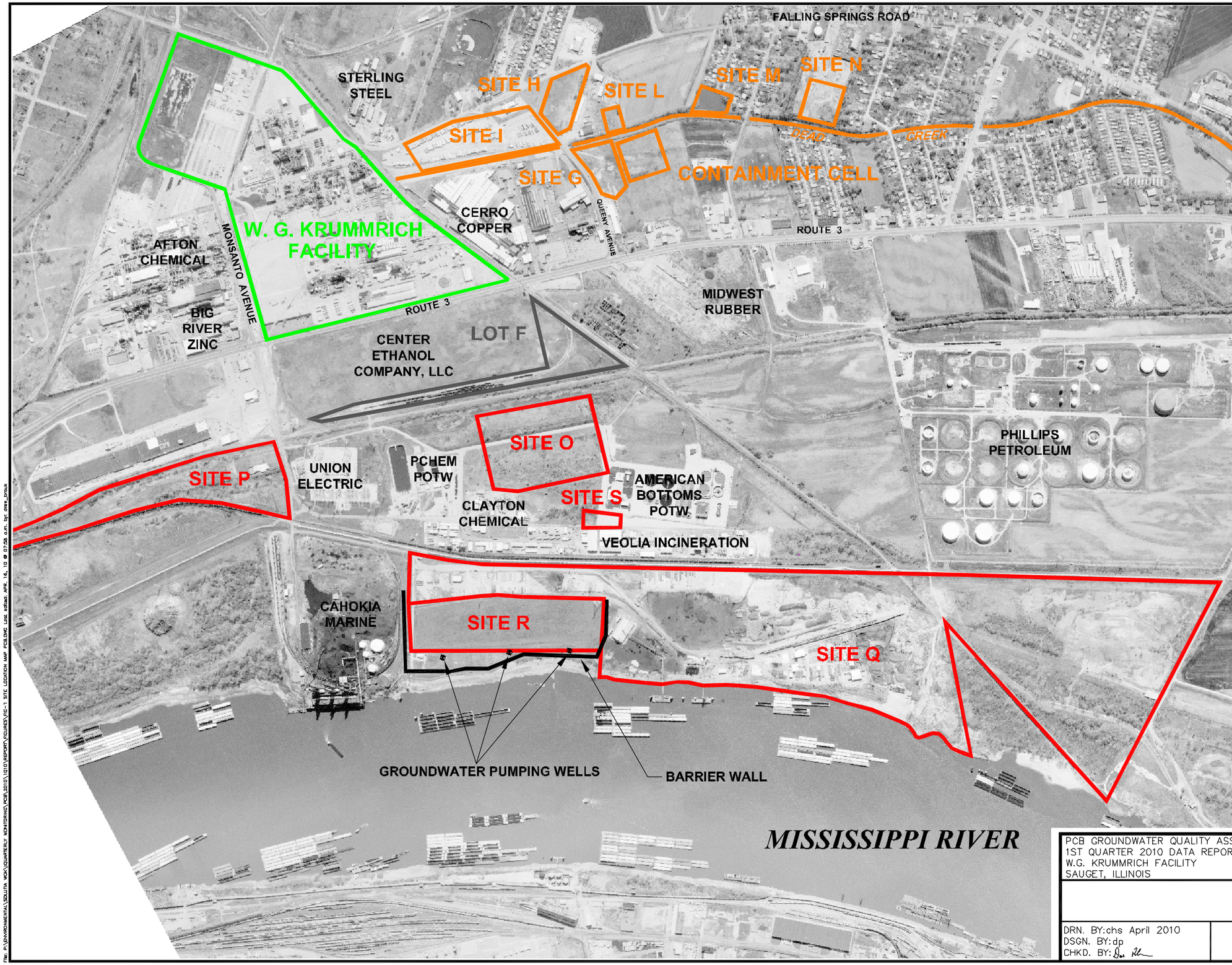
After eight quarters of sampling under the PCB Groundwater Quality Assessment Program, the Mann-Whitney U Test will be performed to determine whether or not concentrations in the second four quarters were higher or lower than the first four quarters. Linear regression analysis will be done for the eight quarters of data provided the data distribution allows the use of parametric statistical analysis.

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.

Figures



LEGEND

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

0 1000

SCALE FEET

PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM
1ST QUARTER 2010 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562156

URS

DRN. BY: chs April 2010
DSGN. BY: dp
CHKD. BY:

Site Location Map

FIG. NO. 1

File: P:\ENVIRONMENTAL\SOLUTN MGR\QUARTERLY MONITORING\PCB\2010\1Q10\REPORT\FIGURES\FIG-1 SITE LOCATION MAP PCBLGWQ Last edited: APR. 16, 10 @ 07:58 a.m. by: drew_brock

LEGEND

MONITORING WELL LOCATION

N E M S

0 300

SCALE FEET

PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM 1ST QUARTER 2010 DATA REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS	PROJECT NO. 21562156

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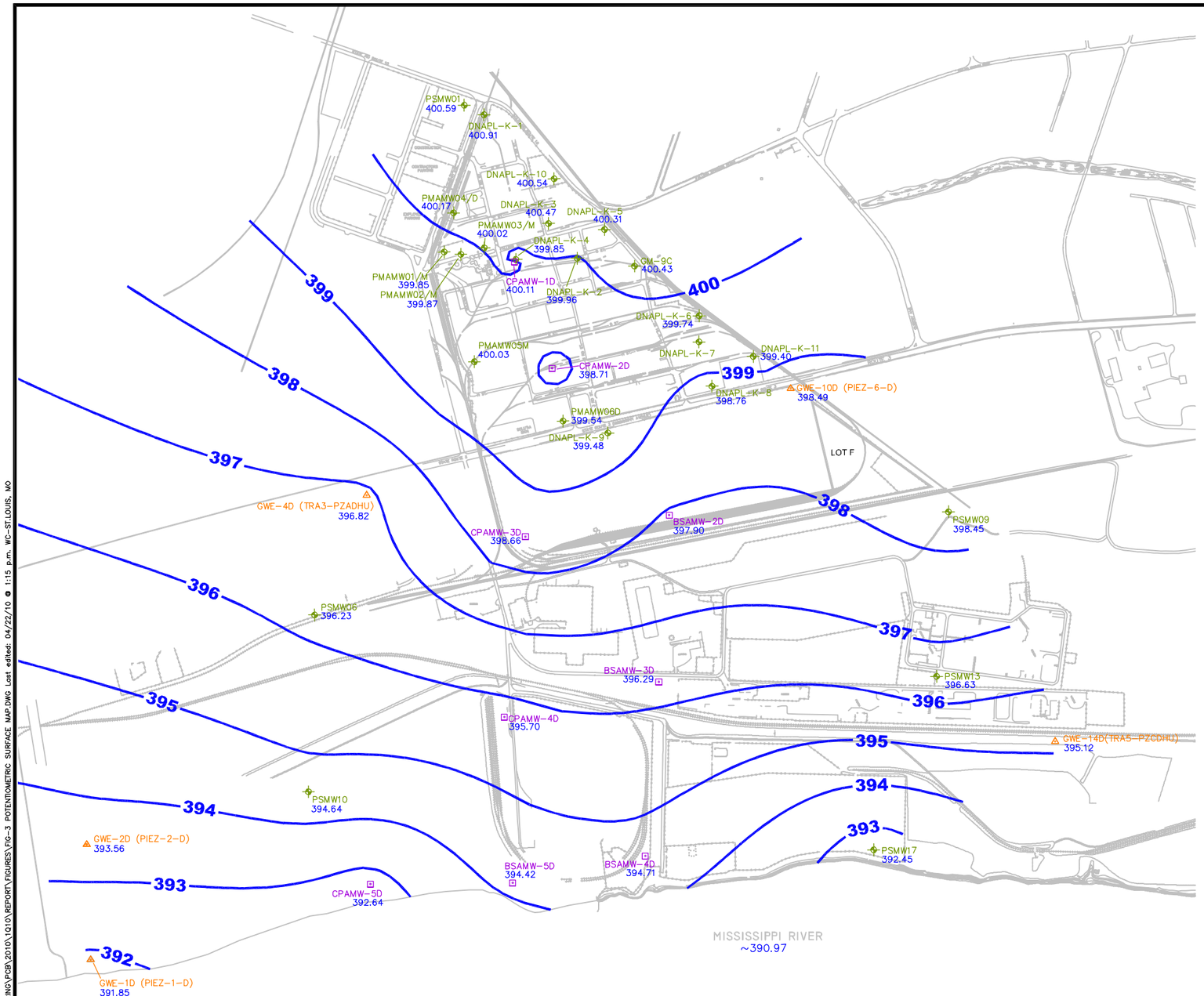
DRN. BY: chs April 2010 DSGN. BY: dp CHKD. BY:	Former PCB Manufacturing Area Monitoring Well Locations	FIG. NO. 2

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\PCB\2010\1Q10\REPORT\FIGURES\FIG-2 FORMER PCB MANUFACTURING AREA.DWG Last edited: APR. 16, 10 @ 08:04 a.m. by: drew.brouk



LEGEND

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

NOTES:

1. GROUNDWATER LEVELS WERE MEASURED FEBRUARY 12, 2010.
2. CONTOURS GENERATED PRIMARILY USING SURFER SOFTWARE VERSION 8. SOME INTERPRETATION WAS DONE USING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
3. THE MISSISSIPPI RIVER STAGE ELEVATION PRESENTED ON THE FIGURE IS AN AVERAGE ELEVATION FOR THE TIME OF THE GAUGING EVENT. THE INFORMATION WAS OBTAINED FROM THE SITE R BUBBLER.
4. LOCATIONS WITH WELLS SCREENED IN BOTH THE MHU AND DHU UTILIZED THE DHU WELL FOR DEVELOPMENT OF THE POTENTIOMETRIC SURFACE MAP.

PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM 1ST QUARTER 2010 DATA REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS	PROJECT NO. 21562156
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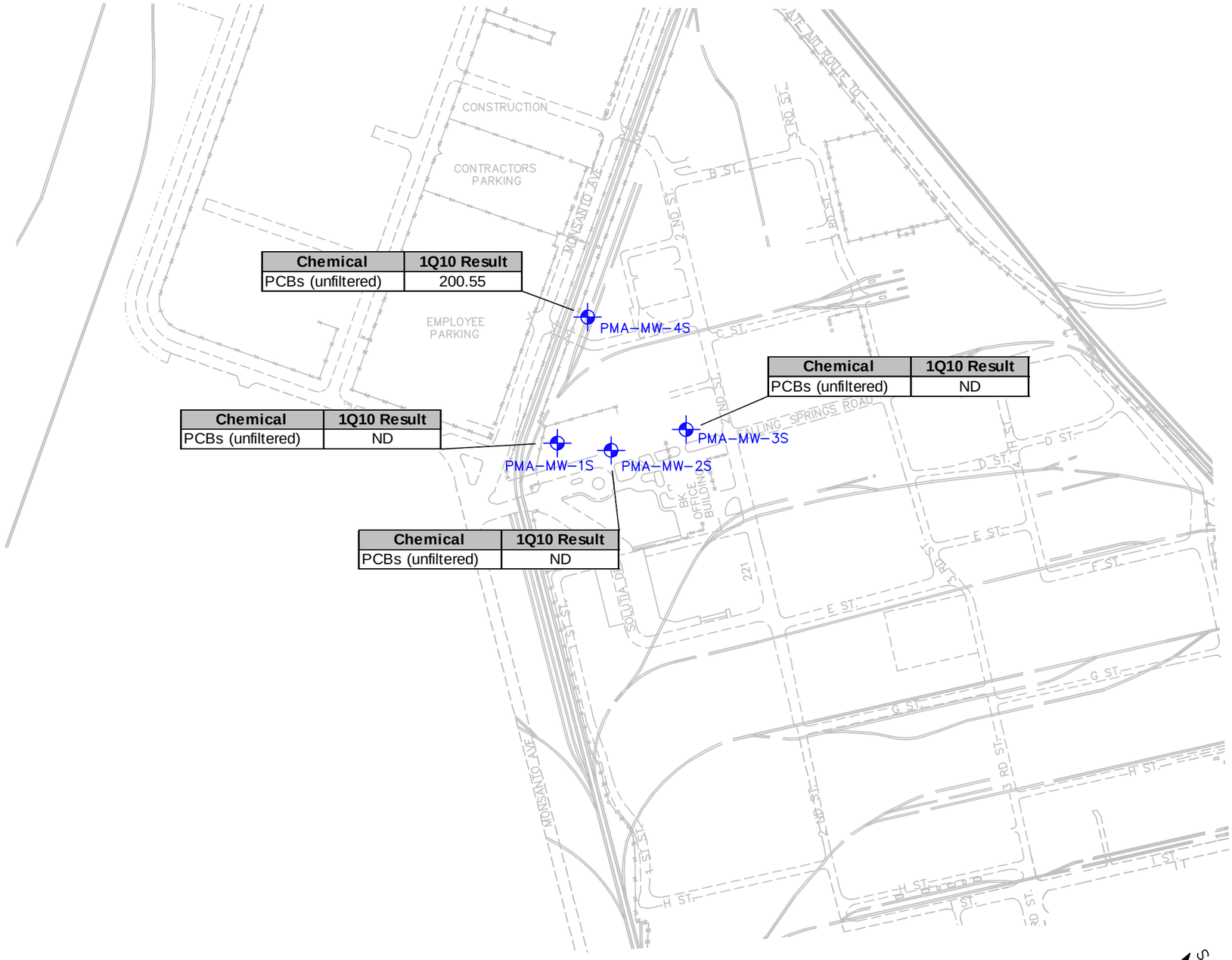
DRN. BY:chs April 2010 DSGN. BY:dp CHKD. BY:	Potentiometric Surface Map Middle/Deep Hydrogeologic Unit
	FIG. NO. 3

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\PCB\2010\1Q10\REPORT\FIGURES\FIG-3 POTENTIOMETRIC SURFACE MAP.DWG Last edited: 04/22/10 @ 1:15 p.m. WC-ST.LOUIS, MO



Chemical	1Q10 Result
PCBs (unfiltered)	200.55

Chemical	1Q10 Result
PCBs (unfiltered)	ND

Chemical	1Q10 Result
PCBs (unfiltered)	ND

Chemical	1Q10 Result
PCBs (unfiltered)	ND

LEGEND

MONITORING WELL LOCATION

NOTES:
TOTAL PCB RESULTS INCLUDE THE SUM OF ALL METHOD 680 HOMOLOGS.

RESULTS ARE SHOWN IN ug/L.

ND = NOT DETECTED.

N E W S

0 300
SCALE FEET

PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM
1ST QUARTER 2010 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562156

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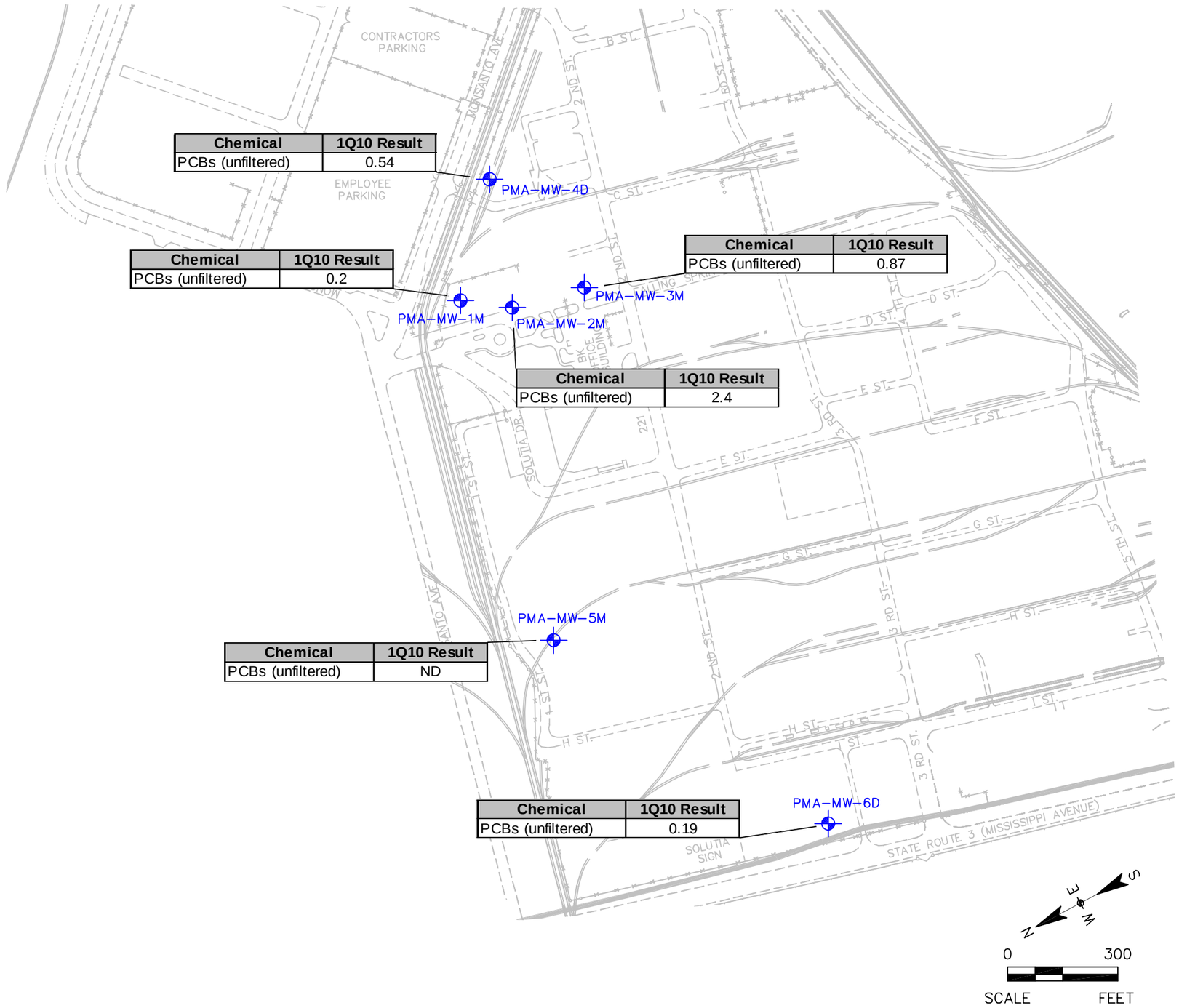
PCB Results – SHU Wells

FIG. NO. 4

FILE: P:\ENVIRONMENTAL\SOLUTIA MGK\QUARTERLY MONITORING\PCB\2010\Q1\Q1\REPORT\FIGURES\FIG-4 TOTAL PCBS SHU WELLS.DWG Last edited APR. 22, 10 @ 1:21 p.m. by: drew_brook



Chemical	1Q10 Result
PCBs (unfiltered)	0.54

Chemical	1Q10 Result
PCBs (unfiltered)	0.2

Chemical	1Q10 Result
PCBs (unfiltered)	0.87

Chemical	1Q10 Result
PCBs (unfiltered)	2.4

Chemical	1Q10 Result
PCBs (unfiltered)	ND

Chemical	1Q10 Result
PCBs (unfiltered)	0.19

LEGEND

MONITORING WELL LOCATION

NOTES:

1. TOTAL PCB RESULTS INCLUDE THE SUM OF ALL METHOD 680 HOMOLOGS.
2. RESULTS ARE SHOWN IN ug/L.
3. ND = NOT DETECTED.
4. MULTIPLE SAMPLE RESULTS INDICATE A DUPLICATE SAMPLE

PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM
1ST QUARTER 2010 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562156

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PCB Results – MHU/DHU Wells

FIG. NO. 5

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\PCB\2010\1Q10\REPORT\FIGURES\FIG-5 TOTAL PCBS MHU-DHU WELLS.DWG Last edited: APR. 16, 10 @ 08:05 a.m. by: drew_brouk

Tables

See last page of table for notes.

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						February 12, 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)	Product Thickness (feet)	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	9.85	--	24.91	400.21
PMA-MW-2S	412.27	411.66	22.94	27.94	389.33	384.33	11.78	--	27.33	399.88
PMA-MW-3S	412.37	412.06	22.71	27.71	389.66	384.66	12.02	--	27.38	400.04
PMA-MW-4S	411.09	410.43	20.99	25.99	390.10	385.10	10.35		25.35	400.08
Middle Hydrogeologic Unit (MHU 380-350 feet NAVD 88)										
PMA-MW-1M	410.32	410.08	54.54	59.54	355.78	350.78	10.23	--	59.61	399.85
PMA-MW-2M	412.26	411.93	56.87	61.87	355.39	350.39	12.06	--	61.53	399.87
PMA-MW-3M	412.36	412.10	57.07	62.07	355.29	350.29	12.08	--	61.80	400.02
PMA-MW-5M	411.27	410.97	52.17	57.17	359.10	354.10	10.94	--	56.97	400.03
PSMW-1	409.37	412.59	37.78	42.78	371.59	366.59	12.00	--	46.04	400.59
Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock)										
BSA-MW-2D	412.00	415.13	68.92	73.92	343.08	338.08	17.23	--	77.02	397.90
BSA-MW-3D	412.91	415.74	107.02	112.02	305.89	300.89	19.45	--	114.80	396.29
BSA-MW-4D	425.00	424.69	118.54	123.54	306.46	301.46	29.98	--	123.18	394.71
BSA-MW-5D	420.80	420.49	115.85	120.85	304.95	299.95	26.07	--	120.95	394.42
CPA-MW-1D	408.62	408.32	66.12	71.12	342.50	337.50	8.21	--	70.73	400.11
CPA-MW-2D	408.51	408.20	99.96	104.96	308.55	303.55	9.49	--	104.65	398.71
CPA-MW-3D	410.87	410.67	108.20	113.20	302.67	297.67	12.01	--	112.84	398.66
CPA-MW-4D	421.57	421.20	116.44	121.44	305.13	300.13	25.50	--	121.00	395.70
CPA-MW-5D	411.03	413.15	107.63	112.63	303.40	298.40	20.51	--	114.67	392.64
DNAPL-K-1	413.07	415.56	108.20	123.20	304.87	289.87	14.65	--	123.16	400.91
DNAPL-K-2	407.94	407.72	97.63	112.63	310.31	295.31	7.76	--	112.36	399.96
DNAPL-K-3	412.13	411.91	104.80	119.80	307.33	292.33	11.44	--	119.25	400.47
DNAPL-K-4	409.48	409.15	102.55	117.55	306.93	291.93	9.30	--	115.59	399.85
DNAPL-K-5	412.27	411.91	102.15	117.15	310.12	295.12	11.60	--	116.48	400.31
DNAPL-K-6	410.43	410.09	102.47	117.47	307.96	292.96	10.35	--	116.94	399.74
DNAPL-K-7	408.32	407.72	100.40	115.40	307.92	292.92	NG	--	NG	NG
DNAPL-K-8	408.56	411.38	102.65	117.65	305.91	290.91	12.62	--	117.59	398.76
DNAPL-K-9	406.45	405.97	97.42	112.42	309.03	294.03	6.49	--	111.23	399.48
DNAPL-K-10	413.50	413.25	105.43	120.43	308.07	293.07	12.71	--	120.27	400.54
DNAPL-K-11	412.20	411.78	105.46	120.46	306.74	291.74	12.38	--	120.25	399.40
GM-9C	409.54	411.21	88.00	108.00	321.54	301.54	10.78	--	23.75	400.43

See last page of table for notes.

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						February 12, 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)	Product Thickness (feet)	Depth to Bottom (feet btoc)	Water Elevation* (feet)
Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock) (continued)										
GWE-1D (PIEZ-1D)	412.80	415.60	117.00	127.00	295.80	285.80	23.75	--	128.53	391.85
GWE-2D (PIEZ-2D)	417.45	417.14	127.00	137.00	290.45	280.45	23.58	--	136.67	393.56
GWE-4D (TRA3-PZADHU)	406.05	405.74	74.00	80.00	332.05	326.05	8.92	--	78.78	396.82
GWE-10D (PIEZ-6D)	410.15	412.87	102.50	112.50	307.65	297.65	14.38	--	114.85	398.49
GWE-14D (TRA5-PZCDHU)	420.47	422.90	90.00	96.00	330.47	324.47	27.78	--	98.78	395.12
PMA-MW-4D	411.22	410.88	68.84	73.84	342.38	337.38	10.71	--	73.35	400.17
PMA-MW-6D	407.63	407.32	96.49	101.49	311.14	306.14	7.78	--	101.29	399.54
PSMW-6	404.11	406.63	99.80	104.80	304.31	299.31	10.40	--	109.85	396.23
PSMW-9	403.92	403.52	100.40	105.40	303.52	298.52	5.07	--	105.13	398.45
PSMW-10	409.63	412.18	101.23	106.23	308.40	303.40	17.54	--	111.28	394.64
PSMW-13	405.80	405.53	106.08	111.08	299.72	294.72	8.90	--	110.13	396.63
PSMW-17	420.22	423.26	121.25	126.25	298.97	293.97	30.81	--	134.84	392.45

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

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-0210	2/22/2010	µg/L	<0.097	<0.097	<0.097	<0.19	<0.19	<0.19	<0.29	<0.29	<0.49	<0.49
PMA-MW-2S-0210	2/22/2010	µg/L	<0.095	<0.095	<0.095	<0.19	<0.19	<0.19	<0.29	<0.29	<0.48	<0.48
PMA-MW-3S-0210	2/23/2010	µg/L	<0.095	<0.095	<0.095	<0.19	<0.19	<0.19	<0.29	<0.29	<0.48	<0.48
PMA-MW-4S-0210	2/23/2010	µg/L	**1.4 J**	**6.8 J**	**14 D J**	**52 J**	**34 J**	**49 D J**	**33 J**	**8.3 J**	**1.2 J**	**0.85 J**
Middle / Deep Hydrologic Unit												
PMA-MW-1M-0210	2/22/2010	µg/L	**0.2**	<0.094	<0.094	<0.19	<0.19	<0.19	<0.28	<0.28	<0.47	<0.47
PMA-MW-2M-0210	2/22/2010	µg/L	**2.4**	<0.094	<0.094	<0.19	<0.19	<0.19	<0.28	<0.28	<0.47	<0.47
PMA-MW-2M-0210-AD	2/22/2010	µg/L	**2.4**	<0.095	<0.095	<0.19	<0.19	<0.19	<0.29	<0.29	<0.48	<0.48
PMA-MW-3M-0210	2/23/2010	µg/L	**0.87 J**	<0.094	<0.094	<0.19	<0.19	<0.19	<0.28	<0.28	<0.47	<0.47
PMA-MW-4D-0210	2/23/2010	µg/L	**0.26**	**0.28**	<0.094	<0.19	<0.19	<0.19	<0.28	<0.28	<0.47	<0.47
PMA-MW-5M-0210	2/22/2010	µg/L	<0.095	<0.095	<0.095	<0.19	<0.19	<0.19	<0.29	<0.29	<0.48	<0.48
PMA-MW-6D-0210	2/23/2010	µg/L	**0.19**	<0.095	<0.095	<0.19	<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
J = Estimated value
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 2Q06	Event 2 3Q06	Event 3 4Q06	Event 4 1Q07	Event 5 2Q07	Event 6 3Q07	Event 7 4Q07	Event 8 1Q08	Event 9 2Q08	Event 10 3Q08	Event 11 4Q08	Event 12 1Q09	Event 13 2Q09	Event 14 3Q09	Event 15 4Q09	Event 16 1Q10	Row 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	
Compare to Event 1		1	1	1	1	1	1	NA	1	1	1	1	1	1	1	1	14
Compare to Event 2			-1	-1	1	1	1	-1	-1	1	1	-1	-1	1	1	-1	0
Compare to Event 3				-1	1	1	1	-1	-1	1	1	-1	0	1	1	-1	2
Compare to Event 4					1	1	1	-1	1	1	1	-1	1	1	1	1	8
Compare to Event 5						1	1	-1	-1	1	0	-1	-1	1	1	-1	0
Compare to Event 6							1	-1	-1	1	-1	-1	-1	-1	-1	-1	-6
Compare to Event 7								-1	-1	-1	-1	-1	-1	-1	-1	-1	-9
Compare to Event 8									1	1	1	1	1	1	1	1	8
Compare to Event 9										1	1	-1	1	1	1	1	5
Compare to Event 10											-1	-1	-1	-1	-1	-1	-6
Compare to Event 11												-1	-1	1	1	-1	-1
Compare to Event 12													1	1	1	1	4
Compare to Event 13														1	1	-1	1
Compare to Event 14															0	-1	-1
Compare to Event 15																-1	-1

Mann-Kendall Statistic (S)	**18**

90 % Confidence Mann-Kendall Statistic	**30**

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 2Q06	Event 2 3Q06	Event 3 4Q06	Event 4 1Q07	Event 5 2Q07	Event 6 3Q07	Event 7 4Q07	Event 8 1Q08	Event 9 2Q08	Event 10 3Q08	Event 11 4Q08	Event 12 1Q09	Event 13 2Q09	Event 14 3Q09	Event 15 4Q09	Event 16 1Q10	Row 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	
Compare to Event 1		1	1	-1	1	1	1	-1	1	1	1	1	1	1	1	1	11
Compare to Event 2			1	-1	1	1	1	-1	1	1	1	1	1	1	1	0	9
Compare to Event 3				-1	1	-1	1	-1	1	1	-1	1	1	1	-1	-1	1
Compare to Event 4					1	1	1	-1	1	1	1	1	1	1	1	1	10
Compare to Event 5						-1	-1	-1	-1	1	-1	-1	1	-1	-1	-1	-7
Compare to Event 6							1	-1	1	1	0	1	1	1	1	-1	5
Compare to Event 7								-1	-1	1	-1	-1	1	0	-1	-1	-4
Compare to Event 8									1	1	1	1	1	1	1	1	8
Compare to Event 9										1	-1	-1	1	1	-1	-1	-1
Compare to Event 10											-1	-1	-1	-1	-1	-1	-6
Compare to Event 11												1	1	1	1	-1	3
Compare to Event 12													1	1	-1	-1	0
Compare to Event 13														-1	-1	-1	-3
Compare to Event 14															-1	-1	-2
Compare to Event 15																-1	-1

Mann-Kendall Statistic (S)	**23**

90 % Confidence Mann-Kendall Statistic	**30**

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 2Q06	Event 2 3Q06	Event 3 4Q06	Event 4 1Q07	Event 5 2Q07	Event 6 3Q07	Event 7 4Q07	Event 8 1Q08	Event 9 2Q08	Event 10 3Q08	Event 11 4Q08	Event 12 1Q09	Event 13 2Q09	Event 14 3Q09	Event 15 4Q09	Event 16 1Q10	Row 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	
Compare to Event 1		-1	-1	-1	1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1	-9
Compare to Event 2			-1	1	1	-1	-1	-1	1	-1	-1	1	-1	1	1	-1	-2
Compare to Event 3				1	1	1	1	1	1	1	1	1	-1	1	1	-1	9
Compare to Event 4					1	-1	-1	-1	1	-1	-1	1	-1	-1	1	-1	-4
Compare to Event 5						-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-9
Compare to Event 6							-1	-1	1	-1	-1	1	-1	1	1	-1	-2
Compare to Event 7								1	1	1	1	1	-1	1	1	-1	5
Compare to Event 8									1	1	-1	1	-1	1	1	-1	2
Compare to Event 9										-1	-1	1	-1	-1	1	-1	-3
Compare to Event 10											-1	1	-1	1	1	-1	0
Compare to Event 11												1	-1	1	1	-1	1
Compare to Event 12													-1	-1	1	-1	-2
Compare to Event 13														1	1	NA	2
Compare to Event 14															1	-1	0
Compare to Event 15																-1	-1

Mann-Kendall Statistic (S)	**-13**

90 % Confidence Mann-Kendall Statistic	**-30**

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 2Q06	Event 2 3Q06	Event 3 4Q06	Event 4 1Q07	Event 5 2Q07	Event 6 3Q07	Event 7 4Q07	Event 8 1Q08	Event 9 2Q08	Event 10 3Q08	Event 11 4Q08	Event 12 1Q09	Event 13 2Q09	Event 14 3Q09	Event 15 4Q09	Event 16 1Q10	Row 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	
Compare to Event 1		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-15
Compare to Event 2			-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-14
Compare to Event 3				1	NA	1	1	1	1	1	1	1	1	1	1	-1	10
Compare to Event 4					-1	1	-1	-1	1	1	-1	1	1	1	1	1	4
Compare to Event 5						1	1	1	1	1	1	1	1	1	1	1	11
Compare to Event 6							-1	-1	1	1	-1	1	1	-1	-1	1	0
Compare to Event 7								-1	1	1	-1	1	1	1	1	1	5
Compare to Event 8									1	1	1	1	1	1	1	1	8
Compare to Event 9										1	-1	1	1	-1	-1	-1	-1
Compare to Event 10											-1	1	1	-1	-1	-1	-2
Compare to Event 11												1	1	1	1	1	5
Compare to Event 12													-1	-1	-1	-1	-4
Compare to Event 13														-1	-1	-1	-3
Compare to Event 14															0	1	1
Compare to Event 15																1	1

Mann-Kendall Statistic (S)	**6**
90 % Confidence Mann-Kendall Statistic	**30**

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	Row
	2Q06	3Q06	4Q06	1Q07	2Q07	3Q07	4Q07	1Q08	2Q08	4Q08	1Q09	2Q09	3Q09	4Q09	1Q10	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	
Compare to Event 1		-1	1	-1	1	1	-1	-1	1	-1	1	1	1	1	1	4
Compare to Event 2			1	1	1	1	1	1	1	1	1	1	1	1	1	13
Compare to Event 3				-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-10
Compare to Event 4					1	1	-1	-1	1	-1	1	1	1	1	1	5
Compare to Event 5						-1	-1	-1	-1	-1	1	1	-1	1	1	-2
Compare to Event 6							-1	-1	1	-1	1	1	1	1	1	3
Compare to Event 7								1	1	1	1	1	1	1	1	8
Compare to Event 8									1	1	1	1	1	1	1	7
Compare to Event 9										-1	1	1	-1	1	1	2
Compare to Event 10											1	1	1	1	1	5
Compare to Event 11												-1	-1	-1	-1	-4
Compare to Event 12													-1	1	-1	-1
Compare to Event 13														1	1	2
Compare to Event 14															-1	-1

Mann-Kendall Statistic (S)	**31**

90 % Confidence Mann-Kendall Statistic	**29**

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	Row Total
Total PCBs, ug/L	0.21	0.43	0.32	0.29	0.20	0.30	0.19	
Compare to Event 1		1	1	1	-1	1	-1	2
Compare to Event 2			-1	-1	-1	-1	-1	-5
Compare to Event 3				-1	-1	-1	-1	-4
Compare to Event 4					-1	1	-1	-1
Compare to Event 5						1	-1	0
Compare to Event 6							-1	-1

Mann-Kendall Statistic (S)	**-9**

90 % Confidence Mann-Kendall Statistic	**-11**

Appendix A

Groundwater Purging and Sampling Forms

LOW FLOW GROUNDWA AMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00001
FIELD PERSONNEL: Mike Corbett, Drew Brouk
DATE: 2/22/10
WEATHER: cloudy, 35°F
MONITORING WELL ID: PMAMW01M
SAMPLE ID: PMAMW01M-0210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 59.61 ft
Constructed Well Depth (btoc): 59.30 ft
Depth to Water (btoc): 10.63 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): 48.98 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 56.80 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell): 1,150 mL
Minimum Purge Volume = (3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	1152	10.65	colorless	hydrocarbon	6.69	14.80	2.062	7.7	0.56	-97.6
1200	1156	↓	↓	↓	6.68	14.83	2.156	7.8	0.52	-128.0
2400	1158				6.70	14.92	2.179	4.9	0.29	-136.1
3600	1201				6.70	14.98	2.175	10.0	0.23	-138.6
4800	1204				6.71	15.00	2.161	3.7	0.20	-139.7
6000	1207				6.71	14.92	2.166	9.2	0.17	-140.2

MEC

Start Time: 1152
Stop Time: 1207
Elapsed Time: 15 min.
Average Purge Rate (mL/min): 400
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/22/10

SAMPLING DATA

Sample Date: 2/22/10
Sample Time: 1210
Analysis: Total PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 400 mL/min.
QA/QC Samples: none

COMMENTS:

LOW FLOW GROUNDWA AMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00001
FIELD PERSONNEL: Mike Corbett, Drew Brouk
DATE: 2/22/10
WEATHER: cloudy, 35°F
MONITORING WELL ID: PMAMW01S
SAMPLE ID: PMAMW01S-0210, PMAMW01S-0210-MS, PMAMW01S-0210-MSD

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 24.91 ft
Constructed Well Depth (btoc): 24.94 ft
Depth to Water (btoc): 10.12 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): 14.79 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 22.44 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	1057	10.83	colorless	hydrocarbon	6.65	15.08	1.138	3.3	1.15	46.6
1200	1100	10.64			6.60	15.07	1.151	2.4	0.83	47.1
2400	1103	10.63			6.56	15.09	1.161	1.6	0.49	48.9
3600	1106	10.63			6.55	14.93	1.168	1.1	0.40	50.6
4800	1109	10.63			6.54	14.86	1.172	0.7	0.24	52.4
6000	1112				6.54	14.99	1.171	0.5	0.20	54.5
7200	1115				6.54	15.07	1.170	0.5	0.20	55.2

MEC

Start Time: 1057
Stop Time: 1115
Elapsed Time: 18 min.
Average Purge Rate (mL/min): 400
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/22/10

SAMPLING DATA

Sample Date: 2/22/10
Sample Time: 1120
Analysis: Total PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 400 mL/min
QA/QC Samples: MS/MSD

COMMENTS:

LOW FLOW GROUNDWA AMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00001
FIELD PERSONNEL: Mike Corbett, Drew Brouk
DATE: 2/22/10
WEATHER: cloudy, 35°
MONITORING WELL ID: PMAMW02M
SAMPLE ID: PMAMW02M-0210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 61.53 ft
Constructed Well Depth (btoc): 61.54 ft
Depth to Water (btoc): 12.50 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): 49.03 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is < 4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 59.04 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell): 1,150 mL
Minimum Purge Volume = (3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	1343	12.50	colorless	hydrocarbon	7.06	15.67	2.048	14.6	0.90	-108.7
1200	1346	↓	↓	↓	6.99	15.88	2.117	15.8	0.28	-136.5
2400	1349				6.96	16.00	2.137	7.5	0.18	-150.5
3600	1352				6.94	16.00	2.135	6.4	0.14	-152.5
4800	1355				6.92	16.00	2.135	4.0	0.12	-154.0

MEC

Start Time: 1343
Stop Time: 1355
Elapsed Time: 12 min.
Average Purge Rate (mL/min): 400
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/22/10

SAMPLING DATA

Sample Date: 2/22/10
Sample Method: Stainless Steel Monsoon
Sample Time: 1400
Sample Flow Rate: 400 mL/min
Analysis: Total PCBs
QA/QC Samples: AD – PMAMW02M-0210-AD

COMMENTS:

LOW FLOW GROUNDWA' AMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00001
FIELD PERSONNEL: Mike Corbett, Drew Brouk
DATE: 2/22/10
WEATHER: Cloudy, 36°F
MONITORING WELL ID: PMAMW02S
SAMPLE ID: PMAMW02S-0210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 27.33 ft
Constructed Well Depth (btoc): 27.33 ft
Depth to Water (btoc): 12.17 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): 15.16 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 24.83 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH ±0.2 units	Temp (°C)	Cond. (ms/cm) ±3 %	Turbidity (NTUs)	DO (mg/l) ±10 % or 0.2 mg/L	ORP (mv) ±20 mV
0	1430	12.30	colorless	sl. hydrocarbon	7.20	16.27	0.931	-2.3	0.67	-48.5
1200	1433	12.24	↓	↓	7.01	16.32	0.925	7.4	0.35	-43.6
2400	1436	↓	↓	↓	6.93	16.55	0.929	6.4	0.33	-40.2
3600	1439	↓	↓	↓	6.88	16.73	0.932	5.6	0.25	-38.6
4800	1442	↓	↓	↓	6.84	16.78	0.938	4.0	0.22	-35.7

MEC

Start Time: 1430
Stop Time: 1442
Elapsed Time: 12 min.
Average Purge Rate (mL/min): 400
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/22/10

SAMPLING DATA

Sample Date: 2/22/10
Sample Time: 1445
Analysis: Total PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 400 mL/min.
QA/QC Samples: EB before this well — PMAMW02S-0210-EB

COMMENTS:

LOW FLOW GROUNDWATE. .MPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00001
FIELD PERSONNEL: Mike Corbett, Drew Brouk
DATE: 2/23/10
WEATHER: Sunny, 30°F
MONITORING WELL ID: PMAMW03M
SAMPLE ID: PMAMW03M-0210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 61.80 ft
Constructed Well Depth (btoc): 61.81 ft
Depth to Water (btoc): 12.53 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): 49.27 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is (4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 59.31 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are (4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 11.3 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	1104	12.53	brown	hydrocarbon	8.95	17.19	2.471	35.5	0.14	-70.1
1200	1107	↓	↓	↓	9.01	17.17	2.478	30.8	0.09	-85.6
2400	1110				9.06	17.06	2.481	26.1	0.08	-98.1
3600	1113				9.10	17.14	2.479	20.6	0.06	-113.0
4800	1116				9.11	17.15	2.479	17.6	0.05	-125.8
6000	1119				9.09	17.16	2.478	14.7	0.04	-138.7
7200	1122				9.11	17.21	2.478	12.3	0.04	-157.7
8400	1125				9.17	17.28	2.478	11.9	0.03	-159.6
9600	1128				9.18	17.30	2.480	10.8	0.02	-169.9
10800	1131				9.19	17.26	2.482	10.3	0.02	-175.8
12000	1134				9.23	17.20	2.486	9.2	0.02	-182.2
13200	1137	↓	↓	↓	9.26	17.15	2.484	9.1	0.01	-186.8
								MEC		

Start Time: 1104
Stop Time: 1137
Elapsed Time: 33 min.
Average Purge Rate (mL/min): 400
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/23/10

SAMPLING DATA

Sample Date: 2/23/10
Sample Time: 1140
Analysis: Total PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 400 mL/min.
QA/QC Samples: none

COMMENTS:

LOW FLOW GROUNDWATE. .MPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00001
FIELD PERSONNEL: Mike Corbett, Drew Brook
DATE: 2/23/10
WEATHER: Sunny, 32°F
MONITORING WELL ID: PMAMW03S
SAMPLE ID: PMAMW03S-0210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 27.38 ft
Constructed Well Depth (btoc): 27.40 ft
Depth to Water (btoc): 12.48 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): 14.90 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 24.90 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	1210	12.50	colorless	hydrocarbon	7.21	18.31	2.671	28.2	0.52	-21.5
1200	1213	↓	↓	↓	6.96	18.42	2.675	15.3	0.31	-16.5
2400	1216				6.90	18.36	2.677	12.1	0.31	-13.8
3600	1219				6.82	18.27	2.677	7.3	0.27	-11.1
4800	1222				6.79	18.29	2.673	5.9	0.20	-9.4
6000	1225				6.75	18.26	2.669	4.5	0.14	-6.3

MEC

Start Time: 1210
Stop Time: 1225
Elapsed Time: 15 min.
Average Purge Rate (mL/min): 400
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/23/10

SAMPLING DATA

Sample Date: 2/23/10
Sample Time: 1230
Analysis: Total PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 400 mL/min
QA/QC Samples: none

COMMENTS:

LOW FLOW GROUNDWATE. .MPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00001
FIELD PERSONNEL: Mike Corbett, Drew Brouk
DATE: 2/23/10
WEATHER: sunny, 32° F
MONITORING WELL ID: PMAMW04D
SAMPLE ID: PMAMW04D-0210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 73.35 ft
Constructed Well Depth (btoc): 73.50 ft
Depth to Water (btoc): 11.05 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): 62.30 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 71.00 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	1351	11.05	colorless	hydrocarbon	6.77	16.18	1.514	10.6	0.46	-131.8
1200	1354	↓	↓	↓	6.71	16.38	1.514	10.8	0.34	-138.2
2400	1357				6.68	16.51	1.512	6.6	0.27	-143.2
3600	1400				6.68	16.53	1.513	5.3	0.16	-145.9
4800	1403				6.70	16.63	1.516	5.6	0.15	-148.1

MEC

Start Time: 1351
Stop Time: 1403
Elapsed Time: 12 min.
Average Purge Rate (mL/min): 400
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/23/10

SAMPLING DATA

Sample Date: 2/23/10
Sample Method: Stainless Steel Monsoon
Sample Time: 1405
Sample Flow Rate: 400 mL/min.
Analysis: Total PCBs
QA/QC Samples: none

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00001
FIELD PERSONNEL: Mike Cordell, Drew Brouk
DATE: 2/23/10
WEATHER: Sunny, 35° F
MONITORING WELL ID: PMAMW04S
SAMPLE ID: PMAMW04S-0210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 25.35 ft
Constructed Well Depth (btoc): 25.33 ft
Depth to Water (btoc): 10.42 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): 14.93 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is (4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 22.83 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are (4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	1449	11.40	light grey	hydrocarbon	6.77	16.64	2.207	67.7	0.28	-91.7
1200	1452	11.23			6.73	16.74	2.220	54.4	0.23	-96.9
2400	1455				6.71	16.79	2.215	42.0	0.21	-100.1
3600	1458				6.69	16.78	2.204	24.8	0.19	-107.3
4800	1501				6.68	16.84	2.200	21.5	0.12	-109.0
6000	1504				6.68	16.84	2.202	19.4	0.09	-110.5
7200	1507				6.67	16.77	2.213	16.2	0.09	-112.3
8400	1510				6.67	16.80	2.218	14.4	0.07	-113.1
9600	1513				6.68	16.96	2.226	13.2	0.07	-114.2
10800	1516				6.66	17.08	2.231	11.7	0.08	-115.3
12000	1519				6.69	16.99	2.237	11.1	0.08	-115.6
13200	1522				6.67	16.91	2.244	10.4	0.08	-116.1
14400	1525				6.66	17.02	2.249	9.2	0.06	-116.6
										MC

Start Time: 1449
Stop Time: 1525
Elapsed Time: 36 min.
Average Purge Rate (mL/min): 400
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/23/10

SAMPLING DATA

Sample Date: 2/23/10
Sample Method: Stainless Steel Monsoon
Sample Time: 1530
Sample Flow Rate: 400 mL/min.
Analysis: Total PCBs
QA/QC Samples: none

COMMENTS:

LOW FLOW GROUNDWA. .AMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00001
FIELD PERSONNEL: Mike Corbett, Drew Brouk
DATE: 2/22/10
WEATHER: cloudy, 38°F
MONITORING WELL ID: PMAMW05M
SAMPLE ID: PMAMW05M-0210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 56.97 ft
Constructed Well Depth (btoc): 56.87 ft
Depth to Water (btoc): 11.56 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): 45.41 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 54.37 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are < 4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	1517	11.60	colorless	sl. hydrocarbon	6.93	16.57	2.347	1.9	1.02	-25.0
1200	1520	↓	↓	↓	6.95	16.39	2.424	0.9	0.54	-51.1
2400	1523				6.92	16.19	2.434	0.7	0.42	-59.2
3600	1526				6.95	16.13	2.441	0.5	0.24	-67.2
4800	1529				6.93	15.99	2.443	0.4	0.20	-69.7
6000	1532				6.92	15.81	2.442	0.4	0.20	-72.6
7200	1535				6.93	15.52	2.441	0.4	0.16	-74.8
8400	1538	↓	↓	↓	6.92	15.33	2.448	0.4	0.17	-75.5

MEC

Start Time: 1517
Stop Time: 1538
Elapsed Time: 21 min.
Average Purge Rate (mL/min): 400
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/22/10

SAMPLING DATA

Sample Date: 2/22/10
Sample Method: Stainless Steel Monsoon
Sample Time: 1545
Sample Flow Rate: 400 mL/min.
Analysis: Total PCBs
QA/QC Samples: none

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00001
FIELD PERSONNEL: Mike Corbett, Drew Brouk
DATE: 2/23/10
WEATHER: sunny, 25°F
MONITORING WELL ID: PMAMW06D
SAMPLE ID: PMAMW06D-0210

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 101.29 ft
Constructed Well Depth (btoc): 101.18 ft
Depth to Water (btoc): 8.53 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): 92.76 ft
If Depth to Top of Screen is > Depth to Water AND Screen Lenth is (4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 98.68 ft btoc
If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are (4ft,
Place Pump at: Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell): 1,150 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 3,450 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	1004	8.53	dark gray	hydrocarbon	6.93	15.92	1.154	54.4	0.41	-117.2
1200	1007	↓	↓	↓	6.81	16.06	1.155	23.4	0.27	-132.1
2400	1010				6.81	16.03	1.168	9.7	0.23	-137.1
3600	1013				6.82	15.99	1.170	8.7	0.19	-141.4
4800	1016				6.81	15.90	1.179	6.0	0.17	-144.4

MEC

Start Time: 1004
Stop Time: 1016
Elapsed Time: 12 min.
Average Purge Rate (mL/min): 400
Water Quality Meter ID: YSI 6920
Date Calibrated: 2/23/10

SAMPLING DATA

Sample Date: 2/23/10
Sample Method: Stainless Steel Monsoon
Sample Time: 1020
Sample Flow Rate: 400 mL/min
Analysis: Total PCBs
QA/QC Samples: none

COMMENTS:

Appendix B

Chains-of-Custody

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jeff Adams	Site Contact: Mike Corbett	Date: 2/22/10	COC No:
URS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gulizia	Carrier: FedEx	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No.
St. Louis, MO 63110	Calendar (C) or Work Days (W)			21562401.00001
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks			SDG No.
Project Name: 1Q10 PCB GW Sampling	☐ 1 week			
Site: Solutia WG Krummrich Facility	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Total PCBs by 680	Sample Specific Notes:
PMA-MW-1S-0210	2/22/10	1120	G	Water	2	2	
PMA-MW-1S-0210-MS		1120	G	Water	2	2	
PMA-MW-1S-0210-MSD		1120	G	Water	2	2	
PMA-MW-1M-0210		1210	G	Water	2	2	
PMA-MW-2M-0210		1400	G	Water	2	2	
PMA-MW-2M-0210-AD		1400	G	Water	2	2	
PMA-MW-2S-0210-EB		1415	G	Water	2	2	
PMA-MW-2S-0210		1445	G	Water	2	2	
PMA-MW-5M-0210		1545	G	Water	2	2	
PMA-MW-____-0210			G	Water	2	2	

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

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

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

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

2.6/1.8/1.8 680-55249

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
M. Corbett	URS	2/22/10 1700	L. Sheblakel	TA	2/22/10 1700
L. Sheblakel	TA	2/22/10 1730			
			George Klouma	TA SAV	2/23/10 0919

APR 13 2010 EK

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jeff Adams	Site Contact: Mike Corbett	Date: 2/23/10	COC No:
URS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gulizia	Carrier: FedEx	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562401.00001
St. Louis, MO 63110	Calendar (C) or Work Days (W) _____			
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks			SDG No.
Project Name: 1Q10 PCB GW Sampling	☐ 1 week			
Site: Solutia WG Krummrich Facility	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Total PCBs by 680	Sample Specific Notes:
PMA-MW-6D-0210	2/23/10	1020	G	Water	2		2	
PMA-MW-3M-0210	↓	1140	G	Water	2		2	
PMA-MW-3S-0210		1230	G	Water	2		2	
PMA-MW-4D-0210		1405	G	Water	2		2	
PMA-MW-4S-0210		1530	G	Water	2		2	
PMA-MW-____-0210			G	Water	2		2	
PMA-MW-____-0210			G	Water	2		2	
PMA-MW-____-0210			G	Water	2		2	
PMA-MW-____-0210			G	Water	2		2	
PMA-MW-____-0210			G	Water	2		2	
							1	

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

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

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

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

680-55283 1.0/0.8

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	2/23/10 1700	[signature]	TA	2/23/10 1700
[signature]	TA	2/23/10 1770			
			[signature]	TA SAV	2/24/10 0919

APR 13 2010

Appendix C

Quality Assurance Report

QUALITY ASSURANCE REPORT

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

PCB Groundwater Quality Assessment Program
1st Quarter 2010 Data Report

Prepared for

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

April 2010

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

1.0 INTRODUCTION 1
2.0 RECEIPT CONDITION AND SAMPLE HOLDING TIMES 2
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1.0 INTRODUCTION

This Quality Assurance Report presents the findings of a review of analytical data for groundwater samples collected in February of 2010 at the Solutia W.G. Krummrich plant as part of the 1st Quarter 2010 PCB Groundwater Quality Assessment Program. The samples were collected by URS Corporation personnel and analyzed by TestAmerica Laboratories located in Savannah, Georgia using USEPA methodologies. Samples were analyzed for polychlorinated biphenyls (PCBs).

One hundred percent of the data were subjected to a data quality review (Level III validation). The Level III 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 pair, 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) KPM037 utilizing the following USEPA 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. Data was qualified based on the data quality review. Qualifiers assigned indicate data that did not meet acceptance criteria and for which corrective actions were not successful or not performed. The various qualifiers are explained in **Tables 1** and **2** below:

TABLE 1 Laboratory Data Qualifiers

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

TABLE 2 URS Data Qualifiers

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

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

The data review included evaluation of the following criteria:

Organics

- Receipt condition and sample holding times
- Laboratory method blanks, 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

2.0 RECEIPT CONDITION AND SAMPLE HOLDING TIMES

Sample holding time requirements for the analyses performed are presented in the methods and/or in the data review guidelines. Review of the sample collection, extraction and analysis dates involved comparing the chain-of-custody and the laboratory data summary forms for accuracy, consistency, and holding time compliance. Upon review of SDG KPM037, sample PMA-MW-3S-

0210 was re-extracted approximately 23 days outside of holding time criteria (7 days) due to loss of internal standards from the original extract. Professional judgment was used to qualify, but not reject data, due to the stability of PCBs. Analytical data that required qualification based on holding time criteria are summarized in the following table:

Field ID	Parameter	Analyte	Qualification
PMA-MW-3S-0210	PCBs	Monochlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Dichlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Trichlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Tetrachlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Pentachlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Hexachlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Heptachlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Octachlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Nonachlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	DCB Decachlorobiphenyl	**UJ**

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

3.0 LABORATORY METHOD BLANK 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 with the exception of those surrogates in data reviews discussed further in Appendix D. 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. No qualification of data was required.

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

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

Sample PMA-MW-1S-0210 was spiked and analyzed for PCBs in SDG KPM037. 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, with the exception of the IS responses in the data reviews discussed further in Appendix D.

Analytical data that required qualification based on internal standard (IS) data are included in the table below. Analytical data reported as non-detect and associated with internal standard recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
PMA-MW-3M-0210	PCBs	Monochlorobiphenyl	**J**
PMA-MW-1S-0210	PCBs	All PCB nondetects	**UJ**
PMA-MW-4S-0210	PCBs	Monochlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	Dichlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	Tetrachlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	Pentachlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	Heptachlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	Octachlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	Nonachlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	DCB Decachlorobiphenyl	**J**
PMA-MW-4S-0210-DL	PCBs	Trichlorobiphenyl	**J**
PMA-MW-4S-0210-DL	PCBs	Hexachlorobiphenyl	**J**

9.0 RESULTS REPORTED FROM DILUTIONS

Sample PMA-MW-4S-0210 was diluted due to abundance of target analytes. The diluted sample results for PCBs were reported at the lowest possible reporting limit.

Appendix D

Groundwater Analytical Results (with Data Review Sheets)

SDG KPM037

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

Solutia Krummrich Data Review
WGK PCB GW Quality 1Q10

Laboratory SDG: KPM037

Reviewer: Elizabeth Kunkel

Date Reviewed: 4/15/2010

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

Applicable Work Plan: Revised PCB Groundwater Quality Assessment (Solutia 2009)

Sample Identification	Sample Identification
PMA-MW-1S-0210	PMA-MW-1M-0210
PMA-MW-2M-0210	PMA-MW-2M-0210-AD
PMA-MW-2S-0210-EB	PMA-MW-2S-0210
PMA-MW-5M-0210	PMA-MW-6D-0210
PMA-MW-3M-0210	PMA-MW-3S-0210
PMA-MW-4D-0210	PMA-MW-4S-0210

1.0 Data Package Completeness

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

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

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

Yes, the laboratory case narrative indicated that PCB surrogates were diluted out and not recovered in sample PMA-MW-4S-0210. Sample PMA-MW-3S-0210 was re-extracted outside holding time criteria. Additionally, PCB surrogates were outside evaluation criteria in sample PMA-MW-1S-0210 and the equipment blank. Internal standard recoveries were outside evaluation criteria in several samples. Sample PMA-MW-4S-0210 was diluted due to abundance of target analytes. These issues are addressed further in the appropriate sections below.

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

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

No, sample PMA-MW-3S-0210 was re-extracted approximately 23 days outside holding time criteria (7 days) due to loss of internal standards from the original extract. Professional judgment was used to not reject data due to the stability of PCBs.

Qualifications due to hold time criteria are included in the table below:

Sample ID	Parameter	Analyte	Qualification
PMA-MW-3S-0210	PCBs	Monochlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Dichlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Trichlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Tetrachlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Pentachlrobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Hexachlrobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Heptachlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Octachlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	Nonachlorobiphenyl	**UJ**
PMA-MW-3S-0210	PCBs	DCB Decachlorobiphenyl	**UJ**

4.0 Blank Contamination

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

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

Yes

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No, surrogates were diluted out and not recovered in sample PMA-MW-4S-0210-DL. No qualification of data was required.

Sample ID	Parameter	Surrogate	Recovery	Criteria
PMA-MW-1S-0210	PCBs	Decachlorobiphenyl-13C_{12}	**128**	25-113
PMA-MW-2S-0210-EB	PCBs	Decachlorobiphenyl-13C_{12}	**179**	25-113

Analytical data reported as non-detect and associated with surrogate recoveries above evaluation criteria indicating a possible high bias did not require qualification. Equipment blank, PMA-MW-2S-0210-EB is a quality control sample and does not require qualification. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, sample PMA-MW-1S-0210 was spiked and analyzed for PCBs.

Were MS/MSD recoveries within evaluation criteria?

Yes

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
MB 680-161622/17-A	PCBs	Phenanthrene-d_{10}	**5,149**	8,678-12,397
LCS 680-161622/18-A	PCBs	Chrysene-d_{12}	**49,796**	22,917-42,561
PMA-MW-6D-0210	PCBs	Chrysene-d_{12}	**54,072**	22,917-42,561
PMA-MW-3M-0210	PCBs	Phenanthrene-d_{10}	**19,190**	8,678-12,397
PMA-MW-3M-0210	PCBs	Chrysene-d_{12}	**87,871**	22,917-42,561
PMA-MW-1S-0210	PCBs	Phenanthrene-d_{10}	**3,625**	11,033-20,491
PMA-MW-1S-0210-MS	PCBs	Chrysene-d_{12}	**68,490**	33,335-61,909
PMA-MW-2M-0210	PCBs	Chrysene-d_{12}	**72,314**	33,335-61,909
PMA-MW-2M-0210-AD	PCBs	Phenanthrene-d_{10}	**10,393**	11,033-20,491
PMA-MW-2S-0210-EB	PCBs	Phenanthrene-d_{10}	**3,787**	11,033-20,491
PMA-MW-2S-0210	PCBs	Chrysene-d_{12}	**69,037**	33,335-61,909
PMA-MW-5M-0210	PCBs	Chrysene-d_{12}	**65,494**	33,335-61,909
PMA-MW-4D-0210	PCBs	Phenanthrene-d_{10}	**17,590**	8,350-15,506
PMA-MW-4D-0210	PCBs	Chrysene-d_{12}	**75,665**	31,603-58,691
PMA-MW-4S-0210	PCBs	Phenanthrene-d_{10}	**74,984**	8,350-15,506
PMA-MW-4S-0210	PCBs	Chrysene-d_{12}	**84,222**	31,603-58,691
PMA-MW-4S-0210-DL	PCBs	Phenanthrene-d_{10}	**36,001**	11,910-22,118
PMA-MW-3S-0210	PCBs	Chrysene-d_{12}	**58,905**	31,603-58,691
LCSD 680-163986/5-A	PCBs	Phenanthrene-d_{10}	**16,840**	8,350-15,506
LCSD 680-163986/5-A	PCBs	Chrysene-d_{12}	**63,198**	31,603-58,691

Analytical data that required qualification based on internal standard (IS) data are included in the table below. Analytical data reported as non-detect and associated with internal standard recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. MB 680-161622/17-A, LCS 680-161622/18-A, PMA-MW-1S-0210-MS, PMA-MW-2S-0210-EB, and LCSD 680-163986/5-A are quality control samples and do not require qualification. Internal standard areas for phenanthrene-d_{10} and chrysene-d_{12} recovered within the initial calibration average internal standard area in samples PMA-MW-6D-0210, PMA-MW-2M-0210, PMA-MW-2M-0210-AD, PMA-MW-2S-0210, PMA-MW-5M-0210, PMA-MW-4D-0210, and PMA-MW-3S-0210; therefore, no qualification of data was required. [Chrysene-d_{12} was used in the calibration and quantification of the target compounds and surrogate].

Sample ID	Parameter	Analyte	Qualification
PMA-MW-3M-0210	PCBs	Monochlorobiphenyl	**J**
PMA-MW-1S-0210	PCBs	All PCB nondetects	**UJ**
PMA-MW-4S-0210	PCBs	Monochlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	Dichlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	Tetrachlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	Pentachlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	Heptachlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	Octachlorobiphenyl	**J**

Sample ID	Parameter	Analyte	Qualification
PMA-MW-4S-0210	PCBs	Nonachlorobiphenyl	**J**
PMA-MW-4S-0210	PCBs	DCB Decachlorobiphenyl	**J**
PMA-MW-4S-0210-DL	PCBs	Trichlorobiphenyl	**J**
PMA-MW-4S-0210-DL	PCBs	Hexachlorobiphenyl	**J**

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples collected as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
PMA-MW-2M-0210	PMA-MW-2M-0210-AD

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

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

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

12.0 Additional Qualifications

Were additional qualifications applied?

No

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-55249-1

SDG Number: KPM037

Job Description: WGK PCB GW Quality - 1Q10 - FEB 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
4/8/2010 11:02 PM

Lidya Gulizia
Project Manager I
lidya.gulizia@testamericainc.com
04/08/2010

Reviewed on APR 13 2010 EZK

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

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

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ACCREDITED IN ACCORDANCE WITH nelac

Job Narrative
680-55249-1 / SDG KPM037

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

GC/MS Semi VOA
Method(s) 680: Sample PMA-MW-4S-0210 (680-55283-5) was diluted due to abundance of target analytes . As such, surrogate recoveries are not reported, and elevated reporting limits (RLs) are provided.

Method(s) 680: Surrogate recovery for the following sample(s) was outside the upper control limit: PMA-MW-1S-0210 (680-55249-1), PMA-MW-2S-0210-EB (680-55249-5). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 680: The internal standards in the original extract for PMA-MW-3S-0210 (680-55283-3) were lost in the extraction and/or concentration process in the initial extraction and a valid analysis could not be obtained from this extract. The sample was re-extracted outside of holding time and successfully analyzed with acceptable internal standard and surrogate recovery. The results for the extraction outside of holding time are presented in the report.

No other analytical or quality issues were noted.

Comments
No additional comments.

APR 13 2010 ERK

METHOD SUMMARY

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

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

METHOD / ANALYST SUMMARY

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Method	Analyst	Analyst ID
EPA 680	Chamberlain, Kim	KAC

SAMPLE SUMMARY

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-55249-1	PMA-MW-1S-0210	Water	02/22/2010 1120	02/23/2010 0919
680-55249-1MS	PMA-MW-1S-0210-MS	Water	02/22/2010 1120	02/23/2010 0919
680-55249-1MSD	PMA-MW-1S-0210-MSD	Water	02/22/2010 1120	02/23/2010 0919
680-55249-2	PMA-MW-1M-0210	Water	02/22/2010 1210	02/23/2010 0919
680-55249-3	PMA-MW-2M-0210	Water	02/22/2010 1400	02/23/2010 0919
680-55249-4FD	PMA-MW-2M-0210-AD	Water	02/22/2010 1400	02/23/2010 0919
680-55249-5EB	PMA-MW-2S-0210-EB	Water	02/22/2010 1415	02/23/2010 0919
680-55249-6	PMA-MW-2S-0210	Water	02/22/2010 1445	02/23/2010 0919
680-55249-7	PMA-MW-5M-0210	Water	02/22/2010 1545	02/23/2010 0919
680-55283-1	PMA-MW-6D-0210	Water	02/23/2010 1020	02/24/2010 0919
680-55283-2	PMA-MW-3M-0210	Water	02/23/2010 1140	02/24/2010 0919
680-55283-3	PMA-MW-3S-0210	Water	02/23/2010 1230	02/24/2010 0919
680-55283-4	PMA-MW-4D-0210	Water	02/23/2010 1405	02/24/2010 0919
680-55283-5	PMA-MW-4S-0210	Water	02/23/2010 1530	02/24/2010 0919

SAMPLE RESULTS

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-1S-0210**

Lab Sample ID: 680-55249-1
Client Matrix: Water

Date Sampled: 02/22/2010 1120
Date Received: 02/23/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	03/31/2010 0156			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			Injection Volume:	

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

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	128	X	25 - 113

APR 13 2010 ETK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-1M-0210**

Lab Sample ID: 680-55249-2
Client Matrix: Water

Date Sampled: 02/22/2010 1210
Date Received: 02/23/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	03/31/2010 0328			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.20		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	67		25 - 113

APR 13 2010 EZK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-2M-0210**

Lab Sample ID: 680-55249-3
Client Matrix: Water

Date Sampled: 02/22/2010 1400
Date Received: 02/23/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	04/01/2010 0359			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	2.4		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	73		25 - 113

APR 13 2010 EZK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-2M-0210-AD**

Lab Sample ID: 680-55249-4FD
Client Matrix: Water

Date Sampled: 02/22/2010 1400
Date Received: 02/23/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	04/01/2010 0430			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	2.4		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	76		25 - 113

APR 13 2010 EZK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-2S-0210-EB**

Lab Sample ID: 680-55249-5EB
Client Matrix: Water

Date Sampled: 02/22/2010 1415
Date Received: 02/23/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	04/01/2010 0501			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			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	179	X	25 - 113

APR 13 2010 EZK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-2S-0210**

Lab Sample ID: 680-55249-6
Client Matrix: Water

Date Sampled: 02/22/2010 1445
Date Received: 02/23/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	04/01/2010 0532			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			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	81		25 - 113

APR 13 2010 ZZK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-5M-0210**

Lab Sample ID: 680-55249-7
Client Matrix: Water

Date Sampled: 02/22/2010 1545
Date Received: 02/23/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	04/01/2010 0603			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			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	87		25 - 113

APR 13 2010 EJK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-6D-0210**

Lab Sample ID: 680-55283-1
Client Matrix: Water

Date Sampled: 02/23/2010 1020
Date Received: 02/24/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	03/31/2010 2016			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.19		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	77		25 - 113

APR 13 2010 ZK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-3M-0210**

Lab Sample ID: 680-55283-2
Client Matrix: Water

Date Sampled: 02/23/2010 1140
Date Received: 02/24/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	03/31/2010 2047			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.87	"J"	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	69		25 - 113

APR 13 2010 EZK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-3S-0210**

Lab Sample ID: 680-55283-3
Client Matrix: Water

Date Sampled: 02/23/2010 1230
Date Received: 02/24/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-163986		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	04/01/2010 1923			Final Weight/Volume:	1.0 mL
Date Prepared:	03/25/2010 1401			Injection Volume:	

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

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	73		25 - 113

APR 13 2010 EZK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-4D-0210**

Lab Sample ID: 680-55283-4
Client Matrix: Water

Date Sampled: 02/23/2010 1405
Date Received: 02/24/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1060 mL
Date Analyzed:	04/01/2010 1618			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.26		0.094
Dichlorobiphenyl	0.28		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	59		25 - 113

APR 13 2010 EJK

* "Do not use this data. Use all other data."

Analytical Data

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-4S-0210**

Lab Sample ID: 680-55283-5
Client Matrix: Water

Date Sampled: 02/23/2010 1530
Date Received: 02/24/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	04/01/2010 1649			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	1.4	"J"	0.097
Dichlorobiphenyl	6.8	"J"	0.097
* ~~Trichlorobiphenyl~~	~~21~~	~~"J"~~	~~0.097~~
Tetrachlorobiphenyl	52	"J"	0.19
Pentachlorobiphenyl	34	"J"	0.19
* ~~Hexachlorobiphenyl~~	~~50~~	~~"J"~~	~~0.19~~
Heptachlorobiphenyl	33	"J"	0.29
Octachlorobiphenyl	8.3	"J"	0.29
Nonachlorobiphenyl	1.2	"J"	0.49
DCB Decachlorobiphenyl	0.85	"J"	0.49

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

APR 13 2010 ECK

* "Use these results only. All other data was reported from the 1.0 X dilution analysis."

Analytical Data

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Client Sample ID: **PMA-MW-4S-0210**

Lab Sample ID: 680-55283-5
Client Matrix: Water

Date Sampled: 02/23/2010 1530
Date Received: 02/24/2010 0919

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-164886		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-161622		Lab File ID:	N/A
Dilution:	10			Initial Weight/Volume:	1030 mL
Date Analyzed:	04/06/2010 1715	Run Type:	DL	Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
~~Monochlorobiphenyl~~	~~1.3~~	~~D~~	~~0.97~~
~~Dichlorobiphenyl~~	~~6.8~~	~~D~~	~~0.97~~
* Trichlorobiphenyl	14	~~D~~ "J"	0.97
~~Tetrachlorobiphenyl~~	~~43~~	~~D~~	~~1.9~~
~~Pentachlorobiphenyl~~	~~31~~	~~D~~	~~1.9~~
* Hexachlorobiphenyl	49	~~D~~ "J"	1.9
~~Heptachlorobiphenyl~~	~~42~~	~~D~~	~~2.9~~
~~Octachlorobiphenyl~~	~~7.2~~	~~D~~	~~2.9~~
~~Nonachlorobiphenyl~~	~~4.9~~	~~U~~	~~4.9~~
~~DCB Decachlorobiphenyl~~	~~4.9~~	~~U~~	~~4.9~~

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

APR 13 2010 EZ

DATA REPORTING QUALIFIERS

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	E	Result exceeded calibration range.
	H	Sample was prepped or analyzed beyond the specified holding time
	X	Surrogate is outside control limits
	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.

QUALITY CONTROL RESULTS

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 680-161622					
LCS 680-161622/18-A	Lab Control Sample	T	Water	680	
MB 680-161622/17-A	Method Blank	T	Water	680	
680-55249-1	PMA-MW-1S-0210	T	Water	680	
680-55249-1MS	Matrix Spike	T	Water	680	
680-55249-1MSD	Matrix Spike Duplicate	T	Water	680	
680-55249-2	PMA-MW-1M-0210	T	Water	680	
680-55249-3	PMA-MW-2M-0210	T	Water	680	
680-55249-4FD	PMA-MW-2M-0210-AD	T	Water	680	
680-55249-5EB	PMA-MW-2S-0210-EB	T	Water	680	
680-55249-6	PMA-MW-2S-0210	T	Water	680	
680-55249-7	PMA-MW-5M-0210	T	Water	680	
680-55283-1	PMA-MW-6D-0210	T	Water	680	
680-55283-2	PMA-MW-3M-0210	T	Water	680	
680-55283-4	PMA-MW-4D-0210	T	Water	680	
680-55283-5	PMA-MW-4S-0210	T	Water	680	
680-55283-5DL	PMA-MW-4S-0210	T	Water	680	
Prep Batch: 680-163986					
LCS 680-163986/4-A	Lab Control Sample	T	Water	680	
LCSD 680-163986/5-A	Lab Control Sample Duplicate	T	Water	680	
MB 680-163986/3-A	Method Blank	T	Water	680	
680-55283-3	PMA-MW-3S-0210	T	Water	680	
Analysis Batch:680-164886					
LCS 680-161622/18-A	Lab Control Sample	T	Water	680	680-161622
MB 680-161622/17-A	Method Blank	T	Water	680	680-161622
LCS 680-163986/4-A	Lab Control Sample	T	Water	680	680-163986
LCSD 680-163986/5-A	Lab Control Sample Duplicate	T	Water	680	680-163986
MB 680-163986/3-A	Method Blank	T	Water	680	680-163986
680-55249-1	PMA-MW-1S-0210	T	Water	680	680-161622
680-55249-1MS	Matrix Spike	T	Water	680	680-161622
680-55249-1MSD	Matrix Spike Duplicate	T	Water	680	680-161622
680-55249-2	PMA-MW-1M-0210	T	Water	680	680-161622
680-55249-3	PMA-MW-2M-0210	T	Water	680	680-161622
680-55249-4FD	PMA-MW-2M-0210-AD	T	Water	680	680-161622
680-55249-5EB	PMA-MW-2S-0210-EB	T	Water	680	680-161622
680-55249-6	PMA-MW-2S-0210	T	Water	680	680-161622
680-55249-7	PMA-MW-5M-0210	T	Water	680	680-161622
680-55283-1	PMA-MW-6D-0210	T	Water	680	680-161622
680-55283-2	PMA-MW-3M-0210	T	Water	680	680-161622
680-55283-3	PMA-MW-3S-0210	T	Water	680	680-163986
680-55283-4	PMA-MW-4D-0210	T	Water	680	680-161622
680-55283-5	PMA-MW-4S-0210	T	Water	680	680-161622
680-55283-5DL	PMA-MW-4S-0210	T	Water	680	680-161622

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
T = Total

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Surrogate Recovery Report

680_Polychlorinated Biphenyls (PCBs) (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	13DCB %Rec
680-55249-1	PMA-MW-1S-0210	128X
680-55249-2	PMA-MW-1M-0210	67
680-55249-3	PMA-MW-2M-0210	73
680-55249-4	PMA-MW-2M-0210-AD	76
680-55249-5	PMA-MW-2S-0210-EB	179X
680-55249-6	PMA-MW-2S-0210	81
680-55249-7	PMA-MW-5M-0210	87
680-55283-1	PMA-MW-6D-0210	77
680-55283-2	PMA-MW-3M-0210	69
680-55283-3	PMA-MW-3S-0210	73
680-55283-4	PMA-MW-4D-0210	59
680-55283-5	PMA-MW-4S-0210	69
680-55283-5 DL	PMA-MW-4S-0210 DL	0D
MB 680-161622/17-A		104
MB 680-163986/3-A		84
LCS 680-161622/18-A		70
LCS 680-163986/4-A		84
LCSD 680-163986/5-A		70
680-55249-1 MS	PMA-MW-1S-0210 MS	75
680-55249-1 MSD	PMA-MW-1S-0210 MSD	107

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

APR 13 2010 EZK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Method Blank - Batch: 680-161622

Method: 680
Preparation: 680

Lab Sample ID:	MB 680-161622/17-A	Analysis Batch:	680-164886	Instrument ID:	MSY
Client Matrix:	Water	Prep Batch:	680-161622	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	03/31/2010 1914			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			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	104	25 - 113

Lab Control Sample - Batch: 680-161622

Method: 680
Preparation: 680

Lab Sample ID:	LCS 680-161622/18-A	Analysis Batch:	680-164886	Instrument ID:	MSY
Client Matrix:	Water	Prep Batch:	680-161622	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	03/31/2010 1945			Final Weight/Volume:	1 mL
Date Prepared:	02/25/2010 1417			Injection Volume:	

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Monochlorobiphenyl	2.00	0.649	32	10 - 125	
Dichlorobiphenyl	2.00	0.738	37	10 - 110	
Trichlorobiphenyl	2.00	0.792	40	17 - 110	
Tetrachlorobiphenyl	4.00	1.64	41	18 - 110	
Pentachlorobiphenyl	4.00	2.12	53	34 - 110	
Hexachlorobiphenyl	4.00	2.06	51	31 - 110	
Heptachlorobiphenyl	6.00	3.06	51	33 - 110	
Octachlorobiphenyl	6.00	3.44	57	33 - 110	
DCB Decachlorobiphenyl	10.0	6.28	63	26 - 115	

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

APR 13 2010 EZK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-161622

Method: 680
Preparation: 680

MS Lab Sample ID:	680-55249-1	Analysis Batch: 680-164886	Instrument ID: MSY
Client Matrix:	Water	Prep Batch: 680-161622	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 1060 mL
Date Analyzed:	04/01/2010 0227		Final Weight/Volume: 1 mL
Date Prepared:	02/25/2010 1417		Injection Volume:

MSD Lab Sample ID:	680-55249-1	Analysis Batch: 680-164886	Instrument ID: MSY
Client Matrix:	Water	Prep Batch: 680-161622	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 1050 mL
Date Analyzed:	04/01/2010 0257		Final Weight/Volume: 1 mL
Date Prepared:	02/25/2010 1417		Injection Volume:

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Monochlorobiphenyl	41	55	10 - 125	30	40		
Dichlorobiphenyl	45	63	10 - 110	34	40		
Trichlorobiphenyl	48	69	17 - 110	36	40		
Tetrachlorobiphenyl	46	66	18 - 110	37	40		
Pentachlorobiphenyl	56	79	34 - 110	36	40		
Hexachlorobiphenyl	54	76	31 - 110	35	40		
Heptachlorobiphenyl	55	77	33 - 110	34	40		
Octachlorobiphenyl	62	86	33 - 110	34	40		
DCB Decachlorobiphenyl	68	95	26 - 115	34	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Decachlorobiphenyl-13C12	75	107	25 - 113

APR 13 2010

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Method Blank - Batch: 680-163986

Method: 680
Preparation: 680

Lab Sample ID:	MB 680-163986/3-A	Analysis Batch:	680-164886	Instrument ID:	MSY
Client Matrix:	Water	Prep Batch:	680-163986	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	04/01/2010 1720			Final Weight/Volume:	1.0 mL
Date Prepared:	03/25/2010 1401			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	84	25 - 113

APR 13 2010 EZK

Client: Solutia Inc.

Job Number: 680-55249-1
Sdg Number: KPM037

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-163986

Method: 680
Preparation: 680

LCS Lab Sample ID:	LCS 680-163986/4-A	Analysis Batch:	680-164886	Instrument ID:	MSY
Client Matrix:	Water	Prep Batch:	680-163986	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	04/01/2010 1751			Final Weight/Volume:	1.0 mL
Date Prepared:	03/25/2010 1401			Injection Volume:	

LCSD Lab Sample ID:	LCSD 680-163986/5-A	Analysis Batch:	680-164886	Instrument ID:	MSY
Client Matrix:	Water	Prep Batch:	680-163986	Lab File ID:	N/A
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	04/01/2010 1822			Final Weight/Volume:	1.0 mL
Date Prepared:	03/25/2010 1401			Injection Volume:	

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Monochlorobiphenyl	57	61	10 - 125	6	40		
Dichlorobiphenyl	61	63	10 - 110	3	40		
Trichlorobiphenyl	65	65	17 - 110	0	40		
Tetrachlorobiphenyl	65	64	18 - 110	1	40		
Pentachlorobiphenyl	73	72	34 - 110	2	40		
Hexachlorobiphenyl	71	69	31 - 110	3	40		
Heptachlorobiphenyl	72	71	33 - 110	2	40		
Octachlorobiphenyl	76	71	33 - 110	8	40		
DCB Decachlorobiphenyl	77	65	26 - 115	17	40		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Decachlorobiphenyl-13C12	84	70	25 - 113

APR 13 2010

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jeff Adams	Site Contact: Mike Corbett	Date: 2/22/10	COC No:
URS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gulizia	Carrier: FedEx	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No.
St. Louis, MO 63110	Calendar (C) or Work Days (W)			21562401.00001
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks			SDG No.
Project Name: 1Q10 PCB GW Sampling	☐ 1 week			
Site: Solutia WG Krummrich Facility	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Total PCBs by 680	Sample Specific Notes:
PMA-MW-1S-0210	2/22/10	1120	G	Water	2	2	
PMA-MW-1S-0210-MS		1120	G	Water	2	2	
PMA-MW-1S-0210-MSD		1120	G	Water	2	2	
PMA-MW-1M-0210		1210	G	Water	2	2	
PMA-MW-2M-0210		1400	G	Water	2	2	
PMA-MW-2M-0210-AD		1400	G	Water	2	2	
PMA-MW-2S-0210-EB		1415	G	Water	2	2	
PMA-MW-2S-0210		1445	G	Water	2	2	
PMA-MW-5M-0210		1545	G	Water	2	2	
PMA-MW-____-0210			G	Water	2	2	

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

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

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

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

2.6/1.8/1.8 680-55249

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
M. Corbett	URS	2/22/10 1700	L. Sheblakel	TA	2/22/10 1700
L. Sheblakel	TA	2/22/10 1730			
			George Klouma	TA SAV	2/23/10 0919

APR 13 2010 EK

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jeff Adams	Site Contact: Mike Corbett	Date: 2/23/10	COC No:
URS Corporation	Tel/Fax: (314) 743-4228	Lab Contact: Lidya Gulizia	Carrier: FedEx	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562401.00001
St. Louis, MO 63110	Calendar (C) or Work Days (W) _____			
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks			SDG No.
Project Name: 1Q10 PCB GW Sampling	☐ 1 week			
Site: Solutia WG Krummrich Facility	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Total PCBs by 680	Sample Specific Notes:
PMA-MW-6D-0210	2/23/10	1020	G	Water	2		2	
PMA-MW-3M-0210	↓	1140	G	Water	2		2	
PMA-MW-3S-0210		1230	G	Water	2		2	
PMA-MW-4D-0210		1405	G	Water	2		2	
PMA-MW-4S-0210		1530	G	Water	2		2	
PMA-MW-____-0210			G	Water	2		2	
PMA-MW-____-0210			G	Water	2		2	
PMA-MW-____-0210			G	Water	2		2	
PMA-MW-____-0210			G	Water	2		2	
PMA-MW-____-0210			G	Water	2		2	
							1	

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

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

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

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

680-55283 1.0/0.8

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	2/23/10 1700	[signature]	TA	2/23/10 1700
[signature]	TA	2/23/10 1770			
			[signature]	TA SAV	2/24/10 0919

APR 13 2010

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55249-1
SDG Number: KPM037

Login Number: 55249
Creator: Conner, Keaton
List Number: 1

List Source: TestAmerica Savannah

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	3 coolers rec'd on ice
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6, 1.8 and 1.8 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
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	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	

APR 13 2010 EJK

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-55249-1
SDG Number: KPM037

Login Number: 55283
Creator: Conner, Keaton
List Number: 1

List Source: TestAmerica Savannah

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	2 coolers rec'd on ice
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.0 and 0.8 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
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	
Is the Field Sampler's name present on COC?	N/A	
Sample Preservation Verified	True	

APR 13 2010