SOLUTIA

Solutions for a better life.

Solutia Inc.
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July 22, 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
2nd Quarter 2010 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

Dear Mr. Bardo:

Enclosed please find the PCB Groundwater Quality Assessment Program 2nd 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

A separate report evaluating all of the PCB groundwater monitoring data collected from 3rd quarter 2008 through 2nd quarter 2010, i.e., since the February 2008 Final Decision, and making recommendations for changes going forward will be submitted shortly.

Sincerely,

Gerald M. Rinaldi
Manager, Remediation Services

Enclosure

cc: Distribution List

DISTRIBUTION LIST

PCB Groundwater Quality Assessment Program
2nd Quarter 2010 Data Report
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

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Solutia

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

2ND 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

July 2010

URS Corporation
1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100
Project # **21562401.00004**

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1.0 INTRODUCTION

This report presents the results of the 2nd Quarter 2010 (2Q10) 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 2Q10 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 2Q10 PCB Groundwater Quality Assessment Program field activities between May 14 and 18, 2010.

Groundwater Level Measurements – An oil/water interface probe was used to measure depth to static groundwater levels and determine the presence of non-aqueous phase liquids (NAPL) in the PCB Groundwater Quality Assessment Program well network. Periodically, well PMA-MW-4S has contained measurable DNAPL, however none was observed in this well during the second quarter sampling event. Depth to groundwater measurements were collected from accessible existing wells (i.e., GM-, K- , PSMW- and PMA-series) and piezometers clusters (installed for the Sauget Area 2 RI/FS and WGK CA-750 Environmental Indicator projects) specified in the Revised PCB Groundwater Quality Assessment Program Work Plan.

Well gauging information for the 2Q10 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 300 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.: May (second quarter), 2010 (0510)
- **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^{o}C. Field personnel recorded the project identification and number, sample description/location, required analysis, date and time of sample collection, type and matrix of sample, number of sample containers, analysis requested/comments, and sampler signature/date/time, with permanent ink on the chain-of-custody (COC). Prior to shipment, coolers were sealed between the lid and sides of the cooler with a custody seal, and then shipped to TestAmerica in Savannah, Georgia by means of overnight delivery service (FedEx). Field sampling data sheets are included in **Appendix A**, COC forms are included in **Appendix B**.

3.0 LABORATORY PROCEDURES

Samples were analyzed by TestAmerica for PCBs using Method 680.

4.0 QUALITY ASSURANCE

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

A total of 14 samples (ten investigative groundwater samples, one field duplicate pair, one MS/MSD, one equipment blank) were prepared and analyzed by TestAmerica for PCBs. Results for the various analyses were submitted as sample delivery group (SDG) KPM038.

The samples contained in SDG KPM038 are listed below:

KPM038

PMA-MW-05M-0510
PMA-MW-06D-0510
PMA-MW-03S-0510
PMA-MW-03M-0510
PMA-MW-01S-0510
PMA-MW-01M-0510
PMA-04D-0510
PMA-04S-0510
PMA-MW-02M-0510
PMA-MW-02M-0510-AD
PMA-MW-02S-0510-EB
PMA-MW-02S-0510

Evaluation of the analytical data followed procedures outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, (USEPA 2008) and the Revised PCB Groundwater Quality Assessment Work Plan (Solutia 2009). Based on the above mentioned criteria, results reported for the analyses performed were accepted for their intended use. Acceptable levels of accuracy and precision, based on MS/MSD, LCS, surrogate and field duplicate data were achieved for this SDG to meet the project objectives. Completeness, which is defined to be the percentage of analytical results which are judged to be valid, including estimated detect (**J**) data was 100 percent.

5.0 OBSERVATIONS

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

Shallow Hydrogeologic Unit

Historically, measurable DNAPL has been periodically observed in the source area SHU monitoring well PMA-MW-4S during previous sampling events. As DNAPL was not detected in PMA-MW-4S by the oil/water interface probe during the 2Q10 event, a water sample was collected, and total PCBs were detected at an estimated concentration of 2,131 µg/L. PCBs were detected in two of the three down-gradient PCB Groundwater Quality Assessment Program SHU monitoring wells at concentrations of 0.63 µg/L (PMA-MW-3S) and 0.18 µg/L (PMA-MW-2S). 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 0.72 µg/L for the 2Q10 sampling event. PCBs were also detected in three of the five downgradient monitoring wells at concentrations of 3.9/4 µg/L (PMA-MW-2M/duplicate), 0.82 µg/L (PMA-MW-3M), and 0.33 µg/L (PMA-MW-6D). PCBs were not detected in the groundwater samples collected from monitoring wells PMA-MW-1M and PMA-MW-5M. **Figure 5** displays the 2Q10 PCB sampling results for the MHU/DHU.

The 2Q10 sampling event was the eighth 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 wells PMA-MW-2M and PMA-MW-4D at this time, but no trends at any of the other wells.

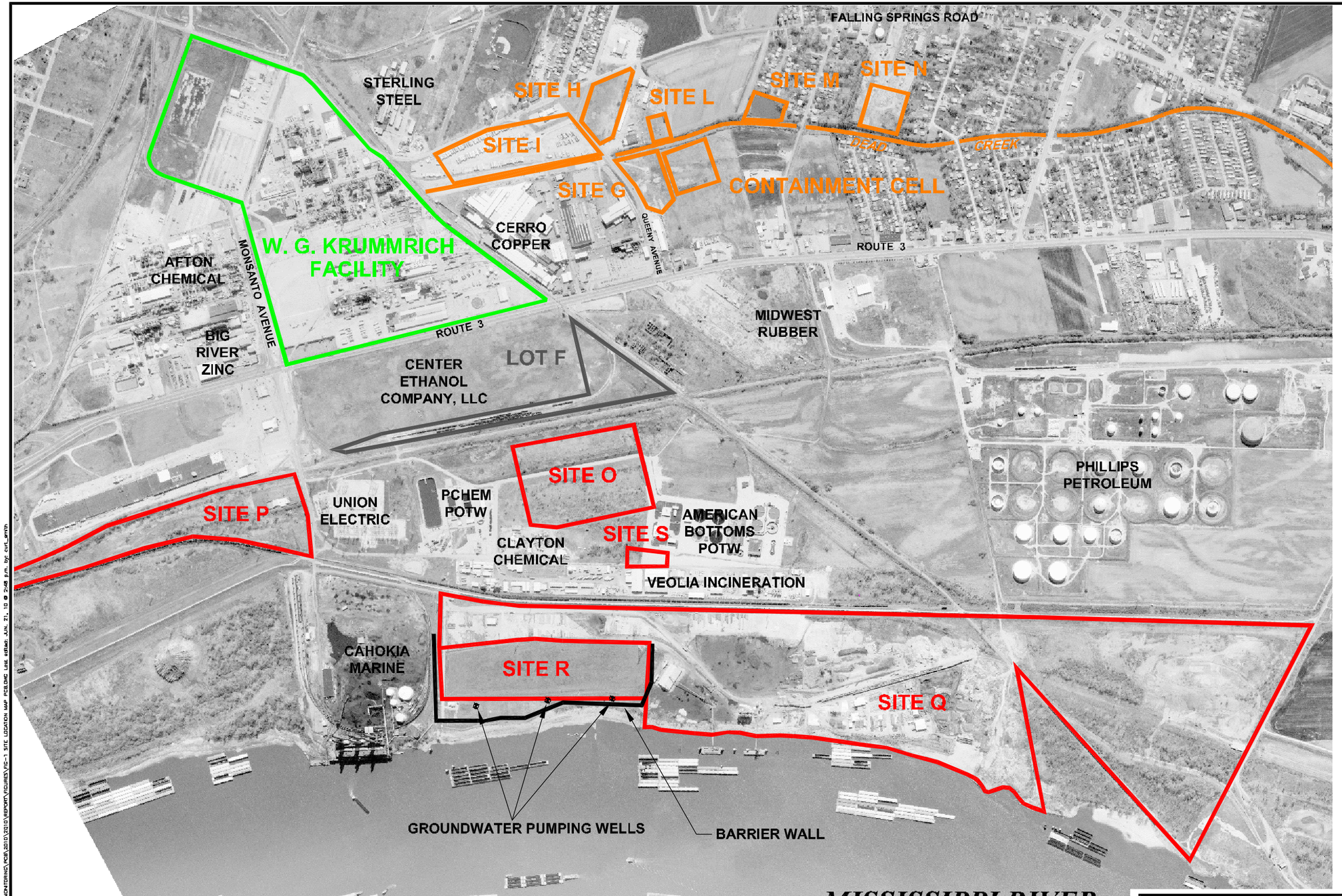
After eight quarters of sampling under the PCB Groundwater Quality Assessment Program, the Mann-Whitney U Test will be performed to determine whether or not concentrations in the second four quarters were higher or lower than the first four quarters. Linear regression analysis will be done for the eight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

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
2ND QUARTER 2010 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562401

URS

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

Site Location Map

FIG. NO. 1

LEGEND

MONITORING WELL LOCATION

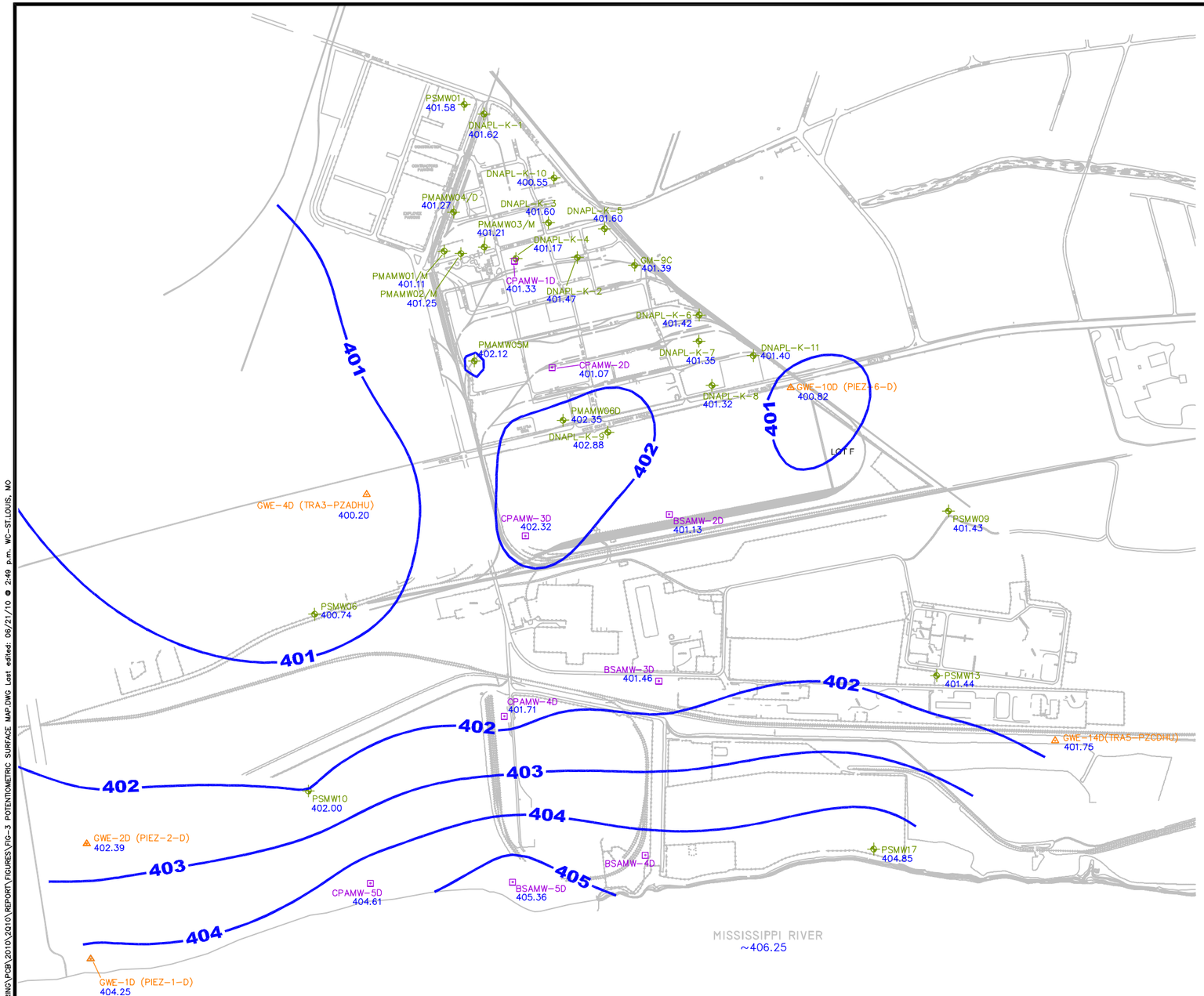
N E S W

0 300

SCALE FEET

PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM 2ND QUARTER 2010 DATA REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS	PROJECT NO. 21562401
URS	
DRN. BY: chs July 2010 DSGN. BY: dp CHKD. BY:	Former PCB Manufacturing Area Monitoring Well Locations
	FIG. NO. 2

File: #:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\WGK\2010\2Q10\REPORTS\FIGURES\FIG-2 FORMER PCB MANUFACTURING AREA.DWG Last edited: JUN. 21, 10 @ 2:49 p.m. by: curt_smith



LEGEND

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

NOTES:

1. GROUNDWATER LEVELS WERE MEASURED MAY 14, 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.

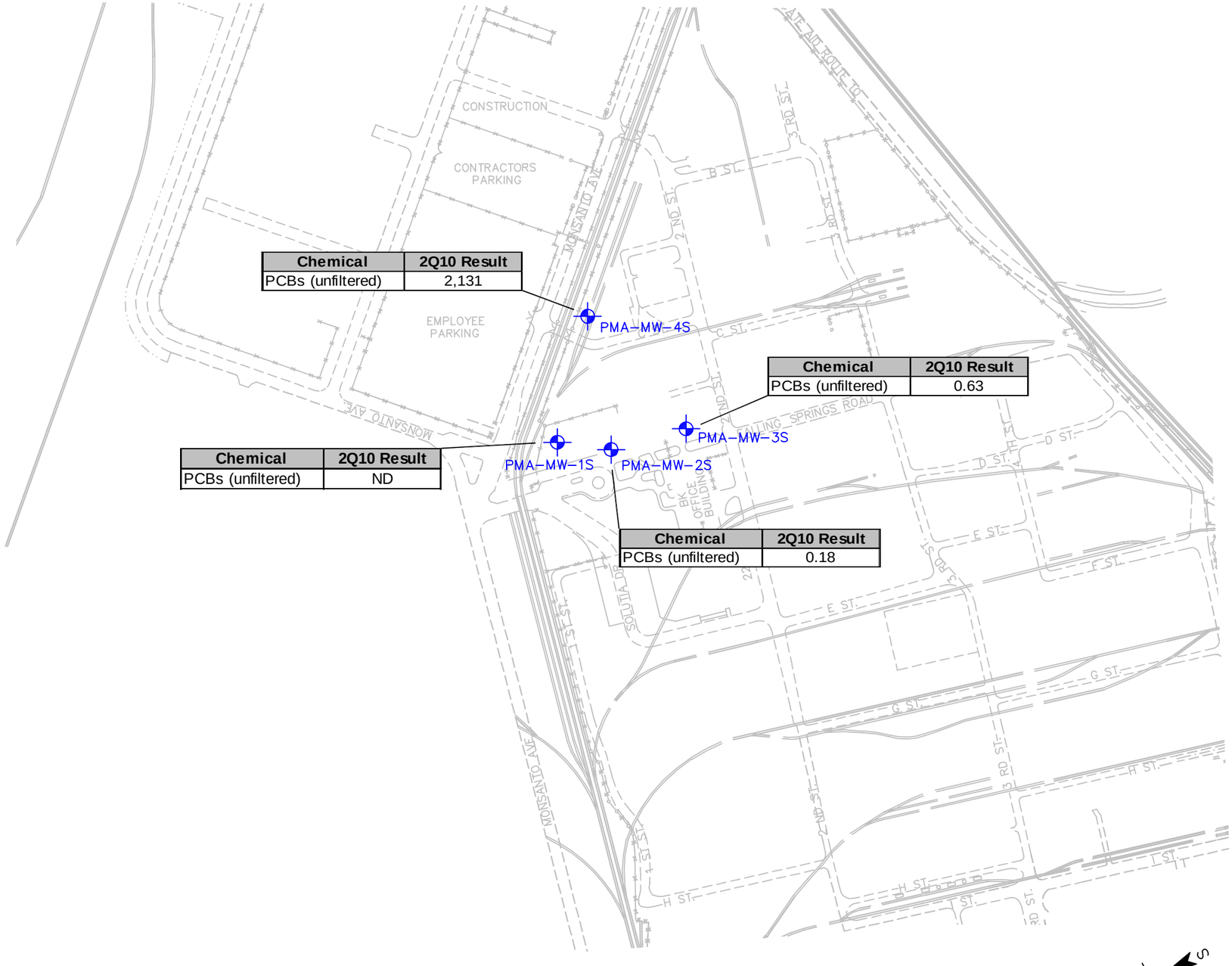
N

0 1000

SCALE FEET

PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM 2ND QUARTER 2010 DATA REPORT W.G. KRUMMRICH FACILITY SAUGET, ILLINOIS	PROJECT NO. 21562156
URS	
DRN. BY:chs July 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\2010\REPORT\FIGURES\FIG-3 POTENTIOMETRIC SURFACE MAP.DWG Last edited: 06/21/10 @ 2:49 p.m. WC-ST.LOUIS, MO



Chemical	2Q10 Result
PCBs (unfiltered)	2,131

Chemical	2Q10 Result
PCBs (unfiltered)	0.63

Chemical	2Q10 Result
PCBs (unfiltered)	ND

Chemical	2Q10 Result
PCBs (unfiltered)	0.18

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 S W

0 300

SCALE FEET

PCB GROUNDWATER QUALITY ASSESSMENT PROGRAM
2ND QUARTER 2010 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562401

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DRN. BY: chs July 2010
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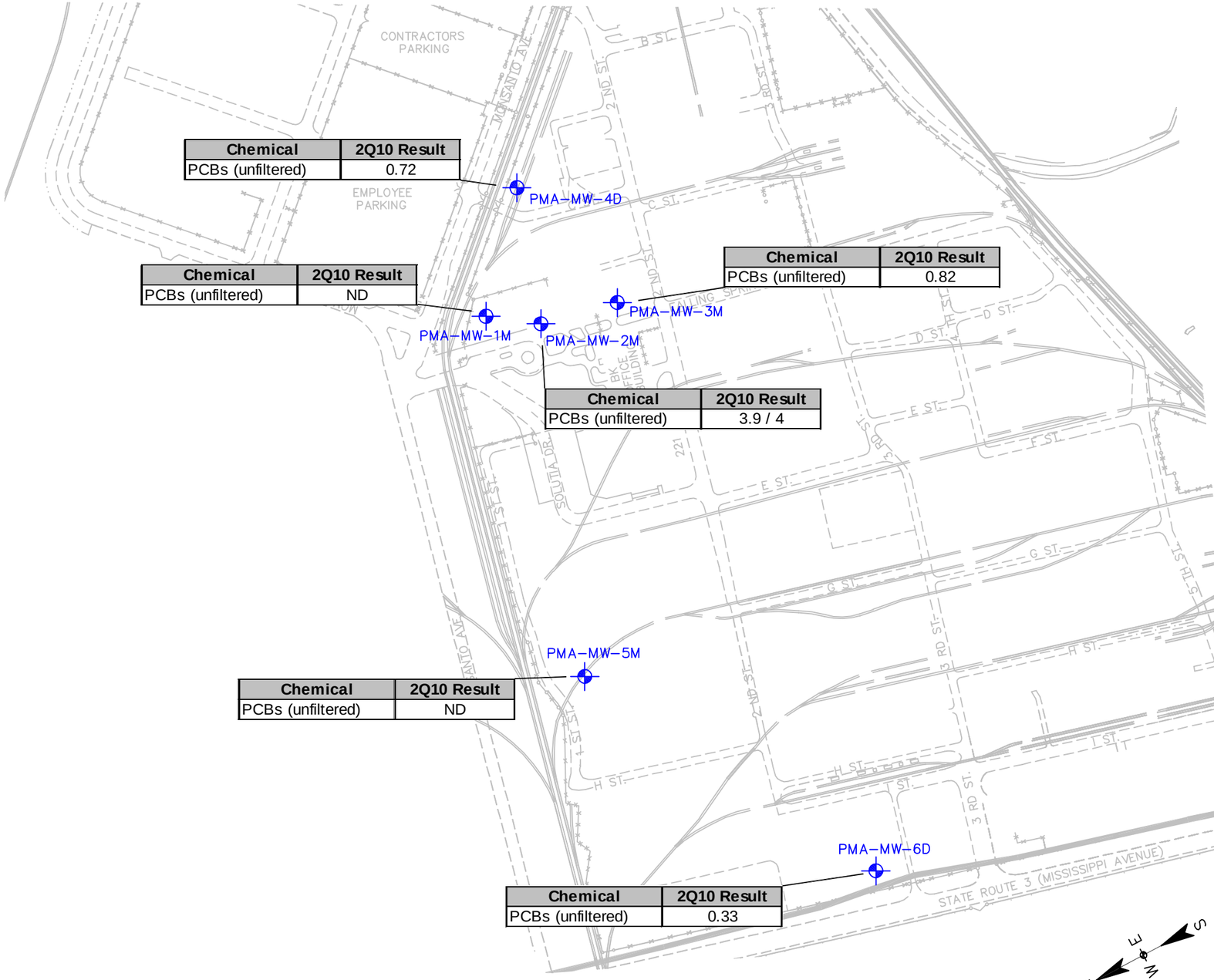
CHKD. BY:

PCB Results – SHU Wells

FIG. NO. 4

File: P:\ENVIRONMENTAL\SOLUTIA WGK\QUARTERLY MONITORING\PCB\2010\Q2\10A REPORT\FIGURES\FIG-4 TOTAL PCBS SHU WELLS.DWG Last edited JUN. 21, 10 @ 2:50 p.m. by: curt_smith



Chemical	2Q10 Result
PCBs (unfiltered)	0.72

Chemical	2Q10 Result
PCBs (unfiltered)	ND

Chemical	2Q10 Result
PCBs (unfiltered)	0.82

Chemical	2Q10 Result
PCBs (unfiltered)	3.9 / 4

Chemical	2Q10 Result
PCBs (unfiltered)	ND

Chemical	2Q10 Result
PCBs (unfiltered)	0.33

0 300
SCALE FEET

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
2ND QUARTER 2010 DATA REPORT
W.G. KRUMMRICH FACILITY
SAUGET, ILLINOIS

PROJECT NO. 21562401

URS

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

PCB Results – MHU/DHU Wells

FIG. NO. 5

Tables

See last page of table for notes.

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						May 14, 2010		
	Ground Elevation (feet)*	Casing Elevation* (feet)	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Top of Screen Elevation* (feet)	Bottom of Screen Elevation* (feet)	Depth to Water (feet btoc)	Depth to Bottom (feet btoc)	Water Elevation* (feet)
Shallow Hydrogeologic Unit (SHU 395-380 feet NAVD 88)									
PMA-MW-1S	410.30	410.06	20.18	25.18	390.12	385.12	8.61	NG	401.45
PMA-MW-2S	412.27	411.66	22.94	27.94	389.33	384.33	10.41	NG	401.25
PMA-MW-3S	412.37	412.06	22.71	27.71	389.66	384.66	10.84	NG	401.22
PMA-MW-4S	411.09	410.43	20.99	25.99	390.10	385.10	9.08	25.37	401.35
Middle Hydrogeologic Unit (MHU 380-350 feet NAVD 88)									
PMA-MW-1M	410.32	410.08	54.54	59.54	355.78	350.78	8.97	NG	401.11
PMA-MW-2M	412.26	411.93	56.87	61.87	355.39	350.39	10.68	NG	401.25
PMA-MW-3M	412.36	412.10	57.07	62.07	355.29	350.29	10.89	NG	401.21
PMA-MW-5M	411.27	410.97	52.17	57.17	359.10	354.10	8.85	NG	402.12
PS-MW-1	409.37	412.59	37.78	42.78	371.59	366.59	11.01	NG	401.58
Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock)									
BSA-MW-2D	412.00	415.13	68.92	73.92	343.08	338.08	14.00	NG	401.13
BSA-MW-3D	412.91	415.74	107.02	112.02	305.89	300.89	14.28	NG	401.46
BSA-MW-4D	425.00	424.69	118.54	123.54	306.46	301.46	NG	NG	NG
BSA-MW-5D	420.80	420.49	115.85	120.85	304.95	299.95	15.13	NG	405.36
CPA-MW-1D	408.62	408.32	66.12	71.12	342.50	337.50	6.99	NG	401.33
CPA-MW-2D	408.51	408.20	99.96	104.96	308.55	303.55	7.13	NG	401.07
CPA-MW-3D	410.87	410.67	108.20	113.20	302.67	297.67	8.35	NG	402.32
CPA-MW-4D	421.57	421.20	116.44	121.44	305.13	300.13	19.49	NG	401.71
CPA-MW-5D	411.03	413.15	107.63	112.63	303.40	298.40	8.54	NG	404.61
DNAPL-K-1	413.07	415.56	108.20	123.20	304.87	289.87	13.94	NG	401.62
DNAPL-K-2	407.94	407.72	97.63	112.63	310.31	295.31	6.25	NG	401.47
DNAPL-K-3	412.13	411.91	104.80	119.80	307.33	292.33	10.31	NG	401.60
DNAPL-K-4	409.48	409.15	102.55	117.55	306.93	291.93	7.98	NG	401.17
DNAPL-K-5	412.27	411.91	102.15	117.15	310.12	295.12	10.31	NG	401.60
DNAPL-K-6	410.43	410.09	102.47	117.47	307.96	292.96	8.67	NG	401.42
DNAPL-K-7	408.32	407.72	100.40	115.40	307.92	292.92	6.37	NG	401.35
DNAPL-K-8	408.56	411.38	102.65	117.65	305.91	290.91	10.06	NG	401.32
DNAPL-K-9	406.45	405.97	97.42	112.42	309.03	294.03	3.09	NG	402.88
DNAPL-K-10	413.50	413.25	105.43	120.43	308.07	293.07	11.70	NG	401.55
DNAPL-K-11	412.20	411.78	105.46	120.46	306.74	291.74	10.38	NG	401.40
GM-9C	409.54	411.21	88.00	108.00	321.54	301.54	9.82	NG	401.39

See last page of table for notes.

Table 1
Monitoring Well Gauging Information

Well ID	Construction Details						May 14, 2010		
	Ground Elevation (feet)*	Casing Elevation* (feet)	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Top of Screen Elevation* (feet)	Bottom of Screen Elevation* (feet)	Depth to Water (feet btoc)	Depth to Bottom (feet btoc)	Water Elevation* (feet)
Deep Hydrogeologic Unit (DHU 350 feet NAVD 88 - Bedrock) (continued)									
GWE-1D (PIEZ-1D)	412.80	415.60	117.00	127.00	295.80	285.80	11.35	NG	404.25
GWE-2D (PIEZ-2D)	417.45	417.14	127.00	137.00	290.45	280.45	14.75	NG	402.39
GWE-4D (TRA3-PZADHU)	406.05	405.74	74.00	80.00	332.05	326.05	5.54	NG	400.20
GWE-10D (PIEZ-6D)	410.15	412.87	102.50	112.50	307.65	297.65	12.05	NG	400.82
GWE-14D (TRA5-PZCDHU)	420.47	422.90	90.00	96.00	330.47	324.47	21.15	NG	401.75
PMA-MW-4D	411.22	410.88	68.84	73.84	342.38	337.38	9.61	NG	401.27
PMA-MW-6D	407.63	407.32	96.49	101.49	311.14	306.14	4.97	NG	402.35
PSMW-6	404.11	406.63	99.80	104.80	304.31	299.31	5.89	NG	400.74
PSMW-9	403.92	403.52	100.40	105.40	303.52	298.52	2.09	NG	401.43
PSMW-10	409.63	412.18	101.23	106.23	308.40	303.40	10.18	NG	402.00
PSMW-13	405.80	405.53	106.08	111.08	299.72	294.72	4.09	NG	401.44
PSMW-17	420.22	423.26	121.25	126.25	298.97	293.97	18.41	NG	404.85

Notes:
* - Elevation based upon North American Vertical Datum (NAVD) 88 datum
bgs - below ground surface
btoc - below top of casing
NG - not gauged

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-0510	5/18/2010	µg/L	<0.095	<0.095	<0.095	<0.19	<0.19	<0.19	<0.29	<0.29	<0.48	<0.48
PMA-MW-2S-0510	5/18/2010	µg/L	<0.097	<0.097	**0.18**	<0.19	<0.19	<0.19	<0.29	<0.29	<0.49	<0.49
PMA-MW-3S-0510	5/17/2010	µg/L	**0.52**	**0.11**	<0.095	<0.19	<0.19	<0.19	<0.29	<0.29	<0.48	<0.48
PMA-MW-4S-0510	5/18/2010	µg/L	<9.7	**43**	**140**	**410**	**370**	**620**	**470**	**78**	<49	<49
Middle / Deep Hydrologic Unit												
PMA-MW-1M-0510	5/18/2010	µg/L	<0.95	<0.95	<0.95	<1.9	<1.9	<1.9	<2.9	<2.9	<4.8	<4.8
PMA-MW-2M-0510	5/18/2010	µg/L	**3.9**	<0.99	<0.99	<2	<2	<2	<3	<3	<5	<5
PMA-MW-2M-0510-AD	5/18/2010	µg/L	**4**	<0.97	<0.97	<1.9	<1.9	<1.9	<2.9	<2.9	<4.9	<4.9
PMA-MW-3M-0510	5/17/2010	µg/L	**0.82**	<0.095	<0.095	<0.19	<0.19	<0.19	<0.29	<0.29	<0.48	<0.48
PMA-MW-4D-0510	5/18/2010	µg/L	**0.31**	**0.41**	<0.097	<0.19	<0.19	<0.19	<0.29	<0.29	<0.49	<0.49
PMA-MW-5M-0510	5/17/2010	µg/L	<0.098	<0.098	<0.098	<0.2	<0.2	<0.2	<0.29	<0.29	<0.49	<0.49
PMA-MW-6D-0510	5/17/2010	µg/L	**0.33**	<0.097	<0.097	<0.19	<0.19	<0.19	<0.29	<0.29	<0.49	<0.49

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

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

W.G.Krummrich Facility PCB Mfg. Area Monitoring Well MW-1M Mann-Kendall Trend Analysis																		
	Event 1 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	Event 17 2Q10	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	ND	
Compare to Event 1		1	1	1	1	1	1	NA	1	1	1	1	1	1	1	1	NA	14
Compare to Event 2		-1	-1	1	1	1	-1	-1	1	1	-1	-1	1	1	-1	-1	-1	-1
Compare to Event 3			-1	1	1	1	-1	-1	1	1	-1	0	1	1	-1	-1	-1	1
Compare to Event 4				1	1	1	-1	1	1	1	-1	1	1	1	1	-1	-1	7
Compare to Event 5					1	1	-1	-1	1	0	-1	-1	1	1	-1	-1	-1	-1
Compare to Event 6						1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-7
Compare to Event 7							-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-10
Compare to Event 8								1	1	1	1	1	1	1	1	1	NA	8
Compare to Event 9									1	1	-1	1	1	1	1	1	-1	4
Compare to Event 10											-1	-1	-1	-1	-1	-1	-1	-7
Compare to Event 11												-1	-1	1	1	-1	-1	-2
Compare to Event 12													1	1	1	1	-1	3
Compare to Event 13														1	1	-1	-1	0
Compare to Event 14															0	-1	-1	-2
Compare to Event 15																-1	-1	-2
Compare to Event 16																	-1	-1

Mann-Kendall Statistic (S)	**4**
90 % Confidence Mann-Kendall Statistic	**34**

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	Event 17 2Q10	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	3.9	
Compare to Event 1		1	1	-1	1	1	1	-1	1	1	1	1	1	1	1	1	1	12
Compare to Event 2			1	-1	1	1	1	-1	1	1	1	1	1	1	1	0	1	10
Compare to Event 3				-1	1	-1	1	-1	1	1	-1	1	1	1	-1	-1	1	2
Compare to Event 4					1	1	1	-1	1	1	1	1	1	1	1	1	1	11
Compare to Event 5						-1	-1	-1	-1	1	-1	-1	1	-1	-1	-1	1	-6
Compare to Event 6							1	-1	1	1	0	1	1	1	1	-1	1	6
Compare to Event 7								-1	-1	1	-1	-1	1	0	-1	-1	1	-3
Compare to Event 8									1	1	1	1	1	1	1	1	1	9
Compare to Event 9										1	-1	-1	1	1	-1	-1	1	0
Compare to Event 10											-1	-1	-1	-1	-1	-1	-1	-7
Compare to Event 11												1	1	1	1	-1	1	4
Compare to Event 12													1	1	-1	-1	1	1
Compare to Event 13														-1	-1	-1	-1	-4
Compare to Event 14															-1	1	1	-1
Compare to Event 15																-1	1	0
Compare to Event 16																	1	1

Mann-Kendall Statistic (S)	**35**
90 % Confidence Mann-Kendall Statistic	**34**

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	Event 17 2Q10	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	0.63	
Compare to Event 1		-1	-1	-1	1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1	-1	-10
Compare to Event 2			-1	1	1	-1	-1	-1	1	-1	-1	1	-1	1	1	-1	1	-1
Compare to Event 3				1	1	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	-1	1	-3
Compare to Event 5						-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-10
Compare to Event 6							-1	-1	1	-1	-1	1	-1	1	1	-1	1	-1
Compare to Event 7								1	1	1	1	1	-1	1	1	-1	1	6
Compare to Event 8									1	1	-1	1	-1	1	1	-1	1	3
Compare to Event 9										-1	-1	1	-1	-1	1	-1	-1	-4
Compare to Event 10											-1	1	-1	1	1	-1	1	1
Compare to Event 11												1	-1	1	1	-1	1	2
Compare to Event 12													-1	-1	1	-1	-1	-3
Compare to Event 13														1	1	NA	1	3
Compare to Event 14															1	-1	1	1
Compare to Event 15																-1	-1	-2
Compare to Event 16																	1	1

Mann-Kendall Statistic (S)	**-7**
90 % Confidence Mann-Kendall Statistic	**-34**

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	Event 17 2Q10	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	0.82	
Compare to Event 1		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-16
Compare to Event 2			-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-15
Compare to Event 3				1	NA	1	1	1	1	1	1	1	1	1	1	-1	1	11
Compare to Event 4					-1	1	-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	1	1	12
Compare to Event 6							-1	-1	1	1	-1	1	1	-1	-1	1	-1	-1
Compare to Event 7								-1	1	1	-1	1	1	1	1	1	1	6
Compare to Event 8									1	1	1	1	1	1	1	1	1	9
Compare to Event 9										1	-1	1	1	-1	-1	-1	-1	-2
Compare to Event 10											-1	1	1	-1	-1	-1	-1	-3
Compare to Event 11												1	1	1	1	1	1	6
Compare to Event 12													-1	-1	-1	-1	-1	-5
Compare to Event 13														-1	-1	-1	-1	-4
Compare to Event 14															0	1	-1	0
Compare to Event 15																1	-1	0
Compare to Event 16																	-1	-1

Mann-Kendall Statistic (S)	**2**
90 % Confidence Mann-Kendall Statistic	**34**

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 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 4Q08	Event 11 1Q09	Event 12 2Q09	Event 13 3Q09	Event 14 4Q09	Event 15 1Q10	Event 16 2Q10	Row Total
Total PCBs, µg/L	0.34	0.10	2.07	0.33	0.50	0.35	0.23	0.27	0.44	0.27	2.73	0.59	0.37	0.61	0.54	0.72	
Compare to Event 1		-1	1	-1	1	1	-1	-1	1	-1	1	1	1	1	1	1	5
Compare to Event 2			1	1	1	1	1	1	1	1	1	1	1	1	1	1	14
Compare to Event 3				-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-11
Compare to Event 4					1	1	-1	-1	1	-1	1	1	1	1	1	1	6
Compare to Event 5						-1	-1	-1	-1	-1	1	1	-1	1	1	1	-1
Compare to Event 6							-1	-1	1	-1	1	1	1	1	1	1	4
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	3
Compare to Event 10											1	1	1	1	1	1	6
Compare to Event 11												-1	-1	-1	-1	-1	-5
Compare to Event 12													-1	1	-1	1	0
Compare to Event 13														1	1	1	3
Compare to Event 14															-1	1	0
Compare to Event 15																1	1

Mann-Kendall Statistic (S)	**42**
90 % Confidence Mann-Kendall Statistic	**30**

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

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

Mann-Kendall Statistic (S)	**-4**
90 % Confidence Mann-Kendall Statistic	**-12**

Appendix A

Groundwater Purging and Sampling Forms

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment | PROJECT NUMBER: 21562401.00003 | FIELD PERSONNEL: N. McMullen, K. Owings
DATE: 5/18/10 | WEATHER: Clear, 70°F
MONITORING WELL ID: PMAMW01M | SAMPLE ID: PMAMW01M-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): — ft
Constructed Well Depth (btoc): 59.30 ft
Depth to Water (btoc): 7.79 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): 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) = 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 = 57.3 ft btoc

Volume of Flow Through Cell): 750 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (±0.2 units)	Temp (°C) (±3 %)	Cond. (ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	~~7.80~~ 1017	~~Lt. Brn 7.80~~	Lt. Brn	Yes	6.82	17.02	2224	78.9	1.38	116.6
750	1020	7.80	Lt. Brn	Yes	6.83	16.52	2281	20.6	1.93	123.2
1500	1023	7.80	Lt. Brn	Yes	6.83	16.76	2252	41.5	0.61	124.8
2250	1026	7.82	Lt. Brn	Yes	6.84	16.57	2225	19.0	0.58	124.8
3000	1029	7.82	Lt. Brn	Yes	6.84	16.59	2208	22.4	1.08	123.6
3750	1032	7.82	Clr	Yes	6.84	16.57	2193	30.6	1.18	122.4
4500	1035	7.83	Clr	Yes	6.85	16.62	2184	19.4	0.54	121.2
5250	1038	7.83	Clr	Yes	6.85	16.69	2186	51.6	0.35	119.7
6000	1041	7.83	Clr	Yes	6.84	16.67	2165	29.4	0.81	118.1
6750	1044	7.83	Clr	Yes	6.85	16.59	2137	20.7	0.96	116.4
7500	1047	7.83	Clr	Yes	6.85	16.69	2122	30.7	0.96	114.6

Start Time: 1017
Stop Time: 1047
Elapsed Time: 30
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6920
Date Calibrated: 5/18/10

SAMPLING DATA

Sample Date: 5/18/10
Sample Method: Stainless Steel Monsoon
Sample Time: 1055
Sample Flow Rate: 250 mL/min
Analysis: Total PCBs
QA/QC Samples: None

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00003
FIELD PERSONNEL: N.McNabb, K.Owings
DATE: 5/18/10
WEATHER: Clear, 70°F
MONITORING WELL ID: PMAMW01S
SAMPLE ID: PMAMW01S-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): — ft
Constructed Well Depth (btoc): 24.94 ft
Depth to Water (btoc): 7.85 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): _____ 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) = _____ 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 = 23.0 ft btoc

Volume of Flow Through Cell): 750 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2250 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. µS (~~ms/cm~~) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	0904	8.09	Clr	None	6.68	16.31	1332	5.7	3.15	210.9
750	0907	8.09	Clr	None	6.77	16.32	1352	3.7	2.34	209.1
1500	0910	8.09	Clr	None	6.78	16.22	1356	2.6	2.19	208.0
2250	0913	8.05	Clr	None	6.78	16.17	1352	2.2	2.08	208.0
3000	0916	8.05	Clr	None	6.77	16.09	1351	1.7	2.00	208.3

Start Time: 0904
Stop Time: 0916
Elapsed Time: 12
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6920
Date Calibrated: 5/18/10

SAMPLING DATA

Sample Date: 5/18/10
Sample Time: 0925
Analysis: Total PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 250
QA/QC Samples: MS/MSD

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment
PROJECT NUMBER: 21562401.00003
FIELD PERSONNEL: N. McAuley, K. Owings
DATE: 5/18/10
WEATHER: partly cloudy 70°F
MONITORING WELL ID: PMAMW02M
SAMPLE ID: PMAMW02M-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): NM ft
Constructed Well Depth (btoc): 61.54 ft
Depth to Water (btoc): 9.62 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): 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) = 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 = 58.8 ft btoc

Volume of Flow Through Cell): 750 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 0.5 ppm
Wellbore PID/FID Reading: 0.5 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	1504	9.65	Clr	None	6.99	18.77	1816	12.1	3.32	145.1
750	1507	9.65	Clr	None	7.01	18.58	1977	41.3	1.67	66.2
1500	1510	9.65	Clr	None	7.11	18.46	1973	28.1	1.14	60.6
2250	1513	9.65	Clr	None	7.11	18.28	1972	36.9	0.92	57.8
3000	1516	9.65	Clr	None	7.10	18.61	1985	23.7	0.88	53.7
3750	1519	9.65	Clr	None	7.10	18.33	1988	14.7	1.01	51.4

Start Time: 1504
Stop Time: 1519
Elapsed Time: 15
Average Purge Rate (mL/min): ≥ 50
Water Quality Meter ID: YSI 6920
Date Calibrated: 5/18/10

SAMPLING DATA

Sample Date: 5/18/10
Sample Method: Stainless Steel Monsoon
Sample Time: 1525
Sample Flow Rate: 350 mL/min
Analysis: Total PCBs
QA/QC Samples: Analytical Duplicate

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment | PROJECT NUMBER: 21562401.00003 | FIELD PERSONNEL: N. McNaken, K. Owings
DATE: 5/18/10 | WEATHER: Partly Cloudy, 70°F
MONITORING WELL ID: PMAMW02S | SAMPLE ID: PMAMW02S-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): NM ft
Constructed Well Depth (btoc): 27.33 ft
Depth to Water (btoc): 9.37 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): _____ 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) = _____ 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 = 25.0 ft btoc

Volume of Flow Through Cell): 750 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 0.1 ppm
Wellbore PID/FID Reading: 0.1 ppm

PURGE DATA

Pump Type: Stainless Steel Monsoon

					±0.2 units		±3 %		±10 % or 0.2 mg/L	±20 mV
Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (ms/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
0	1622	9.42	Clr	None	6.88	18.61	955	6.7	2.67	210.3
750	1625	9.42	Clr	None	6.89	18.51	959	5.2	2.03	221.8
1500	1628	9.42	Clr	None	6.90	18.40	959	3.4	1.85	228.6
2250	1631	9.42	Clr	None	6.90	18.43	960	2.8	1.74	231.7
3000	1634	9.42	Clr	None	6.91	18.41	959	2.2	1.71	234.0

Start Time: 1622
Stop Time: 1634
Elapsed Time: 12
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6920
Date Calibrated: 5/18/10

SAMPLING DATA

Sample Date: 5/18/10
Sample Time: 1640
Analysis: Total PCBs
Sample Method: Stainless Steel Monsoon
Sample Flow Rate: 250 mL/min
QA/QC Samples: EB (before this well)

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: WBK PCB PROJECT NUMBER: 21562401 FIELD PERSONNEL: N. McNutt, K. Owings
DATE: 5/17/10 WEATHER:
MONITORING WELL ID: ~~PMA-MW-3M~~ ~~PMA-MW-03M-0510~~ PMA-MW-3M PMA-MW-03M-0510

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 61.81 ft
Depth to Water (btoc): 10.04 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): ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 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 = 60.20 ft btoc

Volume of Flow Through Cell): 750 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 0.6 ppm
Wellbore PID/FID Reading: 0 ppm

PURGE DATA

Pump Type:

0.2 3% 10% 0.2 20

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. ~~µS (mS/cm)~~ mS/cm	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
0	1409	10.04	Brn	Yes	9.08	16.98	2479	15.2	0.37	40.9
750	1412	10.04	Brn	Yes	9.29	16.97	2503	12.4	0.47	-7.8
1500	1415	10.04	Brn	Yes	9.32	17.06	2523	9.1	0.28	-48.5
2250	1418	10.08	Brn	Yes	9.33	17.09	2527	7.6	0.52	-66.7
3000	1421	10.08	Brn	Yes	9.34	17.11	2527	7.0	0.41	-75.8
3750	1424	10.08	Brn	Yes	9.35	17.12	2528	6.4	0.69	-91.2
4500	1427	10.08	Brn	Yes	9.35	17.13	2527	6.0	0.85	-102.4
5250	1430	10.07	Brn	Yes	9.35	17.14	2530	5.5	0.77	-111.4
6000	1433	10.07	Brn	Yes	9.36	17.14	2533	5.2	0.73	-121.0

Start Time: 1409
Stop Time: 1433
Elapsed Time: 24
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6820
Date Calibrated: 5/17/10

SAMPLING DATA

Sample Date: 5/17/10
Sample Method: SS Mon Well
VOA Vials, No Headspace ☐ Initials: NA
Sample Time: 1440
Sample Flow Rate: 250
Analysis: PCB 680
QAQC Samples: None

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: W.K PCB PROJECT NUMBER: 21562401 FIELD PERSONNEL: N. McNabb, K. Owings
DATE: WEATHER:
MONITORING WELL ID: ~~PMA-MW-65~~ ~~PMA-MW-35~~ ~~PMA-MW-065 0510~~ PMA-MW-035-0510

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 27.40 ft
Depth to Water (btoc): 10.06 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): ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is ⟨4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 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 = 25.5 ft btoc

Volume of Flow Through Cell): 750 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: SS Monsoon

0.2 3% 10%/0.2 20

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. µS ~~(mS/cm)~~ cm	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
0	1302	10.12	Yellow	None	6.80	17.22	2635	287.6	2.12	57.3
750	1305	10.12	Yellow	None	6.81	17.18	2637	184.2	0.86	55.6
1500	1308	10.12	Yellow	None	6.82	17.19	2636	141.7	0.83	53.4
2250	1311	10.12	Yellow	None	6.85	17.17	2640	105.9	0.92	51.9
3000	1314	10.12	Yellow	None	6.82	17.21	2638	87.8	0.91	50.3
3750	1317	10.12	Yellow	None	6.83	17.21	2640	70.2	0.95	48.8
4500	1320	10.12	Yellow	None	6.83	17.22	2640	65.3	0.96	46.2
5250	1323	10.12	Yellow/Brn	None	6.83	17.22	2639	61.0	0.92	45.3
6000	1326	10.12	Lt. Brn	None	6.83	17.25	2640	49.4	0.88	43.0
6750	1329	10.12	Lt. Brn	None	6.83	17.26	2639	45.4	0.70	41.2
7500	1332	10.12	Cloudy	None	6.83	17.27	2639	39.5	0.65	39.9
8250	1335	10.12	Cloudy	None	6.83	17.27	2638	37.9	0.60	38.5
9000	1338	10.12	Cloudy	None	6.83	17.28	2638	29.3	0.62	37.0
9750	1341	10.12	Cloudy	None	6.83	17.27	2639	26.4	0.60	36.7

Start Time: 1302
Stop Time: 1341
Elapsed Time: 38
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6820
Date Calibrated: 5/17/10

SAMPLING DATA

Sample Date: 5/17/10
Sample Method: SS Monsoon
VOA Vials, No Headspace ☐ Initials: NA
Sample Time: 1345
Sample Flow Rate: 250 mL/min
Analysis: PCB 680
QAQC Samples: None

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment | PROJECT NUMBER: 21562401.00003 | FIELD PERSONNEL: N. McNutt, K. Owings
DATE: 5/18/10 | WEATHER: Clear, 75°F
MONITORING WELL ID: PMAMW04D | SAMPLE ID: PMAMW04D-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): NM ft
Constructed Well Depth (btoc): 73.50 ft
Depth to Water (btoc): 8.35 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): 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) = 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 = 72.0 ft btoc

Volume of Flow Through Cell): 750 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 2.7 ppm
Wellbore PID/FID Reading: 3.7 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	1233	8.36	Clr	Yes	6.64	18.36	1558	5.9	2.69	81.8
750	1236	8.36	Clr	Yes	6.64	18.20	1510	11.6	1.71	112.7
1500	1239	8.36	Clr	Yes	6.66	18.12	1492	13.3	1.55	115.7
2250	1242	8.56	Clr	Yes	6.68	18.10	1491	11.7	1.57	117.2
3000	1245	8.34	Clr	Yes	6.69	18.18	1487	9.2	1.82	116.6

Start Time: 1233
Stop Time: 1245
Elapsed Time: 12
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6920
Date Calibrated: 5/18/10

SAMPLING DATA

Sample Date: 5/18/10
Sample Method: Stainless Steel Monsoon
Sample Time: 1250
Sample Flow Rate: 250 mL/min
Analysis: Total PCBs
QA/QC Samples: None

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: PCB GW Quality Assessment | PROJECT NUMBER: 21562401.00003 | FIELD PERSONNEL: N. McNuden, K. Owings
DATE: 5/18/10 | WEATHER: Clear, 75°F
MONITORING WELL ID: PMAMW04S | SAMPLE ID: PMAMW04S-0510

INITIAL DATA

Well Diameter: 2 in
Measured Well Depth (btoc): 25.37 ft
Constructed Well Depth (btoc): 25.33 ft
Depth to Water (btoc): 7.86 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 20.33 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): _____ 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) = _____ 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 = 22.8 ft btoc

Volume of Flow Through Cell): 750 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 5.6 ppm
Wellbore PID/FID Reading: 5.6 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. (µS ms/cm) (±3 %)	Turbidity (NTUs)	DO (mg/l) (±10 % or 0.2 mg/L)	ORP (mv) (±20 mV)
0	1321	8.15	Lt. Yellow	Yes	6.74	19.6	2405	40.0	1.83	137.8
800	1329	8.12	Lt. Yellow	Yes	6.75	19.95	2399	31.1	1.06	138.4
1600	1337	8.12	Lt. Yellow	Yes	6.76	20.25	2393	24.5	0.77	135.8
2400	1345	8.12	Lt. Yellow	Yes	6.76	19.98	2390	21.5	0.69	132.6
3200	1353	8.10	Lt. Yellow	Yes	6.76	20.36	2393	18.5	0.68	128.3

Start Time: 1321
Stop Time: 1353
Elapsed Time: 32
Average Purge Rate (mL/min): 100
Water Quality Meter ID: YSI 6920
Date Calibrated: 5/18/10

SAMPLING DATA

Sample Date: 5/18/10
Sample Time: 1400
Analysis: Total PCBs
Sample Method: SS Monsoon
Sample Flow Rate: 100
QA/QC Samples: None

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: WGK RB PROJECT NUMBER: 21562401 FIELD PERSONNEL: N.M.Norton, K. Owings
DATE: 5/17/10 WEATHER: Overcast, 60°F
MONITORING WELL ID: FMAMW-5M FMA-MW-05M-0510

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): ~~56.87~~ ft
Depth to Water (btoc): 7.88 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): ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is <4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ~~54.0~~ 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) = ~~54.0~~ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = 54.0 ft btoc

Volume of Flow Through Cell): 750 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: SS Monsoon

0.20 3% 10%/0.2 20 mV

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. ~~(mS/cm)~~ µS	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
0	1007	7.92	Clr	Yes	7.02	17.39	2325	5.5	1.20	62.8
1250	1012	7.93	Clr	Yes	7.05	17.18	2525	2.0	0.94	37.4
2500	1017	7.93	Clr	Yes	7.05	17.21	2523	1.5	0.88	-7.6
3750	1022	7.93	Clr	Yes	7.06	17.23	2524	1.3	0.90	-47.5
5000	1027	7.93	Clr	Yes	7.06	17.28	2524	1.2	0.94	-63.9
6250	1032	7.93	Clr	Yes	7.06	17.20	2528	1.1	0.97	-77.0
7500	1037	7.93	Clr	Yes	7.06	17.27	2528	1.2	1.04	-85.3

Start Time: 1007
Stop Time: 1037
Elapsed Time: 30 min
Average Purge Rate (mL/min): 250
Water Quality Meter ID: YSI 6820
Date Calibrated: 5/17/10

SAMPLING DATA

Sample Date: 5/17/10
Sample Method: SS Monsoon
VOA Vials, No Headspace ☒ ~~Initials: NM~~ NA
Sample Time: 1045
Sample Flow Rate: 250 mL/min
Analysis: ICB 680
QAQC Samples: None

COMMENTS:

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: WGK PCB PROJECT NUMBER: 21562401 FIELD PERSONNEL: N. Mobley, K. Owings
DATE: 5/17/10 WEATHER: Overcast, 60°F
MONITORING WELL ID: RMA-MW-66D RMA-MW-066D-0510

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 101.14 ft
Depth to Water (btoc): 3.71 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 96.14 ft
Screen Length: 5 ft

Water Column Height (do not include LNAPL or DNAPL): ft btoc
If Depth to Top of Screen is > Depth to Water AND Screen Length is (4 feet,
Place Pump at: Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 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 = 101.4 ft btoc

Volume of Flow Through Cell): 750 mL
Minimum Purge Volume =
(3 x Flow Through Cell Volume) 2250 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: SS Monsoon 0.20 3% 10% 0.2 20mV

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. ~~(mS/cm)~~ µS/cm	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
0	1202	3.71	Grey	Yes	7.02	16.96	1318	56.6	1.90	-76.9
900	1205	3.71	Grey	Yes	7.06	16.95	1342	19.8	1.35	-114.1
1800	1208	3.71	Grey	Yes	7.07	17.02	1313	11.5	1.38	-120.7
2700	1211	3.71	Grey	Yes	7.06	17.06	1303	9.3	1.42	-122.3
3600	1214	3.70	Clear	Yes	7.07	17.14	1290	7.9	1.40	-125.7

Start Time: 1202
Stop Time: 1214
Elapsed Time: 12 min
Average Purge Rate (mL/min): 300
Water Quality Meter ID: YSI
Date Calibrated: ~~5/17/10~~ 5/17/10

SAMPLING DATA

Sample Date: 5/17/10
Sample Method: SS Monsoon
VOA Vials, No Headspace ☐ Initials: NA
Sample Time: 1220
Sample Flow Rate: 300
Analysis: PCB 680
QAQC 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: Dave Palmer	Site Contact: Nathan McNurlen	Date: 5/17/10	COC No: 1
URS Corporation	Tel/Fax: (314) 743-3054	Lab Contact: Lidya Gulizia	Carrier:	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562401.00003
St. Louis, MO 63110	Calendar (C) or Work Days (W)			SDG No.
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks ☒ 1 week ☐ 2 days ☐ 1 day			
Project Name: 2Q10 PCB GW Sampling				
Site: Solutia WG Krummrich Facility				
P O #				

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Total PCBs by 680	Sample Specific Notes:
PMA-MW-05M-0510	5/17/10	1045	G	Water	2		2	
PMA-MW-06D-0510	5/17/10	1230	G	Water	2		2	
PMA-MW-03S-0510	5/17/10	1395	G	Water	2		2	
PMA-MW-03M-0510	5/17/10	1440	G	Water	2		2	
							1	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

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

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

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

Temp 2.4/2.2

680-57745

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	5/17/10	[signature]	TA	5/17/10 1650
Relinquished by: [signature]	Company: TA	Date/Time: 5/17/10 1715	Received by: Beth A Daughtry	Company: TA SHV	Date/Time: 5-18-10c 0905
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmericc

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Nathan McNurlen	Date: 5/18/10	COC No: 2
URS Corporation	Tel/Fax: (314) 743-3054	Lab Contact: Lidya Gulizia	Carrier: Fed Ex	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562401.00003
St. Louis, MO 63110	Calendar (C) or Work Days (W)			SDG No.
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks			
Project Name: 2Q10 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-015-0510	5/18/10	0925	G	Water	2		2	
PMA-MW-015-0510-MS	5/18/10	0925	G	Water	2		2	
PMA-MW-015-0510-MSD	5/18/10	0925	G	Water	2		2	
PMA-MW-02M-0510	5/18/10	1055	G	Water	2		2	
PMA-MW-04D-0510	5/18/10	1250	G	Water	2		2	3.8/3.7/3.6
PMA-MW-04S-0510	5/18/10	1400	G	Water	2		2	680-57756
PMA-MW-02M-0510	5/18/10	~~1440~~ 1535	G	Water	2		2	
PMA-MW-02M-0510-AD	5/18/10	1535 MM	G	Water	2		2	
PMA-MW-02S-0510-EB	5/18/10	1545	G	Water	2		2	
PMA-MW-02S-0510	5/18/10	1640	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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	URS	5/18/10 1800			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TASW	5/19/10 0923

Appendix C

Quality Assurance Report

QUALITY ASSURANCE REPORT

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

PCB Groundwater Quality Assessment Program
2nd Quarter 2010 Data Report

Prepared for

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

July 2010

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

1.0 INTRODUCTION

This Quality Assurance Report presents the findings of a review of analytical data for groundwater samples collected in May of 2010 at the Solutia W.G. Krummrich plant as part of the 2nd 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 review was performed in order to confirm that the analytical data provided by TestAmerica were acceptable in quality for their intended use.

A total of 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) KPM038 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 this analysis 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 (J) 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.

Extractions and/or analyses were completed within the recommended holding time requirements. The laboratory communicated that continuing calibration verification standards were run after the 12 hour sample sequences. The standards were run within approximately 30 minutes of the corresponding 12 hour sequences; therefore, professional judgment was used to not qualify the data. 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. Analytes detected in the equipment blank are included in the table below:

Blank ID	Parameter	Analyte	Concentration	Units
PMA-MW-2S-0510-EB	PCBs	Trichlorobiphenyl	0.34	µg/L
PMA-MW-2S-0510-EB	PCBs	Tetrachlorobiphenyl	0.46	µg/L
PMA-MW-2S-0510-EB	PCBs	Pentachlorobiphenyl	0.24	µg/L
PMA-MW-2S-0510-EB	PCBs	Hexachlorobiphenyl	0.30	µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
PMA-MW-02S-0510	PCBs	Trichlorobiphenyl	0.18	**U**

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. The laboratory case narrative indicated that surrogate spiking concentrations were prepared at 1.5 µg/L; however, the method specifies surrogate spiking concentrations of 2.5 µg/L. Professional judgment was used to not qualify data since, with the exceptions of those that were diluted out, surrogates were recovered within evaluation criteria. 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-01S-0510 was spiked and analyzed for PCBs in SDG KPM038. 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 reported as non-detect and associated with internal standard recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. No qualification of data was required.

9.0 RESULTS REPORTED FROM DILUTIONS

Samples PMA-MW-01M-0510, PMA-MW-04S-0510, PMA-MW-02M-0510, and PMA-MW-02M-0510-AD were 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 KPM038

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 2Q10

Laboratory SDG: KPM038

Reviewer: Elizabeth Kunkel

Date Reviewed: 6/15/2010

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

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

Sample Identification	
PMA-MW-01M-0510	PMA-MW-03M-0510
PMA-MW-01S-0510	PMA-MW-03S-0510
PMA-MW-02M-0510	PMA-MW-04D-0510
PMA-MW-02M-0510-AD	PMA-MW-04S-0510
PMA-MW-02S-0510	PMA-MW-05M-0510
PMA-MW-02S-0510-EB	PMA-MW-06D-0510

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 surrogate spiking concentrations were not prepared at method specified spiking concentrations. Although not indicated in the laboratory case narrative, PCB surrogates were diluted out and not recovered in several samples. The laboratory communicated that continuing calibration verification standards were run after the 12 hour sample sequences. The standards were run within approximately 30 minutes of the corresponding 12 hour sequences; therefore, professional judgment was used to not qualify the data. Internal standard recoveries were outside evaluation criteria. These issues are addressed further in the appropriate sections below.

The cooler receipt form did not indicate any problems however, the laboratory incorrectly transcribed COC designated equipment blank ID, PMA-MW-02S-0510-EB as PMA-MW-2S-0510-EB. Results were reported using the COC designated sample ID.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

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

Yes

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

Yes

Blank ID	Parameter	Analyte	Concentration	Units
PMA-MW-2S-0510-EB	PCBs	Trichlorobiphenyl	0.34	µg/L
PMA-MW-2S-0510-EB	PCBs	Tetrachlorobiphenyl	0.46	µg/L
PMA-MW-2S-0510-EB	PCBs	Pentachlorobiphenyl	0.24	µg/L
PMA-MW-2S-0510-EB	PCBs	Hexachlorobiphenyl	0.30	µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration (10X for common laboratory contaminants) did not require qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
PMA-MW-02S-0510	PCBs	Trichlorobiphenyl	0.18	**U**

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 samples PMA-MW-01M-0510, PMA-MW-04S-0510, PMA-MW-02M-0510, and PMA-MW-02M-0510-AD. No qualification of data was required.

Additionally, the laboratory case narrative indicated that surrogate spiking concentrations were prepared at 1.5 µg/L; however, the method specifies surrogate spiking concentrations of 2.5 µg/L. Professional judgment was used to not qualify data since with the exceptions of those that were diluted out, surrogates recovered within evaluation criteria.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, sample PMA-MW-01S-0510 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 680-169147	PCBs	Phenanthrene-d_{10}	**46162**	71754-133258
MB 680-169147	PCBs	Chrysene-d_{12}	**214739**	387528-719694
PMA-MW-05M-0510	PCBs	Phenanthrene-d_{10}	**64152**	71754-133258
PMA-MW-05M-0510	PCBs	Chrysene-d_{12}	**341205**	387528-719694
PMA-MW-06D-0510	PCBs	Phenanthrene-d_{10}	**52964**	71754-133258
PMA-MW-06D-0510	PCBs	Chrysene-d_{12}	**262915**	387528-719694
PMA-MW-03S-0510	PCBs	Phenanthrene-d_{10}	**57972**	71754-133258
PMA-MW-03S-0510	PCBs	Chrysene-d_{12}	**282281**	387528-719694
LCS 680-169147/14-A	PCBs	Chrysene-d_{12}	**357860**	387528-719694
PMA-MW-01S-0510-MS	PCBs	Phenanthrene-d_{10}	**69627**	71754-133258
PMA-MW-01S-0510-MS	PCBs	Chrysene-d_{12}	**342968**	387528-719694
PMA-MW-01S-0510-MSD	PCBs	Phenanthrene-d_{10}	**68605**	71754-133258
PMA-MW-01S-0510-MSD	PCBs	Chrysene-d_{12}	**351297**	387528-719694
PMA-MW-04S-0510	PCBs	Phenanthrene-d_{10}	**68605**	15052-27954
PMA-MW-01M-0510	PCBs	Phenanthrene-d_{10}	**124228**	38981-116943
PMA-MW-01M-0510	PCBs	Chrysene-d_{12}	**558620**	181633-544901

Analytical data which were reported as non-detect and associated with internal standard recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. MB 680-169147 and LCS 680-169147/14-A are quality control samples and do not require qualification. Internal standard areas for phenanthrene-d_{10} and chrysene-d_{12} recovered within initial calibration average internal standard areas for PMA-MW-05M-0510, PMA-MW-06D-0510, PMA-03S-0510, PMA-MW-01S-0510-MS, PMA-MW-01S-0510-MSD, and PMA-MW-04S-0510 and therefore do not require qualification. Chrysene-d_{12} recovered outside initial calibration average internal standard areas in sample PMA-MW-01M-0510, however target analytes were not detected in this sample. No qualification of data was required.

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-02M-0510	PMA-MW-02M-0510-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: 680-57745-1

SDG Number: KPM038

Job Description: WGK PCB GW Quality - 2Q10

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

Attention: Mr. Jerry Rinaldi

Approved for release.
Lidya Gulizia
Project Manager I
6/11/2010 2:57 PM

Lidya Gulizia
Project Manager I
lidya.gulizia@testamericainc.com
06/11/2010

Revised on
JUN 15 2010 EZK

cc: Mr. Bob Billman
Ms. Elizabeth Kunkel
Dave Palmer

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

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

ACCREDITED IN ACCORDANCE WITH nelac

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

GC/MS Semi VOA
Method(s) 680: Samples were spiked with a surrogate spiking mix that contained the surrogate at a concentration of 1.5ug/ml. The SOP references that the surrogate spiking mix is to be prepared at a concentration of 2.5ug/ml. All calculations have been adjusted and results reported.

Method(s) 680: The reference method requires a calibration verification to be analyzed every 12 hours. The calibration verification for clocks 1f052610 was analyzed 25 minutes outside this method-defined clock time: PMA-MW-01S-0510 (680-57756-1), PMA-MW-01S-0510-MS (680-57756-1 MS), PMA-MW-01S-0510-MSD (680-57756-1 MSD), PMA-MW-02M-0510 (680-57756-5), PMA-MW-02M-0510-AD (680-57756-6), PMA-MW-03M-0510 (680-57745-4), PMA-MW-03S-0510 (680-57745-3), PMA-MW-04D-0510 (680-57756-3), PMA-MW-05M-0510 (680-57745-1), PMA-MW-06D-0510 (680-57745-2). The calibration verification for clock 1f060510 was analyzed 9 minutes outside this method defined clock time.

No other analytical or quality issues were noted.

Comments
No additional comments.

JUN 18 2010

METHOD SUMMARY

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

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: 680-57745-1
Sdg Number: KPM038

Method	Analyst	Analyst ID
EPA 680	Davis, Nancy	ND

SAMPLE SUMMARY

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-57745-1	PMA-MW-05M-0510	Water	05/17/2010 1045	05/18/2010 0905
680-57745-2	PMA-MW-06D-0510	Water	05/17/2010 1220	05/18/2010 0905
680-57745-3	PMA-MW-03S-0510	Water	05/17/2010 1345	05/18/2010 0905
680-57745-4	PMA-MW-03M-0510	Water	05/17/2010 1440	05/18/2010 0905
680-57756-1	PMA-MW-01S-0510	Water	05/18/2010 0925	05/19/2010 0923
680-57756-1MS	PMA-MW-01S-0510-MS	Water	05/18/2010 0925	05/19/2010 0923
680-57756-1MSD	PMA-MW-01S-0510-MSD	Water	05/18/2010 0925	05/19/2010 0923
680-57756-2	PMA-MW-01M-0510	Water	05/18/2010 1055	05/19/2010 0923
680-57756-3	PMA-MW-04D-0510	Water	05/18/2010 1250	05/19/2010 0923
680-57756-4	PMA-MW-04S-0510	Water	05/18/2010 1400	05/19/2010 0923
680-57756-5	PMA-MW-02M-0510	Water	05/18/2010 1525	05/19/2010 0923
680-57756-6FD	PMA-MW-02M-0510-AD	Water	05/18/2010 1525	05/19/2010 0923
680-57756-7EB	PMA-MW-2S-0510-EB	Water	05/18/2010 1545	05/19/2010 0923
680-57756-8	PMA-MW-02S-0510	Water	05/18/2010 1640	05/19/2010 0923

JUN 15 2010

SAMPLE RESULTS

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-05M-0510**

Lab Sample ID: 680-57745-1
Client Matrix: Water

Date Sampled: 05/17/2010 1045
Date Received: 05/18/2010 0905

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170826		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1020 mL
Date Analyzed:	05/26/2010 1707			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

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

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

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-06D-0510**

Lab Sample ID: 680-57745-2
Client Matrix: Water

Date Sampled: 05/17/2010 1220
Date Received: 05/18/2010 0905

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170826		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	05/26/2010 1740			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	.

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.33		0.097
Dichlorobiphenyl	0.097	U	0.097
Trichlorobiphenyl	0.097	U	0.097
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.29	U	0.29
Octachlorobiphenyl	0.29	U	0.29
Nonachlorobiphenyl	0.49	U	0.49
DCB Decachlorobiphenyl	0.49	U	0.49

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	96		25 - 113

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-03S-0510**

Lab Sample ID: 680-57745-3
Client Matrix: Water

Date Sampled: 05/17/2010 1345
Date Received: 05/18/2010 0905

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170826		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	05/26/2010 1812			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.52		0.095
Dichlorobiphenyl	0.11		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	72		25 - 113

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-03M-0510**

Lab Sample ID: 680-57745-4
Client Matrix: Water

Date Sampled: 05/17/2010 1440
Date Received: 05/18/2010 0905

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170826		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	05/26/2010 1844			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.82		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	58		25 - 113

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-01S-0510**

Lab Sample ID: 680-57756-1
Client Matrix: Water

Date Sampled: 05/18/2010 0925
Date Received: 05/19/2010 0923

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170826		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	05/26/2010 1917			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			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	62		25 - 113

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-01M-0510**

Lab Sample ID: 680-57756-2
Client Matrix: Water

Date Sampled: 05/18/2010 1055
Date Received: 05/19/2010 0923

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170868		Instrument ID:	MSY
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	10			Initial Weight/Volume:	1050 mL
Date Analyzed:	06/08/2010 1058			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.95	U	0.95
Dichlorobiphenyl	0.95	U	0.95
Trichlorobiphenyl	0.95	U	0.95
Tetrachlorobiphenyl	1.9	U	1.9
Pentachlorobiphenyl	1.9	U	1.9
Hexachlorobiphenyl	1.9	U	1.9
Heptachlorobiphenyl	2.9	U	2.9
Octachlorobiphenyl	2.9	U	2.9
Nonachlorobiphenyl	4.8	U	4.8
DCB Decachlorobiphenyl	4.8	U	4.8

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

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-04D-0510**

Lab Sample ID: 680-57756-3
Client Matrix: Water

Date Sampled: 05/18/2010 1250
Date Received: 05/19/2010 0923

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170838		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	06/05/2010 1457			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.31		0.097
Dichlorobiphenyl	0.41		0.097
Trichlorobiphenyl	0.097	U	0.097
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.29	U	0.29
Octachlorobiphenyl	0.29	U	0.29
Nonachlorobiphenyl	0.49	U	0.49
DCB Decachlorobiphenyl	0.49	U	0.49

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

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-04S-0510**

Lab Sample ID: 680-57756-4
Client Matrix: Water

Date Sampled: 05/18/2010 1400
Date Received: 05/19/2010 0923

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170859		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	100			Initial Weight/Volume:	1030 mL
Date Analyzed:	06/07/2010 1040			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	9.7	U	9.7
Dichlorobiphenyl	43		9.7
Trichlorobiphenyl	140		9.7
Tetrachlorobiphenyl	410		19
Pentachlorobiphenyl	370		19
Hexachlorobiphenyl	620		19
Heptachlorobiphenyl	470		29
Octachlorobiphenyl	78		29
Nonachlorobiphenyl	49	U	49
DCB Decachlorobiphenyl	49	U	49

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

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-02M-0510**

Lab Sample ID: 680-57756-5
Client Matrix: Water

Date Sampled: 05/18/2010 1525
Date Received: 05/19/2010 0923

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170838		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	10			Initial Weight/Volume:	1010 mL
Date Analyzed:	06/05/2010 1740			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	3.9		0.99
Dichlorobiphenyl	0.99	U	0.99
Trichlorobiphenyl	0.99	U	0.99
Tetrachlorobiphenyl	2.0	U	2.0
Pentachlorobiphenyl	2.0	U	2.0
Hexachlorobiphenyl	2.0	U	2.0
Heptachlorobiphenyl	3.0	U	3.0
Octachlorobiphenyl	3.0	U	3.0
Nonachlorobiphenyl	5.0	U	5.0
DCB Decachlorobiphenyl	5.0	U	5.0

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

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-02M-0510-AD**

Lab Sample ID: 680-57756-6FD
Client Matrix: Water

Date Sampled: 05/18/2010 1525
Date Received: 05/19/2010 0923

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170838		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	10			Initial Weight/Volume:	1030 mL
Date Analyzed:	06/05/2010 1812			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	4.0		0.97
Dichlorobiphenyl	0.97	U	0.97
Trichlorobiphenyl	0.97	U	0.97
Tetrachlorobiphenyl	1.9	U	1.9
Pentachlorobiphenyl	1.9	U	1.9
Hexachlorobiphenyl	1.9	U	1.9
Heptachlorobiphenyl	2.9	U	2.9
Octachlorobiphenyl	2.9	U	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

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-2S-0510-EB**

Lab Sample ID: 680-57756-7EB
Client Matrix: Water

Date Sampled: 05/18/2010 1545
Date Received: 05/19/2010 0923

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170838		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	06/05/2010 1530			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.097	U	0.097
Dichlorobiphenyl	0.097	U	0.097
Trichlorobiphenyl	0.34		0.097
Tetrachlorobiphenyl	0.46		0.19
Pentachlorobiphenyl	0.24		0.19
Hexachlorobiphenyl	0.30		0.19
Heptachlorobiphenyl	0.29	U	0.29
Octachlorobiphenyl	0.29	U	0.29
Nonachlorobiphenyl	0.49	U	0.49
DCB Decachlorobiphenyl	0.49	U	0.49

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

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Client Sample ID: **PMA-MW-02S-0510**

Lab Sample ID: 680-57756-8
Client Matrix: Water

Date Sampled: 05/18/2010 1640
Date Received: 05/19/2010 0923

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Method:	680	Analysis Batch: 680-170838		Instrument ID:	MSF
Preparation:	680	Prep Batch: 680-169147		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1030 mL
Date Analyzed:	06/05/2010 1602			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	RL
Monochlorobiphenyl	0.097	U	0.097
Dichlorobiphenyl	0.097	U	0.097
Trichlorobiphenyl	~~0.18~~ 0.0 ND "U"		~~0.097~~ 0.18
Tetrachlorobiphenyl	0.19	U	0.19
Pentachlorobiphenyl	0.19	U	0.19
Hexachlorobiphenyl	0.19	U	0.19
Heptachlorobiphenyl	0.29	U	0.29
Octachlorobiphenyl	0.29	U	0.29
Nonachlorobiphenyl	0.49	U	0.49
DCB Decachlorobiphenyl	0.49	U	0.49

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl-13C12	72		25 - 113

JUN 15 2010

DATA REPORTING QUALIFIERS

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	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: 680-57745-1
Sdg Number: KPM038

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 680-169147					
LCS 680-169147/14-A	Lab Control Sample	T	Water	680	
MB 680-169147/13-A	Method Blank	T	Water	680	
680-57745-1	PMA-MW-05M-0510	T	Water	680	
680-57745-2	PMA-MW-06D-0510	T	Water	680	
680-57745-3	PMA-MW-03S-0510	T	Water	680	
680-57745-4	PMA-MW-03M-0510	T	Water	680	
680-57756-1	PMA-MW-01S-0510	T	Water	680	
680-57756-1MS	Matrix Spike	T	Water	680	
680-57756-1MSD	Matrix Spike Duplicate	T	Water	680	
680-57756-2	PMA-MW-01M-0510	T	Water	680	
680-57756-3	PMA-MW-04D-0510	T	Water	680	
680-57756-4	PMA-MW-04S-0510	T	Water	680	
680-57756-5	PMA-MW-02M-0510	T	Water	680	
680-57756-6FD	PMA-MW-02M-0510-AD	T	Water	680	
680-57756-7EB	PMA-MW-2S-0510-EB	T	Water	680	
680-57756-8	PMA-MW-02S-0510	T	Water	680	
Analysis Batch:680-170826					
LCS 680-169147/14-A	Lab Control Sample	T	Water	680	680-169147
MB 680-169147/13-A	Method Blank	T	Water	680	680-169147
680-57745-1	PMA-MW-05M-0510	T	Water	680	680-169147
680-57745-2	PMA-MW-06D-0510	T	Water	680	680-169147
680-57745-3	PMA-MW-03S-0510	T	Water	680	680-169147
680-57745-4	PMA-MW-03M-0510	T	Water	680	680-169147
680-57756-1	PMA-MW-01S-0510	T	Water	680	680-169147
680-57756-1MS	Matrix Spike	T	Water	680	680-169147
680-57756-1MSD	Matrix Spike Duplicate	T	Water	680	680-169147
Analysis Batch:680-170838					
680-57756-3	PMA-MW-04D-0510	T	Water	680	680-169147
680-57756-5	PMA-MW-02M-0510	T	Water	680	680-169147
680-57756-6FD	PMA-MW-02M-0510-AD	T	Water	680	680-169147
680-57756-7EB	PMA-MW-2S-0510-EB	T	Water	680	680-169147
680-57756-8	PMA-MW-02S-0510	T	Water	680	680-169147
Analysis Batch:680-170859					
680-57756-4	PMA-MW-04S-0510	T	Water	680	680-169147
Analysis Batch:680-170868					
680-57756-2	PMA-MW-01M-0510	T	Water	680	680-169147

Report Basis
T = Total

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Surrogate Recovery Report

680 Polychlorinated Biphenyls (PCBs) (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	13DCB %Rec
680-57745-1	PMA-MW-05M-0510	73
680-57745-2	PMA-MW-06D-0510	96
680-57745-3	PMA-MW-03S-0510	72
680-57745-4	PMA-MW-03M-0510	58
680-57756-1	PMA-MW-01S-0510	62
680-57756-2	PMA-MW-01M-0510	0D
680-57756-3	PMA-MW-04D-0510	65
680-57756-4	PMA-MW-04S-0510	0D
680-57756-5	PMA-MW-02M-0510	0D
680-57756-6	PMA-MW-02M-0510-AD	0D
680-57756-7	PMA-MW-2S-0510-EB	65
680-57756-8	PMA-MW-02S-0510	72
MB 680-169147/13-A		91
LCS 680-169147/14-A		84
680-57756-1 MS	PMA-MW-01S-0510 MS	95
680-57756-1 MSD	PMA-MW-01S-0510 MSD	92

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

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Method Blank - Batch: 680-169147

Method: 680
Preparation: 680

Lab Sample ID: MB 680-169147/13-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/26/2010 1458
Date Prepared: 05/20/2010 1545

Analysis Batch: 680-170826
Prep Batch: 680-169147
Units: ug/L

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

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

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

Lab Control Sample - Batch: 680-169147

Method: 680
Preparation: 680

Lab Sample ID: LCS 680-169147/14-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/26/2010 2021
Date Prepared: 05/20/2010 1545

Analysis Batch: 680-170826
Prep Batch: 680-169147
Units: ug/L

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

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Monochlorobiphenyl	2.00	1.43	71	10 - 125	
Dichlorobiphenyl	2.00	1.48	74	10 - 110	
Trichlorobiphenyl	2.00	1.48	74	17 - 110	
Tetrachlorobiphenyl	4.00	2.94	74	18 - 110	
Pentachlorobiphenyl	4.00	3.08	77	34 - 110	
Hexachlorobiphenyl	4.00	3.08	77	31 - 110	
Heptachlorobiphenyl	6.00	4.64	77	33 - 110	
Octachlorobiphenyl	6.00	4.55	76	33 - 110	
DCB Decachlorobiphenyl	10.0	7.05	71	26 - 115	

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

JUN 15 2010

Client: Solutia Inc.

Job Number: 680-57745-1
Sdg Number: KPM038

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-169147

Method: 680
Preparation: 680

MS Lab Sample ID:	680-57756-1	Analysis Batch:	680-170826	Instrument ID:	MSF
Client Matrix:	Water	Prep Batch:	680-169147	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	05/26/2010 2054			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

MSD Lab Sample ID:	680-57756-1	Analysis Batch:	680-170826	Instrument ID:	MSF
Client Matrix:	Water	Prep Batch:	680-169147	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1050 mL
Date Analyzed:	05/26/2010 2126			Final Weight/Volume:	1 mL
Date Prepared:	05/20/2010 1545			Injection Volume:	

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Monochlorobiphenyl	72	63	10 - 125	13	40		
Dichlorobiphenyl	79	70	10 - 110	13	40		
Trichlorobiphenyl	81	79	17 - 110	3	40		
Tetrachlorobiphenyl	81	71	18 - 110	13	40		
Pentachlorobiphenyl	84	76	34 - 110	10	40		
Hexachlorobiphenyl	85	76	31 - 110	10	40		
Heptachlorobiphenyl	86	79	33 - 110	8	40		
Octachlorobiphenyl	84	77	33 - 110	8	40		
DCB Decachlorobiphenyl	82	79	26 - 115	4	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Decachlorobiphenyl-13C12	95	92	25 - 113

JUN 15 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: Dave Palmer	Site Contact: Nathan McNurlen	Date: 5/17/10	COC No: 1
URS Corporation	Tel/Fax: (314) 743-3054	Lab Contact: Lidya Gulizia	Carrier:	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562401.00003
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: 2Q10 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 (Y/N)	Total PCBs by 680	Sample Specific Notes:
PMA-MW-05M-0510	5/17/10	1045	G	Water	2		2	
PMA-MW-06D-0510	5/17/10	1230	G	Water	2		2	
PMA-MW-03S-0510	5/17/10	1395	G	Water	2		2	
PMA-MW-03M-0510	5/17/10	1440	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

Temp 2.4/2.2

680-57745

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS	5/17/10	[signature]	TA	5/17/10 1650
Relinquished by: [signature]	Company: TA	Date/Time: 5/17/10 1715	Received by: Beth A. Daughtry	Company: TA SAV	Date/Time: 5-18-10 0905
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

JUN 15 2010 EAK

Savannah
5102 LaRoche Avenue

Savannah, GA 31404
phone 912.354.7858 fax 912.352.0165

Chain of Custody Record

TestAmericc

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Dave Palmer	Site Contact: Nathan McNurlen	Date: 5/18/10	COC No: 2
URS Corporation	Tel/Fax: (314) 743-3054	Lab Contact: Lidya Gulizia	Carrier: Fed Ex	1 of 1 COCs
1001 Highlands Plaza Drive West, Suite 300	Analysis Turnaround Time			Job No. 21562401.00003
St. Louis, MO 63110	Calendar (C) or Work Days (W)			SDG No.
(314) 429-0100 Phone	TAT if different from Below Standard			
(314) 429-0462 FAX	☐ 2 weeks			
Project Name: 2Q10 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-015-0510	5/18/10	0925	G	Water	2		2	
PMA-MW-015-0510-MS	5/18/10	0925	G	Water	2		2	
PMA-MW-015-0510-MSD	5/18/10	0925	G	Water	2		2	
PMA-MW-04M-0510	5/18/10	1055	G	Water	2		2	
PMA-MW-04D-0510	5/18/10	1250	G	Water	2		2	3.8/3.7/3.6
PMA-MW-045-0510	5/18/10	1400	G	Water	2		2	680-57756
PMA-MW-02M-0510	5/18/10	~~1440~~ 1535	G	Water	2		2	
PMA-MW-02M-0510-AD	5/18/10	1535	G	Water	2		2	
PMA-MW-025-0510-EB	5/18/10	1545	G	Water	2		2	
PMA-MW-025-0510	5/18/10	1640	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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	URS	5/18/10 1800			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				TASW	5/19/10 0923

JUN 15 2010

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-57745-1
SDG Number: KPM038

Login Number: 57745
Creator: Daughtry, Beth
List Number: 1

List Source: TestAmerica Savannah

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	2 coolers rec'd on ice
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4 and 2.2 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
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	MS/MSD not requested in receipt for SDG.
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	

Login Sample Receipt Check List

Client: URS Corporation

Job Number: 680-57745-1
SDG Number: KPM038

Login Number: 57756
Creator: Conner, Keaton
List Number: 1

List Source: TestAmerica Savannah

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	3 coolers rec'd on ice
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.8, 3.7, 3.6 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	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	