# SECOND SEMIANNUAL VRP PROGRESS REPORT CAPITOL USA – DALTON FACILITY Dalton, Georgia

Prepared For:

CEA, LLC 633 Chestnut Street, Suite 1640 Chattanooga, TN 37450

Prepared By:

1050 Crown Pointe Parkway

Suite 550 Atlanta, GA 30338

Kirk Kessler, P.G.

Principal

Timmerly Bullman, P.E.

Senior Environmental Engineer



# SECOND SEMIANNUAL VRP PROGRESS REPORT CAPITOL USA – DALTON FACILITY Dalton, Georgia

#### **TABLE OF CONTENTS**

1	INTR	ODUCTION	2						
2	VRP Project Management								
	2.1	Professional Geologist Oversight	3						
	2.2	Milestone Schedule	3						
	2.3	Conceptual Site Model	3						
3	Mon	ITORING WELL INSTALLATION	4						
	3.1	Actions Completed	4						
		3.1.1 Installation of MW-1R							
		3.1.2 Installation of MW-3B	4						
		3.1.3 Survey and Repair of MW-4	5						
4	SEMI	ANNUAL GROUNDWATER SAMPLING	6						
	4.1	Actions Completed	6						
		4.1.1 Water Level Measurements	6						
		4.1.2 Methods	6						
		4.1.3 Results							
		4.1.4 Groundwater Modeling							
	4.2	Upcoming Actions	7						
5	Sour	RCE AREA EVALUATION	8						
	5.1	Actions Completed	8						
	5.2	Upcoming Actions	8						
6	Refe	RENCES	9						



#### LIST OF TABLES

- Table 1 Depth to Groundwater Measurements (2011-2012)
- Table 2 Analytical Results for Constituents Detected in Groundwater (mg/L) August 2012 Sampling Event (mg/L)
- Table 3 Analytical Results for July 2012 AST Area Solid Matrix Sampling (mg/kg)

#### **LIST OF FIGURES**

- Figure 1 Projected Milestone Schedule
- Figure 2 Monitoring Well Locations
- Figure 3 Groundwater Total Chlorinated Ethenes (August 2012)
- Figure 4 Groundwater Total Chlorinated Ethanes (August 2012)
- Figure 5 Chlorinated Ethene Modeling Results (August 2012)
- Figure 6 Chlorinated Ethane Modeling Results (August 2012)
- Figure 7 2012 AST Solid Matrix Sampling Event Total Chlorinated Ethenes
- Figure 8 2012 AST Solid Matrix Sampling Event Total Chlorinated Ethanes

#### LIST OF APPENDICES

- Appendix A Professional Geologist Summary of Hours
- Appendix B Conceptual Site Model
- Appendix C Well Construction Diagrams
- Appendix D Groundwater Laboratory Data Report and Well Forms
- Appendix E AST Subgrade Sampling Work Plan
- Appendix F AST Subgrade Laboratory Data Report



# PROFESSIONAL GEOLOGIST CERTIFICATION

"I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Kirk Kessler GA000685	1013/2012
Printed Name and GA PE/PG Number	Date
The Residence of the State of t	*
Signature and Stamp	

DCN: RIVEDAPR002 1 October 2012



# 1 Introduction

CEA, LLC (CEA) submitted a revised application for the Voluntary Remediation Program (VRP) (which the EPD refers to as the Voluntary Investigation and Remediation Plan, VIRP) for the Capitol USA – Dalton Facility in May 2011. In a letter dated October 3, 2011, the Georgia Environmental Protection Division (EPD) accepted CEA as a participant into the VRP. Pursuant to the conditions of the acceptance letter, the First Semiannual Progress Report for the Capitol Site was submitted in April 2012.

The Capitol Site is located at 300 Cross Plains Boulevard, Dalton, Georgia (Site). The Site is located on a total parcel of approximately 15.31 acres. The facility is currently operated by QEP Co., Inc.

This Second Semiannual Progress Report (Progress Report) summarizes (by task) what actions have been taken since the First Semiannual Progress Report was submitted (April 2012) and the upcoming activities.



# 2 VRP PROJECT MANAGEMENT

## 2.1 Professional Geologist Oversight

This Progress Report includes certification by the Professional Geologist (Kirk Kessler) specified in the VIRP. Appendix A contains a monthly summary of hours invoiced and description of services provided.

#### 2.2 Milestone Schedule

A revised projected milestone schedule has been attached as Figure 1.

### 2.3 Conceptual Site Model

The Conceptual Site Model (CSM) has been updated with data collected from a recent groundwater sampling event (including two newly installed wells) and a recent investigation of the subsurface conditions underneath the AST containment area. The updated CSM is included as Appendix B.



# 3 MONITORING WELL INSTALLATION

### 3.1 Actions Completed

As mentioned in the VIRP, wells MW-1 and MW-1D are no longer operable. The wells were placed in the location where it was originally believed that the catastrophic spill occurred. However, information discovered later indicated that the spill was actually located north of the AST area. Thus, the locations of MW-1 and MW-1D are not optimal for evaluating site conditions. Accordingly, different locations for the replacement wells were agreed upon during conversations with the EPD. CEA submitted a plan to replace these wells in the First Semiannual Progress Report. These wells were installed the week of August 20, 2012 per the plan and EPA Region 4 *Field Branches Quality System and Technical Procedures* (SESDGUID-101-RO, February 2008). The locations of these wells are shown on Figure 2. Well construction diagrams are included in Appendix C.

#### 3.1.1 Installation of MW-1R

Residuum well MW-1R was installed just to the west of the driveway as shown on Figure 2. A 2-inch Schedule 40 PVC monitoring well was installed to a depth of 25 feet using hollow-stem auger techniques. A fifteen-foot 0.01-inch slotted screen was installed from 10 to 25 feet. A granular sand filter pack was installed approximately 6 inches below the screen and two feet above the screen. A bentonite pellet seal, consisting of 2 feet of dry bentonite, was placed above the filter pack and allowed to hydrate prior to pressure grouting the bentonite/cement grout in the well annulus.

Once the annular grout had cured, the well was completed in a 12-inch diameter flush-mounted well vault within a 3-foot by 3-foot by 4-inch concrete well pad. The well was developed more than 24 hours after the installation of the well pad in accordance with SESDGUID-101-R0. The well was developed until it was free of visible sediment, and the pH, turbidity, and specific conductivity had stabilized.

#### 3.1.2 Installation of MW-3B

Bedrock well MW-3B was installed near the MW-3/MW-3D well pair as shown on Figure 2. A 2-inch diameter monitoring well was installed in accordance with EPA Region 4 *Field Branches Quality System and Technical Procedures* (SESDGUID-101-RO, February 2008). The well was triple cased to prevent contaminant migration into the bedrock. Hollow-stem auger techniques were used to advance through the overlying residuum soils. Auger refusal was encountered at 18 feet. At this depth a 6-inch inside diameter (ID) PVC outer casing was installed and grouted in place by pressure grouting a cement/bentonite grout through a tremmie pipe and grout shoe attached to the base of the outer casing. The annulus was grouted up to just below the ground surface. The grout was allowed to cure prior to advancing the borehole.



Air hammer techniques were then used to advance the borehole to 25 feet (approximately 7 feet into the competent bedrock). At this depth a 4-inch ID PVC outer casing was installed and grouted in place. After the grout had cured, the borehole was advanced. Weathered shale bedrock extended to a depth of approximately 31 feet, where more competent rock (shale) was encountered. The competency of the rock changed to a much harder rock (possibly limestone) at a depth of around 41 feet. The boring was further advanced to a total depth of 49 (end of drilling rod) iand the borehole drilling was terminated.

Three packer tests were conducted at different depth intervals. The first packer test was conducted in the 44 to 49 foot interval using a single packer with 5 ft of screen. The test protocol involved pumping to induce drawdown within the isolated test zone, then terminating the pumping to monitor the rate of recovery. The recovery rate in this lower interval was 0.1 ft/min. The packer apparatus was then changed to a double packer with 10 ft of screen and the test was run at the depth interval of 34 to 44 feet. The recovery rate for this depth interval was 0.4 ft/min. A final packer test was run for the 25 to 35 feet interval and a recovery of 0.1 ft/min was observed.

It was decided to place a 10-ft well screen from 35 to 45 feet. The screen length and location was selected to span the area of highest yield and to be located at the interface between the shale and limestone layers. The boring was completed with a 2-inch diameter Schedule 40 PVC monitoring to a depth of 35 ft. A bentonite layer and then a sand layer were placed in the bottom of the borehole prior to installing the well screen. A granular sand filter pack was installed to 12.5 ft above the screen. A 2-ft bentonite pellet seal was placed above the filter pack and allowed to hydrate prior to pressure grouting a bentonite/cement in the well annulus.

Once the annular grout had cured, the well was completed in a 12-inch diameter flush-mounted well vault within a 3-foot by 3-foot by 4-inch concrete well pad. The well was then developed 24 hours after the installation of the well pad in accordance with SESDGUID-101-R0. The well was developed until it was free of visible sediment, and the pH, turbidity, and specific conductivity had stabilized.

#### 3.1.3 Survey and Repair of MW-4

The well pad for MW-4 had been damaged due to traffic at the facility. The well pad was repaired during the well installation event. After MW-4 was repaired and MW-1R and MW-3B were installed, a surveyor determined the x,y-coordinates and top-of-casing elevations for each of these wells.



# 4 SEMIANNUAL GROUNDWATER SAMPLING

### 4.1 Actions Completed

The VIRP specifies that semiannual groundwater sampling will be conducted for a period of at least two years. The groundwater monitoring program consists of

- Annual monitoring
  - o Of all wells for volatile organic compounds (VOCs)
  - o Of specific wells (MW-3, MW-3D, MW-4, and MW-5) for monitored natural attenuation (MNA) parameters
- Semi-annual monitoring (in between "annual monitoring" events)
  - o Of specific wells (MW-3, MW-3D, MW-4, MW-5, MW-15, MW-1R and MW-16) for VOCs

In August 2012, the second groundwater sampling event was conducted. This "semi-annual" event consisted of monitoring the wells specified above and the newly installed wells for VOCs.

#### 4.1.1 Water Level Measurements

Prior to purging the wells, the depth to water was determined for each well. Groundwater elevations were calculated and are shown on Table 1. The groundwater elevations were relatively the same across the Site possibly due to drought conditions during the sampling event. However, historically the groundwater flow direction is to the northeast. More information about the historic water levels at the site is included in the the Conceptual Site Model (Appendix B).

#### 4.1.2 Methods

The sampling methods used in this event were the same as in previous events. Specifically, well purging was accomplished by low-stress purging techniques using a peristaltic pump with Teflon tubing. After purging was complete (based on the stabilization of water quality parameters), samples of the groundwater were collected using the straw method. The sample containers were placed in a cooler, at 4° C, and maintained under Chain-of-Custody until delivery to the analytical laboratory (Analytical Environmental Services, Inc. of Atlanta, Georgia).



#### 4.1.3 Results

In August 2012, samples from the eight wells (MW-1R, MW-3, MW-3B, MW-3D, MW-4, MW-5, MW-15, and MW-16) at the Site were collected and analyzed for VOCs using Method 8260B. A complete copy of the August 2012 analytical testing results is provided in Appendix D and the results of the detected constituents are summarized in Table 2. Values that exceed the Type 1 RRS are highlighted in yellow.

Groundwater concentrations of total chlorinated ethenes (tetrachloroethene [PCE], trichloroethene [TCE], cis-1,2-dichloroethene [DCE], and vinyl chloride [VC]) from the August 2012 sampling event are shown in Figure 3. Similarly, groundwater concentrations of total chlorinated ethanes (1,1,1-Trichloroethane [TCA], 1,1-dichloroethane [DCA], and chloroethane [CA]) are shown in Figure 4. Similar to previous sampling events, groundwater exhibits the highest concentrations immediately north of the tanker truck spill area with decreasing concentrations in the direction of the groundwater flow (northeast).

The results from the newly installed MW-1R were all below the detection limit indicating that as depicted in previous documents the plume has not reached this location. The results from the newly installed bedrock well MW-3B show concentrations above the Type 1 RRS for several constituents. However, in the MW-3 well cluster (MW-3, MW-3D, MW-3B), the concentrations decrease with depth. This information has been incorporated into the CSM (Appendix B).

#### 4.1.4 Groundwater Modeling

Groundwater computer models using BIOCHLOR were developed and presented in the VIRP. In an effort to conservatively model site conditions, the models were calibrated using the empirical data collected from 2004 through 2007, prior to the EHC® injections. Therefore, the models assume that there is no impact from the injections. The models predict estimated concentrations that are higher than seen in empirical data collected after the injections. Thus, the models conservatively estimate future concentrations.

The groundwater models were run for the year 2012 while plotting the results from the August 2012 sampling event. The results for the chlorinated ethene and chlorinated ethane models for 2012 are shown in Figure 5 and 6, respectively. The comparison of the analytical data to the modeling results in 2012 is similar to the 2010 results. Thus, it does not appear necessary to alter the model at this point. The model continues to overestimate the concentrations of the constituents, providing a conservative assessment of future conditions.

# 4.2 Upcoming Actions

The next groundwater sampling event will be an annual event where samples collected from all wells are analyzed for VOCs. This sampling event will be conducted during the first quarter of 2013. Vertical delineation of groundwater will continue to be performed.



# 5 SOURCE AREA EVALUATION

### 5.1 Actions Completed

An investigation of the solid matrix material underneath and just north of the AST containment area was conducted in July, 2012. The work plan for this sampling event is provided in Appendix E. This investigation included coring through the concrete slab at five locations within the AST containment area and at four locations surrounding the location (SO-3) where the highest concentrations in solid matrix material had been observed in the past. Samples were collected at 1 ft and 3 ft bgs (below ground surface) in each sample location. The samples were analyzed for the chlorinated ethenes (PCE, TCE, DCE, and VC) and ethanes (TCA, DCA, and CA) of interested at the Site. The analytical results are summarized on Table 3, Figure 7 and Figure 8. The laboratory data report is presented in Appendix F.

The results show low concentrations around the historical high spot (SO-3) north of the AST. However, two locations (SS-AST-8 and SS-AST-9) in the AST containment area have significantly higher concentrations than the other samples. This information has been incorporated into the CSM (Appendix B).

## 5.2 Upcoming Actions

CEA will evaluate the results of this investigation and will submit a remedial action plan in a future Progress Report.



# 6 REFERENCES

- Cherry, J.A. and S. Feenstra. 1991. Identification of DNAPL Sites: An Eleven Point Approach.

  Draft document in Dense Immiscible Phase Liquid Contaminants in Porous and Fractured Media, short course notes. Waterloo Centre for Ground Water Research.
- Cressler, C.W. 1974. Geology and Ground-Water Resources of Gordon, Whitfield, and Murray Counties, Georgia. Earth and Water Division of the Geological Survey of Georgia. Atlanta. 1974.
- Environmental Protection Agency. 1998. Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater. Office of Research and Development. Washington D.C. September 1998.
- Environmental Protection Agency. 2002. OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance). November. EPA530-D-02-004
- Environmental Planning Specialists, Inc. (EPS). 2008. Source Area Investigation Report. November, 2008.
- EPS. 2009. Corrective Action Plan Addendum. June 12, 2009.
- EPS. 2011. Revised Voluntary Remediation Program Application: Capitol USA Dalton Facility. May.
- Tri-State Testing & Drilling, LLC (Tri-State). 2004a. Phase II Environmental Investigation. August, 2004.
- Tri-State. 2004b. Release Notification and Reportable Quantities Screening Method. August 26, 2004.
- WRS Infrastructure & Environment, Inc. (WRS) 2006. Corrective Action Plan, Capitol Adhesives Dalton Facility. August, 2006.



# **TABLES**

**Table 1. Depth to Groundwater Measurements 2011-2012** 

		TOC	Ground	Depth to	Potentiometric	Depth to GW
		Elevation (ft msl)	Elevation (ft msl)	Water (ft btoc)	Elevation (ft msl)	from Ground Surface (ft)
MW-1R	8/23/2012	672.01		3.78	668.23	
MW-2	4/22/2011	675.33	675.51	0		0
_	4/29/2011			0		0
	5/6/2011			0		0
	2/7/2012			0		0
	8/23/2012			6.65	668.68	6.83
MW-2D	4/22/2011	674.79	675.36	0		0
	4/29/2011			0		0
_	5/6/2011			6.00	668.79	6.57
_	2/7/2012			0		0
_	8/23/2012			6.04	668.75	6.61
MW-3	4/22/2011	673.83	673.87	0		0
_	4/29/2011			0.51	673.32	0.55
	5/6/2011			0.71	673.12	0.75
_	2/7/2012			1.29	672.54	1.33
	8/23/2012			5.40	668.43	5.44
MW-3D	4/22/2011	673.87	674.14	0.58	673.29	0.85
	4/29/2011			0.52	673.35	0.79
	5/6/2011			0.74	673.13	1.01
	2/7/2012			0.4	673.47	0.67
	8/23/2012			5.25	668.62	5.52
MW-3B	8/24/2012	674.32		5.29	669.03	
MW-4	4/22/2011	671.38	671.85	0		0
	4/29/2011			0		0
	5/6/2011			0		0
	2/7/2012			0		0
	8/23/2012	671.93		2.62	669.31	2.54
MW-5	4/22/2011	670.88	670.13	0		0
	4/29/2011			0		0
	5/6/2011			0		0
	2/7/2012			0		0
	8/23/2012			2.47	668.41	1.72
MW-6	4/22/2011	674.92	675.28	2.42	672.50	2.78
	4/29/2011			3.82	671.10	4.18
	5/6/2011			3.01	671.91	3.37
	2/7/2012			2.72	672.20	3.08
	8/23/2012			6.36	668.56	6.72
MW-7	4/22/2011	675.63	674.71	0		0
	4/29/2011			0.32	675.31	-0.60
	5/6/2011			0.87	674.76	-0.05
	2/7/2012			0		0
	8/23/2012			6.79	668.84	5.87



**Table 1. Depth to Groundwater Measurements 2011-2012** 

		TOC	Ground	Depth to	Potentiometric	Depth to GW
		Elevation	Elevation	Water	Elevation	from Ground
		(ft msl)	(ft msl)	(ft btoc)	(ft msl)	Surface (ft)
MW-8	4/22/2011	674.52	674.99	0		0
	4/29/2011			0		0
	5/6/2011			0		0
_	2/7/2012			0		0
_	8/23/2012			5.82	668.70	6.29
MW-9	4/22/2011	675.44	675.80	0		0
	4/29/2011			0		0
	5/6/2011			0.51	674.93	0.87
	2/7/2012			0		0
_	8/23/2012			6.48	668.96	6.84
MW-10	4/22/2011	675.54	675.70	0.43	675.11	0.59
	4/29/2011			0.80	674.74	0.96
	5/6/2011			1.35	674.19	1.51
	2/7/2012			0.7	674.84	0.86
	8/23/2012			6	669.21	6.49
MW-11	4/22/2011	675.31	675.80	1.60	673.71	2.09
_	4/29/2011			2.08	673.23	2.57
	5/6/2011			2.42	672.89	2.91
	2/7/2012			1.92	673.39	2.41
_	8/23/2012					
MW-12	4/22/2011	675.76	675.76	3.32	672.44	3.32
	4/29/2011			3.29	672.47	3.29
	5/6/2011			3.53	672.23	3.53
_	2/7/2012			3.36	672.40	3.36
	8/23/2012			6.92	668.84	6.92
MW-13	4/22/2011	676.70	677.06	1.80	674.90	2.16
	4/29/2011			2.53	674.17	2.89
	5/6/2011			3.23	673.47	3.59
	2/7/2012			2.24	674.46	2.60
	8/23/2012			8.53	668.17	8.89
MW-14	4/22/2011	673.05	673.36	0		0
	4/29/2011			0.45	672.60	0.76
	5/6/2011			0.75	672.30	1.06
	2/7/2012			0		0
	8/23/2012			5.00	668.05	5.31
MW-15	4/22/2011	670.91	671.33	0		0
	4/29/2011			0		0
	5/6/2011			0		0
	2/7/2012			0		0
	8/23/2012			3.07	667.84	3.49



#### **Table 1. Depth to Groundwater Measurements 2011-2012**

		TOC Elevation (ft msl)	Ground Elevation (ft msl)	Depth to Water (ft btoc)	Potentiometric Elevation (ft msl)	Depth to GW from Ground Surface (ft)
MW-16	4/22/2011	669.70	670.24	0.13	669.58	0.66
	4/29/2011			0.45	669.25	0.99
_	5/6/2011			0.69	669.01	1.23
	2/7/2012			0.3	669.40	0.84
	8/23/2012			2.62	667.08	3.16
MW-17	4/22/2011	676.26		0.72	675.54	
	4/29/2011			1.18	675.08	
	5/6/2011			1.50	674.76	
	2/7/2012			0.88	675.38	
	8/23/2012					



Table 2. Analytical Results for Constituents Detected in Groundwater - August, 2012 Sampling Event (mg/L)

	ъ.	Tetra	m · 11	cis-1,2-	T70 1	Total	1,1,1-	4.4 5) 11	CLI	Total
Well	Date	chloro	Trichloro	Dichloro	Vinyl	Chlorinated Ethenes		1,1-Dichloro	Chloro	Chlorinated Ethanes
Type 1 RRS	Sampled	ethene 0.005	ethene 0.005	ethene 0.07	chloride 0.002	Ethenes	hane 0.2	ethane 4	ethane DL	Ethanes
MW-1R	8/23/12	<0.005	<0.005	<0.005	<0.002	ND	< 0.005	<0.005	<0.01	< 0.005
MW-3	8/24/12	3.4	6.1	2.9	0.23	12.63	0.52	0.54	< 0.01	1.06
MW-3D	8/24/12	0.88	1.1	0.51	0.1	2.59	0.3	0.18	< 0.01	0.48
MW-3D (Dup)	8/24/12	0.9	1.1	0.45	0.11	2.56	0.25	0.18	< 0.01	0.43
MW-3B	8/24/12	0.52	0.37	0.15	0.061	1.10	0.04	0.075	< 0.01	0.115
MW-4	8/23/12	< 0.005	0.013	0.012	0.0058	0.0308	< 0.005	< 0.005	< 0.01	ND
MW-5	8/23/12	< 0.005	< 0.005	< 0.005	0.0044	0.0044	< 0.005	0.025	0.17	0.195
MW-15	8/23/12	< 0.005	0.017	0.027	0.0054	0.0494	< 0.005	< 0.005	< 0.01	ND
MW-16	8/23/12	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND

								Dichloro				
		1,1,2-						methane	Methyl			trans-1,2-
	Date	Trichloro	1,1-Dichloro	1,2-Dichloro				(Methylene	cyclo			Dichloroet
Well	Sampled	ethane	ethene	ethane	Acetone	Benzene	Chloroform	chloride)	hexane	o-Xylene	Toluene	hene
Type 1 RRS		0.005	0.007	0.005	4	0.005	0.08	0.005	DL	10	1	0.1
MW-1R	8/23/12	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
MW-3	8/24/12	0.047	3	1.3	< 0.05	0.013	1.8	0.045	0.0068	0.0052	0.0072	0.18
MW-3D	8/24/12	0.0079	0.46	0.24	< 0.05	< 0.005	0.23	0.014	< 0.005	< 0.005	< 0.005	0.033
MW-3D (Dup)	8/24/12	0.0075	0.49	0.19	< 0.05	< 0.005	0.23	0.014	< 0.005	< 0.005	< 0.005	0.032
MW-3B	8/24/12	< 0.005	0.17	0.04	< 0.05	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	0.0089
MW-4	8/23/12	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
MW-5	8/23/12	< 0.005	< 0.005	0.0085	< 0.05	< 0.005	< 0.005	0.0061	< 0.005	< 0.005	< 0.005	0.014
MW-15	8/23/12	< 0.005	0.016	< 0.005	< 0.05	< 0.005	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
MW-16	8/23/12	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

ND: Not detected

Result greater than Type 1 RRS



# Capitol Adhesives Table 3. Analytical Results for July 2012 AST Area Solid Matrix Sampling (mg/kg)

				Chlorinat	ed Ethenes		Chl	orinated Ethanes	
		Depth (ft							
Location	Date	bgs)	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	Chloroethane
SS-AST-3	7/23/2012	1	0.11	0.058	3.6	0.042	<0.003	0.05	<0.0061
SS-AST-3	7/23/2012	2	0.35	0.18	3.3	0.081	<0.0032	0.075	<0.0064
SS-AST-4	7/23/2012	1	0.0047	<0.0028	0.0031	<0.0056	<0.0028	<0.0028	<0.0056
SS-AST-4	7/23/2012	2	0.0042	<0.0033	<0.0033	<0.0066	<0.0033	<0.0033	<0.0066
SS-AST-5	7/23/2012	1	0.0039	<0.0027	<0.0027	<0.0055	<0.0027	<0.0027	<0.0055
SS-AST-5	7/23/2012	2	0.011	<0.0032	0.0083	<0.0064	<0.0032	<0.0032	<0.0064
SS-AST-6	7/23/2012	1	0.039	0.0088	0.011	<0.0057	0.0035	<0.0028	<0.0057
SS-AST-6	7/23/2012	2	0.047	0.011	0.0077	<0.0066	<0.0033	<0.0033	<0.0066
SS-AST-7	7/23/2012	1	0.013	0.0096	1.9	0.24	< 0.003	0.62	0.07
SS-AST-7	7/23/2012	2	0.014	0.0086	2	0.31	<0.0031	1.2	0.037
SS-AST-8	7/23/2012	1	64	58	11	<3.4	66	6.8	<3.4
SS-AST-8	7/23/2012	2	6.5	13	6.2	<3.2	4.7	8.7	<3.2
SS-AST-9	7/23/2012	1	380	34	66	<3	2.1	1.5	<3
SS-AST-9	7/23/2012	2	660	97	55	<3.7	15	2.1	<3.7
SS-AST-10	7/23/2012	1	0.0054	<0.0029	0.004	<0.0057	<0.0029	<0.0029	<0.0057
SS-AST-10	7/23/2012	2	0.02	0.01	0.013	<0.0067	<0.0033	<0.0033	<0.0067
SS-AST-10 (Dup)	7/23/2012	1	0.058	0.018	0.016	<0.0074	0.0043	<0.0037	<0.0074
SS-AST-11	7/23/2012	1	0.0095	0.0061	0.0066	<0.0057	<0.0028	0.0043	<0.0057
SS-AST-11	7/23/2012	2	0.013	0.008	0.0091	<0.0067	<0.0034	<0.0034	< 0.0067





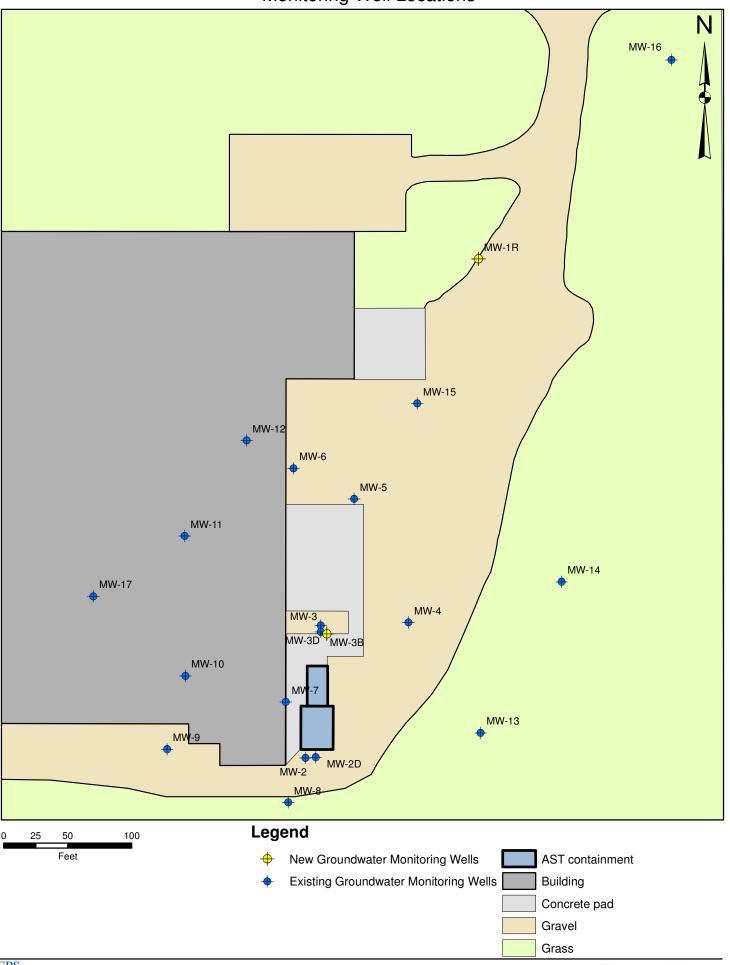
# **FIGURES**

Figure 1 Projected Milestone Schedule

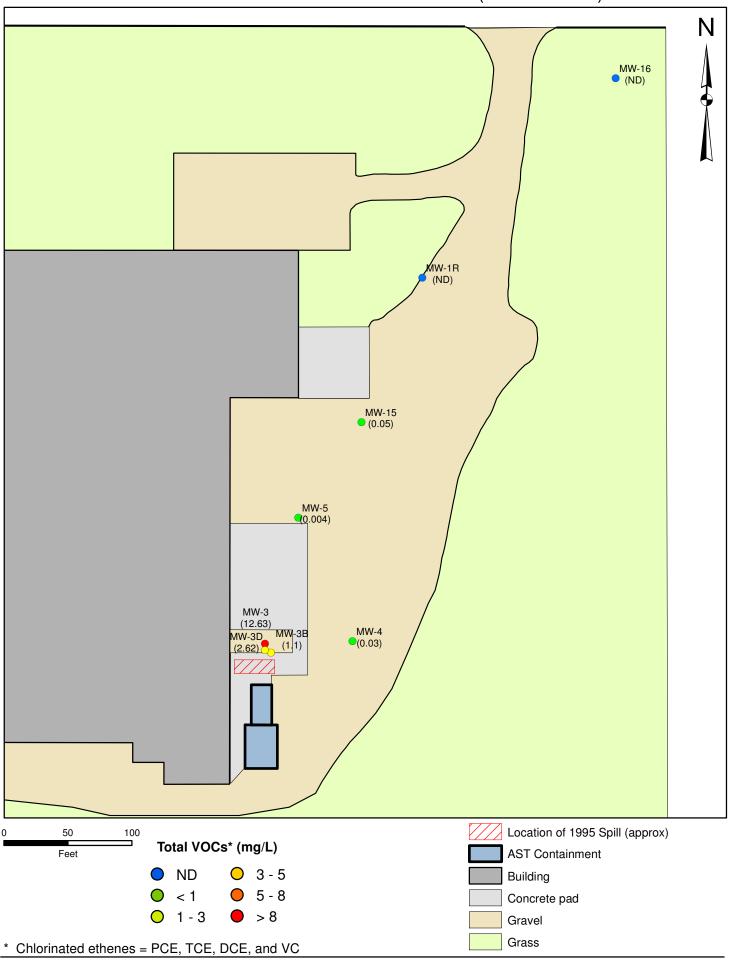
							jecteu	iestone Schedu														
ID	Task Name	2011		2012				2013				2014			2015					20	16	
II.	rask (valle	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Project Mangement																					
	Financial Assurance with cost estimate	Nov 1																				
	Semiannual Progress Reports			Apr 3		Oct 3		Apr 3		Oct 3		Apr 3		Oct 3		Apr 3		Oct 3		Apr 3		CSR Oct 3
	Horizontal and vertical delineation, final remediation plan, cost estimate for remediation											Apr 3										
2	Well Installation																					
3	Groundwater Sampling		Annual		Semi- Annual		Annual		Semi- Annual													
4	Source Area Evaluation and Remedial Action							Prelim Remediation Plan				Final Remediation Plan										
5	Human Health Risk Evaluation							Prelim Risk Evaluation														CSR

Complete
EPD Deadline
Internal Deadline

# Capitol Adhesives Monitoring Well Locations



#### Capitol Adhesives Groundwater Total Chlorinated Ethenes\* (October 2012)



#### Capitol Adhesives Groundwater Total Chlorinated Ethanes\* (August 2012)

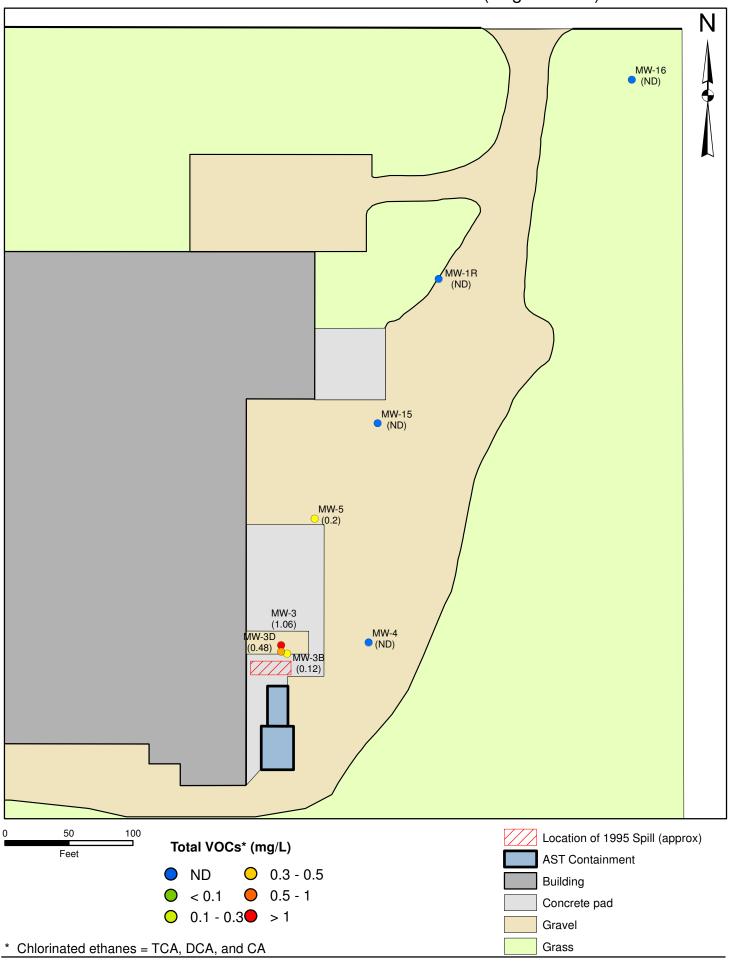


Figure 5. Chlorinated Ethene Modeling Results (August 2012)
Modeled Dissolved Chlorinated Ethene Concentrations Along Plume Centerline

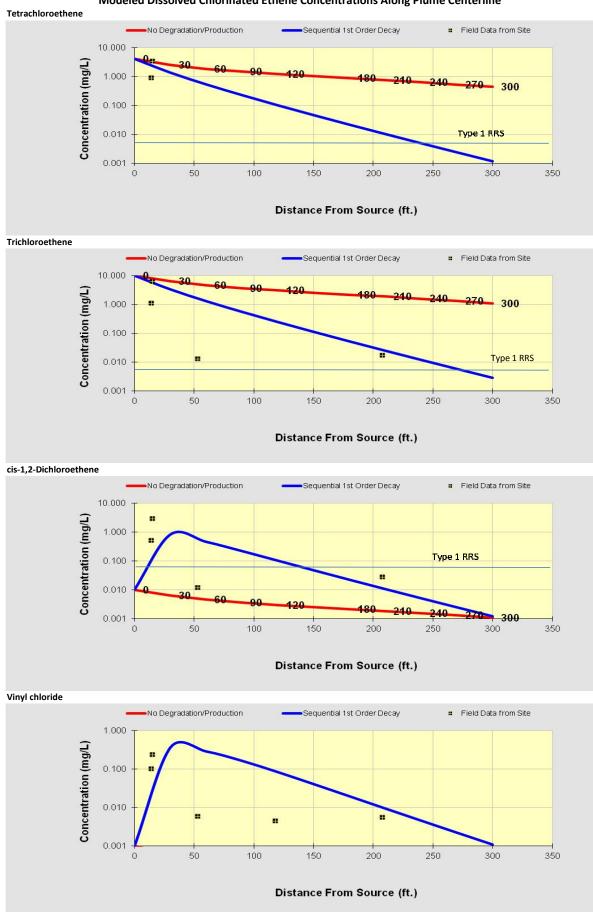
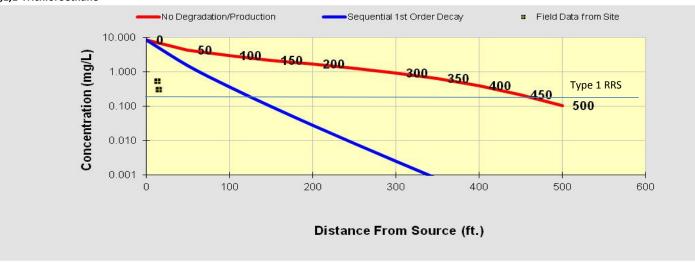
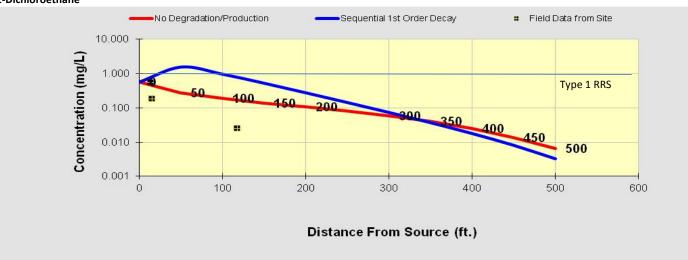


Figure 6. Chlorinated Ethane Modeling Results (August 2012)
Modeled Dissolved Chlorinated Ethane Concentrations Along Plume Centerline

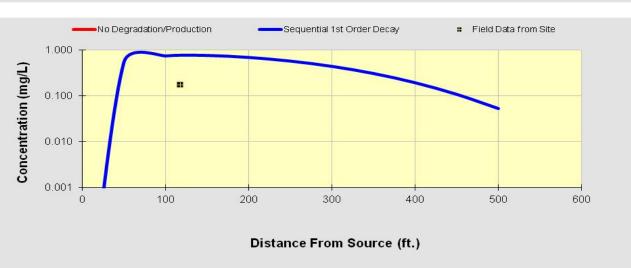
#### 1,1,1-Trichloroethane



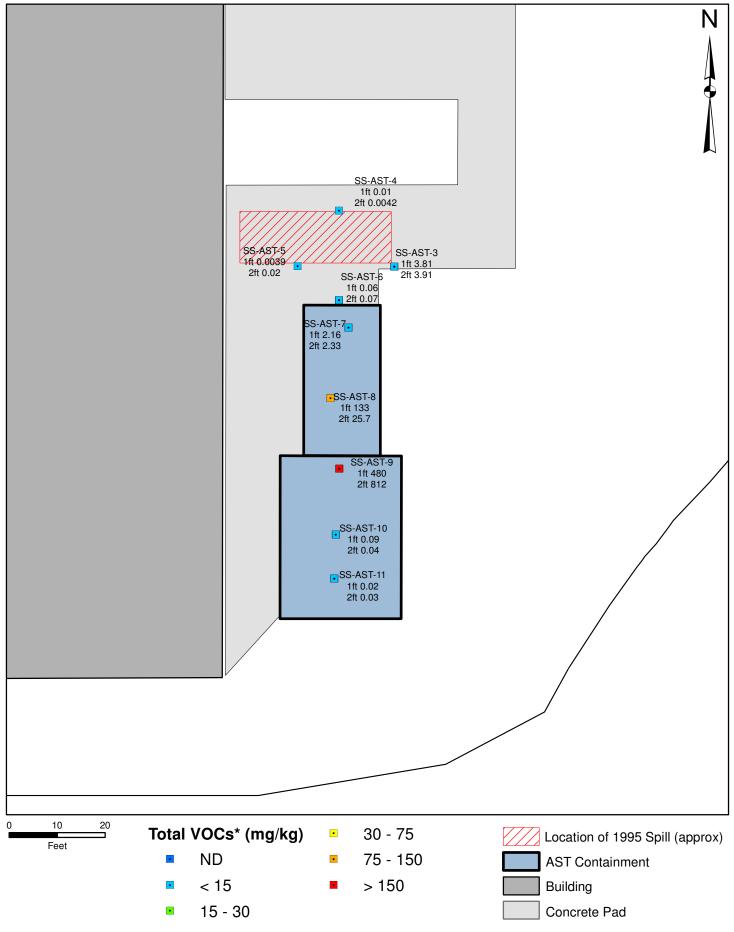
#### 1,1-Dichloroethane





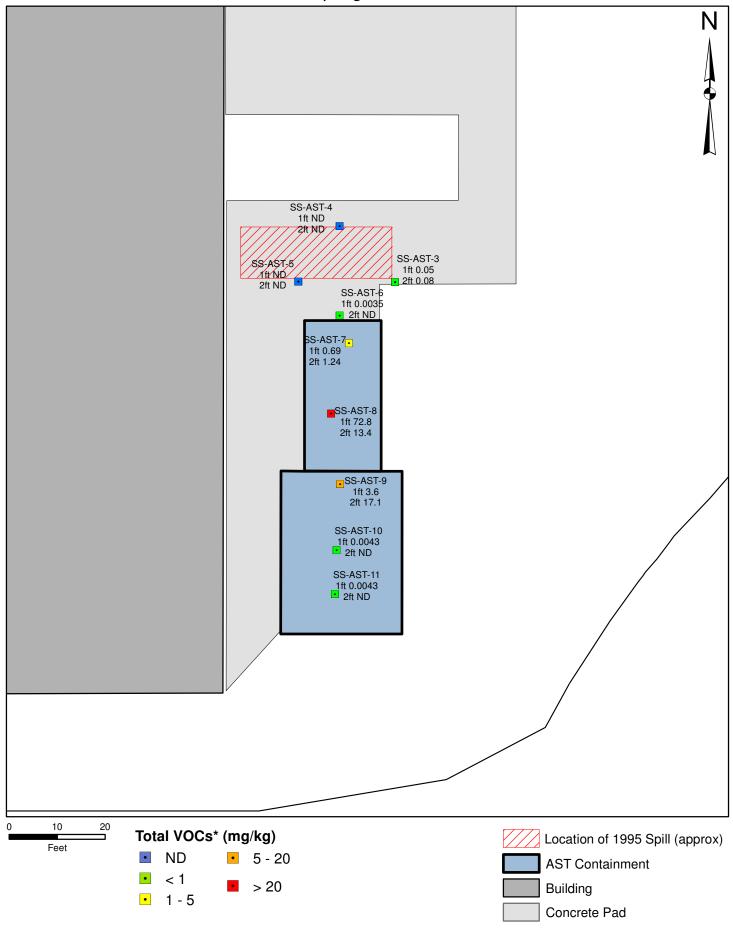


#### Capitol Adhesives 2012 AST Solid Matrix Sampling Event - Total Chlorinated Ethenes\*



<sup>\*</sup> Where multiple samples were collected, the maximum total VOC value is shown. Chlorinated ethenes = PCE, TCE, DCE, and VC

#### Capitol Adhesives 2012 AST Solid Matrix Sampling Event - Total Chlorinated Ethanes\*



<sup>\*</sup> Where multiple samples were collected, the maximum total VOC value is shown. Chlorinated ethanes = TCA, DCA, CA



# **APPENDIX A**

# PROFESSIONAL GEOLOGIST SUMMARY OF HOURS

9:58 AM 10/03/12

# Environmental Planning Specialists, Inc. Time by Job Summary April through September 2012

	Apr 12	May 12	Jun 12	Jul 12	Aug 12	Sep 12	TOTAL
River Associates:Dalton Adhesives:Progress Reports P-Principal:P-Document Preparation	0.00	0.00	0.00	0.00	0.00	2.00	2.00
Total River Associates:Dalton Adhesives:Progress Reports	0.00	0.00	0.00	0.00	0.00	2.00	2.00
River Associates:Dalton Adhesives:Project Management P-Principal:P-Planning / Preparation P-Principal:P-Project Management	2.00 0.00	1.00 0.00	0.00 0.00	0.00 1.00	0.00 0.00	0.00 0.00	3.00 1.00
Total River Associates:Dalton Adhesives:Project Management	2.00	1.00	0.00	1.00	0.00	0.00	4.00
River Associates:Dalton Adhesives:Source Area Evaluation P-Principal:P-Teleconference	0.00	0.00	0.00	0.00	2.00	0.00	2.00
Total River Associates:Dalton Adhesives:Source Area Evaluation	0.00	0.00	0.00	0.00	2.00	0.00	2.00
River Associates:Dalton Adhesives:Well Installation P-Principal:P-Field Work	0.00	0.00	0.00	0.00	8.00	0.00	8.00
Total River Associates:Dalton Adhesives:Well Installation	0.00	0.00	0.00	0.00	8.00	0.00	8.00
TOTAL	2.00	1.00	0.00	1.00	10.00	2.00	16.00



# **APPENDIX B**

# **CONCEPTUAL SITE MODEL**

#### B. CONCEPTUAL SITE MODEL

B.1.	Elements of the Conceptual Site Model	B-1
B.2.	Ground Surface Features	B-1
B.3.	Source of Contamination	B-1
B.4.	Subsurface Features	B-2
	B.4.1. Geological Setting	B-2
	B.4.2. Hydrogeological Setting	B-2
B.5.		
	B.5.1. Groundwater Conditions	B-5
	B.5.2. Solid Aquifer Matrix and Vadose Zone Soil	B-6
B.6.	Fate and Transport Summary	B-8
	B.6.1. Physical Fate and Transport	B-8
	B.6.2. Biological Degradation	
B.7.		
	B.7.1. Setting	
	B.7.2. Human Health	
	B 7.3 Ecological	B-13



Analytical Results for Constituents Detected in Groundwater (mg/L)
Analytical Results for Constituents Detected in Subsurface Solids (mg/kg)
Anaerobic Biodegradation Preliminary Screening
Anaerobic Microbial Testing Results (October, 2010)
Aerobic Microbial Testing Results (October, 2010)
Topographic Map
Aerial of Property and Site Features
Cross Section Location Map
Cross Section A-A'
Cross Section B-B'
Soil Zones Based on High Water Table Conditions
Groundwater Total Chlorinated Ethenes (February/August 2012)
Groundwater Total Chlorinated Ethanes (February/August 2012)
MW-5 PCE Degradation Time Series
MW-5 TCA Degradation Time Series
Location of Solid Matrix Samples and Water Table Zones
Total Chlorinated Ethenes in Subsurface Solids
Total Chlorianted Ethanes in Subsurface Solids



# B. CONCEPTUAL SITE MODEL

The Conceptual Site Model (CSM) is intended to establish a common knowledge base about the Site and its environmental condition, to facilitate the development of basic remedial action objectives appropriate for the Site, and to allow an informed decision regarding possible remedial action measures for the Site. This section describes the surface and subsurface features at the Site, discusses the fate and transport of chlorinated solvents, and discusses the potential receptors and exposure pathways associated with the Site.

### B.1. Elements of the Conceptual Site Model

The figures attached to this section and the Progress Report are plan view and profile diagrams depicting the extent of chlorinated solvents in the subsurface. Viewed in total, these figures give a three-dimensional representation of the site conditions.

#### **B.2. Ground Surface Features**

The Site consists of one steel frame building (approximately 100,000 sf) with concrete masonry walls and slab on grade concrete floor with a metal roof. Parking lots are located to the north and east of the building and a hard-packed gravel road/driveway runs along the eastern and southern sides of the building. Ten loading docks are located on the east wall of the facility; here the driving surface is paved in concrete. Several lean-to structures are on the south and west sides of the building. There is limited grassy terrain on the eastern and northern side of the Site. The topography of the Site gently slopes from the south to northeast. A shallow drainage ditch is located around the southern and eastern side of the Site and conveys runoff toward Cross Plains Boulevard. Samples collected from the southern drainage ditch did not contain concentrations of VOCs above HSRA Notification Concentrations (WRS, 2006). A subgrade storm drain system runs from the southeastern side of the building, across the spill area and then north to the ditch along Cross Plains Boulevard. There are no stream features on or adjacent to the Site. A topographic map is provided in Figure B-1 and the Site features are shown on Figure B-2.

#### **B.3.** Source of Contamination

In January 1995, a documented release of approximately 585 gallons of reclaimed 1,1,1-trichloroethane (TCA) occurred from a delivery truck due to failure of the tanker sidewall. Figure B-2 depicts the approximate location of the spill<sup>1</sup>. Spill response involved containment of the spill area with dikes and product was recovered using a vac truck. Post spill response involved excavation of surface soils at the spill site and off-site disposal<sup>2</sup>. Groundwater samples

<sup>&</sup>lt;sup>1</sup> The location depicted for the tanker truck spill has been modified from previous depictions in the Corrective Action Plan Addendum (EPS, 2009) due to subsequently-discovered information.

<sup>&</sup>lt;sup>2</sup> There is no documentation of the dimensions or specific locations of the soil excavation.



were not collected during the post spill response. An Environmental Investigation (Tri-State, 2004a) in August 2004, identified TCE, PCE, and daughter products in the subsurface and groundwater samples. This spill is the likely source of TCA and the daughter products detected in the groundwater. The spill is also the likely source of PCE/TCE and daughter products detected in the groundwater, as the reclaimed TCA likely contained PCE/TCE.

The ASTs near the tanker spill location are currently being used to store solvents for use in the facility's processes. The secondary containment appears in good condition.

#### **B.4.** Subsurface Features

#### B.4.1. Geological Setting

The Site occurs within the Valley and Ridge Physiographic Province of northwest Georgia. The province is dominated by a northward-trending valleys separated by low, rounded ridges and by high, steep-sided ridges (Cressler, 1974). The stratigraphic units below the Site are within the Conasauga Formation of the middle and late Cambrian system, which is underlain by the Rome Formation. Cressler (1974) describes the Conasauga Formation as follows:

Thickness: 3,000-5,000 feet (maximum thickness unknown)

Lithology: The formation consists of alternating units of shale and limestone that vary in thickness and relative proportion from place to place. In some areas the formation is mainly shale.

The middle unit of the Conasauga Formation is composed of approximately 1,000 feet of light green and yellowish clay shale containing small lenses of blue limestone. Some silty shale is also present, but in smaller quantities than in the lower unit.

A cross section location map is included as Figure B-3, and cross sections are shown on Figures B-4 and B-5. As depicted on these figures, the shallow stratigraphic profile at the Site consists of 4 to 6 feet of fill material placed during construction of the facility, followed by 10 to 15 feet of unconsolidated soil (clayey sand or sandy clay or shaley clay, but predominantly sandy clay) grading to weathered shale approximately to 15 to 30 feet bgs. Competent shale has been observed from 31 to 41 feet bgs and a harder rock (possibly limestone) has been observed below 41 feet bgs.

#### **B.4.2.** Hydrogeological Setting

Cressler (1974) describes the hydrologic properties of the Conasauga Formation as follows:

Wells in shale yield up to 5 gpm, or in some locations 17 gpm; and dry wells also occur. Wells in limestone normally supply between 5 and 25 gpm and ones properly located with respect to the drainage will furnish up to 300 gpm. Most wells are less than 300 feet deep, though some extend to a depth of 500 feet. Wells penetrating shale and limestone mixed generally supply from about 2 to 20 gpm, but some yield up to 100 gpm if they are near a source of recharge. The well water varies from soft to hard and has a low to



moderate iron content. Some large springs have openings in the Conasauga, but discharge water from the Knox Group.

The water table at the Site fluctuates on the scale of 5 to 8 ft at a given location, with many locations exhibiting a high water table mark at the ground surface (i.e., artesian conditions). Although the water table intersects the ground surface, the conditions are such that there is no or minimal pooling of water on the ground surface. In the spring of 2011 a weekly groundwater measurement program was implemented for three consecutive weeks to better define the high water table conditions. Depth to groundwater measurements were made at all the existing wells at the Site on three consecutive weekly site visits. The results are presented in Table 1 of the Progress Report along with the results from the February and August 2012 sampling events. This information was combined with the historical groundwater measurements to determine the historical high water table elevations, which can be seen on the cross-sections (Figures B-4 and B-5). The table below shows the high water table mark for the shallow wells. Ten of the shallow wells have exhibited conditions where the groundwater table intersects the ground surface. The only wells that have consistently shown groundwater deeper than two feet below the ground surface are MW-6, MW-11, MW-12 and MW-13. Figure B-6 shows the locations of the wells and their high water table marks. The overall groundwater flow direction is to the northeast (as shown in the VIRP).

Well	High Water Table Mark: Depth Below Ground Surface (ft)
MW-1	0
MW-2	0
MW-3	0
MW-4	0
MW-5	0
MW-6	2.78
MW-7	0
MW-8	0
MW-9	0
MW-10	0.59
MW-11	2.09
MW-12	3.29
MW-13	2.16
MW-14	0
MW-15	0
MW-16	0.67
MW-17	0.72*

<sup>\*</sup> Ground surface elevation unknown, depth below top of casing shown



The topographic map (Figure B-1) is dated 1982, prior to the construction of the facility. This map shows that the facility is located in a low topographic relief (valley) area. This figure (which shows the approximate location of the facility) also shows that an intermittent stream ran through where the southeastern corner of the building now stands. This stream ran in a northeasterly direction across where the Site now exists. This is the same direction as the groundwater flow seen currently at the site. As mentioned previously, there is 4 to 6 feet of fill material that was placed in this low topographic area during construction of the facility. The high water table conditions are explained by this original topographic setting. The valley bottom pitches from the south to the north creating artesian pressure when the water table is high.

Figure B-6 was used to define soil zones on the Site based on the high water table marks. The fully saturated zone is the area where the subsurface is fully saturated due to the water table intersecting the ground surface. The fully saturated zone shown on Figure B-6 was conservatively assumed to be the area between the wells where the groundwater table intersects the ground surface. It is likely that the actual fully saturated zone is larger than this area. In the fully saturated zone there is no vadose zone. The approximate depth of the vadose zone in other areas of the site shown on Figure B-6 are based on the depth to groundwater measurements. It is reasonable to infer that the fully saturated zone is located where the intermittent stream formerly ran.

Hydraulic gradients, hydraulic conductivity and transmissivity calculations<sup>3</sup> were presented in the CAP (WRS, 2006). Horizontal hydraulic gradients range from 0.0083 to 0.0125 ft/ft. The hydraulic conductivity ranges from 2.63 to 8.09 ft/day with an average and geometric mean of 5.3 and 4.5 ft/day. The transmissivity ranges from 244.61 to 1,452 gallons per day per foot (gpd/ft). Ranges of groundwater flow velocities were estimated using the modified Darcy equation:

 $V = Ki/n_e$ 

where: V = average linear velocity

K = hydraulic conductivity

i = hydraulic gradient

n<sub>e</sub> = effective porosity

Groundwater flow velocities were estimated using the average hydraulic conductivity 5.3 ft/day and an estimated effective porosity (n<sub>e</sub>) for Site soils of 0.3. Using the range of hydraulic gradients (0.0083 to 0.0125 feet/ft), the range of groundwater flow velocities were calculated to be approximately 53 to 80 ft/year.

#### B.5. Extent of Contamination

As mentioned previously, three different matrices are of interest at this Site: groundwater, vadose zone soil, and the solid aquifer matrix. The extent of contamination in each of these matrices is discussed in this section.

<sup>&</sup>lt;sup>3</sup> Hydraulic conductivity and transmissivity were determined by slug tests on four monitoring wells using the Bouwer and Rice method.



#### **B.5.1. Groundwater Conditions**

Twenty groundwater monitoring wells at the Site have been sampled over time (boring logs and well construction diagrams are presented in Appendix F and Appendix G of the VIRP, respectively) and two new wells were recently installed. Additionally, nine direct push-point water samples were collected in March 2009. A summary of the historical analytical results for constituents detected in the recent sampling event is presented in Table B-1.

Chlorinated ethenes and ethanes are the constituent groups of interest at the Site, associated with the 1995 spill event. TCA, PCE, and TCE have been consistently detected in groundwater above RRSs. These chlorinated solvents can degrade biologically in the subsurface. Through reductive dechlorination, parent compounds (i.e., TCA and PCE/TCE) can be degraded biologically into daughter products. TCA can be degraded into 1,1-dichloroethane (DCA) and then chloroethane (CA). Similarly, PCE can be degraded into TCE, cis-1,2-dichloroethene (DCE) and vinyl chloride (VC). Groundwater concentrations of total chlorinated ethenes (PCE, TCE, DCE and VC) in 2012 are shown in Figure B-7. Similarly, groundwater concentrations of total chlorinated ethanes (TCA, DCA and CA) are shown in Figure B-8. The spatial distribution of constituents in groundwater is consistent with the pattern observed in the subsurface solid matrix with groundwater exhibiting the highest concentrations at the location of the tanker truck spill. The primarily direction of the groundwater plumes are to north and northeast of the basin, consistent with the direction of groundwater flow.

The distribution of parent compounds and daughter products demonstrate degradation has occurred over the Site's history, with degradation products having a tendency to exhibit a greater spatial distribution in the downgradient direction compared to the parent compounds. Degradation products also tend to exhibit higher concentrations down gradient from the tanker truck spill area compared to the source area at the tanker truck spill area.

Figures B-9 and B-10 show time series graphs for monitoring well MW-5 (which is in the plume, downgradient from the tanker truck spill area) for the PCE and TCA degradation parameters, respectively. These figures demonstrate that biodegradation is occurring in the plume. The figures clearly show that the peak for the parent compounds (TCE and TCA) appears first followed by the next degradation parameters (DCE and DCA) then the final degradation parameters (VC and CA). (There were only very small concentrations of PCE, likely due to biodegradation occurring prior to reaching MW-5.)

The plume has been characterized and delineated horizontally (see Figures B-7 and B-8) with MW-16 and MW-1R to the north, MW-14 to the east, MW-8 to the south and MW-17 to the west. Three monitoring well clusters are available to evaluate the vertical extent of VOCs (MW-1/MW-1D, MW-2/MW-2D, and MW-3/MW-3D/MW-3B). However, MW-1 and MW-1D have been damaged and are no longer operable. A review of data from the MW-2 and MW-3 well clusters identified VOCs in both the shallow and deeper wells, but both the number of constituents and concentrations are lower in the deepest well of each cluster. Thus, the concentrations of constituents decrease with depth. As there are no wells located deeper than MW-3B, vertical delineation cannot yet be demonstrated.



#### B.5.2. Solid Aquifer Matrix and Vadose Zone Soil

#### B.5.2.1. Subsurface Investigations and Matrix Classification

Although the solid aquifer matrix and vadose zone soil will be considered separately in terms of potential corrective action, for ease of presentation and delineation both matrices will be discussed together. Seven subsurface investigations have been completed to date at the Site. A brief summary of the historical investigations is provided below. Solid-matrix samples were collected and analyzed for VOCs during these investigations both from the zone of the water table fluctuation and from beneath the low water table mark, for the purpose of helping to describe/define the groundwater conditions from a perspective of source area(s) that might warrant a different remedial action approach to that for the dissolved-phase plume. A summary of the analytical results is presented in Table B-2 and the sample locations are shown on Figure B-11. Available boring logs are presented in Appendix F of the VIRP.

Figure B-11 also shows the high water table zones. This figure was used to classify each sample collected as either vadose zone soil or being in the solid aquifer matrix by determining whether the sample collected was above or below the estimated high water table mark at that location and depth. Thus, Table B-2 indicates whether each sample is in the solid aquifer matrix or vadose zone soil.

<u>July 2004 Subsurface Investigation</u>. In July 2004, four solid matrix samples were collected during the installation of MW-1D, MW-2D, MW-3 and MW-3D. Sample collection depth ranged from 8 to 15 ft bgs. Chlorinated ethenes, ethanes and a single detection of toluene (at MW-2D) were detected in these solid matrix samples. Note that the high water table mark for these wells is less than 1 ft bgs (with all but MW-3D having a groundwater level at the ground surface), indicating that all of these solid matrix samples were collected from below the high water table mark.

<u>August 2005 Subsurface Investigation</u>. In August 2005, 13 solid matrix samples were collected from direct-push cores to the east of the main facility building (identified as the GP samples in Figure B-11). Samples were collected at depths from 2 to 8 ft bgs. The only sample locations that are in the greater than 2 ft high water table zone are GP007 and GP008. These two samples will be considered as representing the vadose zone while the remaining samples are in the solid aquifer matix. Consistent with the July 2004 investigation, chlorinated ethenes and ethanes were detected in these samples.

<u>June 2006 Subsurface Investigation</u>. In June and July 2006, nine solid matrix samples were collected during the installation of additional site monitoring wells (MW-8 to MW-16 in Figure B-11). Samples were collected at depths from 5 to 15 ft bgs. The high water table mark for all of these locations is less than 5 feet, thus all of these samples are in the solid aquifer matrix. Only two sample locations exhibited chlorinated ethenes (MW-10 and MW-11) and one location exhibited compounds characteristic of petroleum hydrocarbons or BTEX compounds (MW-15).



MIP Profiling and Associated Core Sampling. Subsurface investigations were performed in October, 2008 to delineate conditions beneath the AST containment basin, beneath the nearby facility structure and areas hydraulically downgradient. These investigations were completed with a combination of both traditional direct-push core sampling and membrane interface probe (MIP) profiling. The MIP profiling, unlike tradition core sampling, yields nearly continuous measurements of total VOCs in the subsurface as it is advanced, providing a more continuous screening-level characterization of the subsurface conditions. Appendix I of the VIRP contains excerpts of the MIP data originally provided in the *Source Area Investigation Report* (EPS, 2008). Interpretation of the MIP profiles indicate that residual VOC product (if present) is entrained in the upper surficial deposits and has not been released in sufficient quantities to remain mobile and transport to deep depths. The MIP profiles also suggest the presence of a dissolved-phase plume.

After completion of the MIP field screening, six core samples were collected at offsets (1 to 2 ft) to the completed MIP borings to quantify VOCs and their respective concentrations (MIP sample series on Figure B-11). Solid media samples were collected to characterize a range of electron capture detector (ECD) responses from the MIP both above and below the measured water table during this point in time. A comparison of the core sample and MIP result are presented in Appendix I of the VIRP. All but two (MIP-6 and MIP-12) of these sample locations fall in the fully saturated zone, and are, therefore, classified as being in the solid aquifer matrix. MIP-6 and MIP-12 fall in the 0-1ft high water table zone. However, all of the samples collected at these locations were at depths greater than 1 ft bgs. Therefore, these samples are also classified as being in the solid aquifer matrix.

AST and Facility Subsurface Samples. On 12 January 2009, subsurface solid matrix samples (designated as "SS" samples on Figure B-11) were collected from multiple locations beneath the facility foundation slab, from beneath the AST containment basin slab, and one sample adjacent to the subgrade site storm drain. Concrete cores were removed from the facility foundation prior to the collection of direct-push cores. Samples from beneath the AST containment basin were collected by first hand-excavating a trench adjacent to the containment basin wall to allow access under the basin slab with a hand auger. A hand auger was then advanced at an angle horizontally underneath the AST containment basin slab (a few feet to the basin interior from the outer wall) to a depth of 1.5 to 2 ft. Seven of the locations (SS-BLDG-1, SS-BLDG-5, SS-BLDG-6, SS-AST-1, SS-AST-2, SS-HA-1, and SS-HA-2) sampled are within the fully saturated zones, and are thus in the solid aquifer matrix. Two of the locations (SS-BLDG-2 and SS-BLDG-4) are in the 0-1 ft high water table zone. Samples were collected at 1 ft bgs at each of these locations. Thus, these two samples are considered to be at the high water table, and, thus, are being considered vadose zone soil. However, another sample was collected below 1 ft bgs at location SS-BLDG-2 and is, thus, considered to be in the solid aquifer matrix. The remaining sample (SS-BLDG-3) is in the 1-2 ft high water table zone. The sample collected from this location was collected at 1 ft bgs and is, thus, considered a vadose zone soil.

<u>Supplemental Subsurface and Groundwater Samples.</u> On March 10, 2009, 10 subsurface solid matrix samples were collected from the area north of the AST containment basin and at the furthest known extent of the VOC groundwater plume. The highest concentrations were observed in SO-3, which was collected in the truck spill area, just north of the AST containment



area. With the exception of SO-5, all of these sample locations were within the fully saturated zone. Therefore, the samples collected from these locations are considered to be in the solid aquifer matrix. SO-5 is in the 0-1 ft high water table zone; however, the sample collected at this location was at 5 ft bgs and is, thus, also in the solid aquifer matrix. In 2010, three soil samples were collected for estimating the permanganate natural oxidant demand. VOCs were also analyzed from one of these locations (SO-10), which was located next to the AST containment area.

AST Subgrade Investigation 2012. In July 2012, five locations in the AST containment area and four locations north of the AST containment area were sampled. Two samples were collected from each location at 1 and 2-ft bgs. All sample locations were within the fully saturated zone, and thus are classified as solid matrix samples.

#### B.5.2.2. Extent of Chlorinated Solvents

Figures B-12 and B-13 show the extent of total chlorinated ethenes and ethanes in these solid matrix samples, respectively. Where more than one sample was taken at a location, the highest total result is shown. The spatial distribution of chlorinated ethenes in the solid subsurface matrix exhibits a clear concentration gradient with the highest values occurring adjacent to the tanker truck spill location at the north end of the AST containment and the second highest concentrations toward the center of the AST containment area. The highest concentrations of chlorinated ethanes have been found in the AST containment area. Chlorinated solvent concentrations lessen with distance from the AST containment area. These areas of high concentrations are in the fully saturated zone indicating that it is comprised of the solid aquifer matrix (without any vadose zone soil).

#### B.5.2.3. Delineation

Delineation is only appropriate for the vadose zone soils. However, because much of the area of interest on the Site does not have vadose zone soils, the solid aquifer matrix is included on the delineation figures to aid in demonstrating delineation for the vadose zone soils. Figures B-12 and B-13 show that the solid matrix has been delineated to background in all directions, except for MW-11 on the west side. The only constituent detected in MW-11 is TCE at a concentration of 0.008 mg/kg, which is below the Type 1 RRS for trichloroethene (0.5 mg/kg). Thus, the solid matrix material has been delineated to the Type 1 RRS in all directions.

## B.6. Fate and Transport Summary

### B.6.1. Physical Fate and Transport

The primary parent constituents of interest at this Site are TCA, PCE, TCE and their breakdown products. In their product state, TCA, PCE and TCE are dense nonaqueous phase liquids (DNAPLs), which can be classified as either mobile or immobile. In the groundwater, they are found in a dissolved state. Thus, there are three states of interest: mobile DNAPL, immobile DNAPL and dissolved-phase. Following release at the surface, DNAPLs actively spread primarily due to gravity. Vertical migration continues through the vadose zone and aquifer until



the released DNAPL either loses continuity and becomes dispersed into isolated bodies (referred to as ganglia or globules) or reaches a less permeable layer where it either accumulates in a pool or flows semi-laterally along the layer. During downward migration, a globule trail of residual product and sorbed-phase contamination is left. The DNAPLs in this trail are incapable of further migration. Eventually, the entire DNAPL mass becomes immobile as the gravity head is lost.

When the groundwater comes in contact with a DNAPL, an aqueous phase plume is created and slowly fed by the sorbed, residual or pooled DNAPL. A residual-phase DNAPL source offers a large surface contact area (as compared to a pooled DNAPL) for contact with the groundwater, which results in a higher flux from the DNAPL state to the dissolved phase. This in turn results in an accelerated rate of DNAPL depletion. Once in the dissolved-phase, the solvents are transported in the water primarily along in the direction of the groundwater flow, but also horizontally (cross- or up-gradient) due to dispersion and diffusion. The aqueous phase plumes become elongated in the hydraulically down-gradient direction and are subject to attenuation process such as dispersion, sorption, matrix diffusion and biodegradation (discussed in the next section). All aqueous plumes will eventually reach a steady-state condition where the leading edge and side edges no longer expand. For this Site, the predominant groundwater flow is laterally downgradient (to the northeast). Additionally, the rapid rise and fall of the water table gives evidence that the groundwater provides for transport of dissolved phase chlorinated solvents to the ground surface (upward migration) through artesian flow and very shallow water table conditions. The water table fluctuation brings dissolved phase contaminants into contact with the solid matrix, resulting in the contaminant becoming entrained and sorbed in the solid matrix. Thus, the fluctuating groundwater table is another transport mechanism occurring at the Site. The groundwater could carry the solvents both horizontally and upwards toward the surface. This creates another potential exposure pathway (exposure to groundwater at the ground surface) that will be evaluated.

PCE has been measured as high as 3.9 mg/L at MW-3, which is next to the location of the spill. This concentration represents approximately 3.2% of the aqueous solubility. According to Cherry and Feenstra (1991), concentrations exceeding 1% of the compound's aqueous solubility indicates the possible presence of DNAPL. Thus, there may be a continuing flushing of PCE from the aquifer matrix near the spill site. An evaluation of the site conditions indicates that at this Site any DNAPLs have remained as a residual smearing in the upper portions of the subsurface and are not present as mobile "pools" of NAPL.

Data collected from groundwater and solid matrix samples at the Site support the lateral movement of dissolved-phase solvents by groundwater. Concentrations in the shallow solid matrix samples outside the vicinity of the AST containment area are attributable to the migration of the contaminants in the shallow fluctuating groundwater. The analytical results of the downgradient wells indicate that the plume has migrated to the northeast (in the direction of groundwater flow). The dissolved plume has been delineated in the downgradient direction and has not migrated off the Site.



#### B.6.2. Biological Degradation

Chlorinated solvents can also degrade biologically in the subsurface through reductive dechlorination. As mentioned previously, parent compounds (i.e., TCA and PCE) can be degraded biologically into daughter products (DCA, CA, TCE, DCE and VC). Four lines of evidence are presented in this section to demonstrate that reductive dechlorination is occurring.

#### B.6.2.1. Daughter Products and Time Series Graphs

The presence of the daughter products at the Site indicates that biological degradation is occurring. Additionally, time series figures (Figures B-9 and B-10) show the decrease of parent products and subsequent increase in daughter products over time.

#### B.6.2.2. MNA Parameters and Screening Method

Other parameters can also be used to indicate that biodegradation is occurring. During the October 2010 sampling event, additional analyses were conducted to provide evidence as to whether or not reductive dechlorination is occurring at the Site. Monitored Natural Attenuation (MNA) parameters were analyzed in samples collected from MW-3, MW-3D, MW-4, MW-5 and MW-8. The following parameters were analyzed by AES for each of these wells: alkalinity, sulfide, methane/ethane/ethene, chloride, ferrous iron, nitrate, nitrite, sulfate, and total organic carbon. These laboratory data sheets are presented in Appendix H of the VIRP. Parameters measured in the field during sample collection included: dissolved oxygen, temperature, pH and Redox potential. As a part of the microbial testing conducted by Microbe Inotech Laboratories, certain MNA parameters (pH, iron, ammonia, nitrite, nitrate, orthophosphate, sulfate and total organic carbon) were also analyzed for MW-3, MW-3D, MW-4 and MW-5.

As part of the process for determining whether anaerobic biodegradation is occurring, the Environmental Protection Agency (EPA) guidance document "Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater" (EPA, 1998) includes a scoring process using indicator parameters. Table B-3 shows the results of this screening at the Site using data collected during the October 2010 sampling event. Results are shown for the primary wells within the plume (MW-3/3D, MW-4, and MW-5), two side-gradient wells (MW-12 and MW-14), and an upgradient well (MW-8) and downgradient well (MW-16). Based on the October 2010 results, the wells within the plume show strong evidence that reductive dechlorination is occurring, while the wells up-, side- or down-gradient of the plume show limited or inadequate evidence that reductive dechlorination is occurring, which is not unexpected since there are low to non-detectable concentrations of chlorinated solvents in these wells. Results of MNA testing from the February 2012 sampling event continue to show that reductive dechloriantion is occurring (see Table 4 of the First Semiannual Progress Report).

#### B.6.2.3. Microbial Testing

Tables B-4 and B-5 show the results of microbial testing at two different laboratories. Microbe Inotech Laboratories performed the first type of testing, which was based on doing anaerobic (Table B-4) and aerobic (Table B-5) cultures using plate counting techniques. The laboratory data report can been found in Appendix H of the VIRP. The first column shows the density (number of colony forming units per mL) of anaerobic or aerobic organisms from each well.



The next several columns show the percent of different strains of organisms that were seen in the culture from each well. After identification of the strains, an endpoint assay was conducted on each strain. The strains were individually cultured with either TCA or TCE as the carbon source. The endpoint assay results (shown at the bottom of each table) show that the microorganisms present in MW-3D and MW-5 grow very well on TCA and TCE. Interestingly, the aerobic assay shows that the microorganisms in MW-5 also grow very well on TCA or TCE. This indicates the potential for multiple types of mechanisms to occur at the Site. This testing shows that degradation of TCA and TCE is favorable in MW-5 and to a lesser extent in MW-3D. One drawback of the plate counting technique is that it does not account for viable (live) cells and cultivation techniques can underestimate the total population.

Microbial Insights performed the second microbial testing technique, which is called CENSUS. The laboratory data report is presented in Appendix H of the VIRP. DNA is extracted from the groundwater samples and quantitative real-time polymerase chain reaction analysis is used to detect and quantify specific targets of interest (e.g., a specific microbial species). Samples from MW-3 and MW-5 were analyzed for *Dehalococcoides spp* and *Dehalobacter spp*, both of which are common dechlorinating bacteria. Dehalococcoides spp is the only known group of bacteria capable of completely degrading PCE to ethene. Dehalobacter spp is capable of dechlorinating PCE to cis-DCE and TCA to chloroethane. Thus, the presence of these species indicates that reductive dechlorination of PCE/TCE and TCA is favorable and likely occurring. The functional genes for Dehalococcoides spp were also analyzed to determine if the genes are present that are necessary for the different steps in the dechlorination chain. tceA reductase is the gene responsible for reducing TCE to DCE. Vinyl chloride reductase is the gene responsible for reducing vinyl chloride to ethene in multiple strains. Similarly, bvcA reductase is the gene responsible for vinyl chloride reducing to ethene, but only for a specific strain (BAV1) of Dehalococcoides spp. The absence of VCreductase and bvcA reductase would indicate that vinyl chloride would accumulate instead of further degrading to ethene. The results (Table B-4) show that these organisms and genes are present in both wells, but are significantly higher in MW-5. This indicates that the conditions are favorable and most likely occurring for reductive dechlorination of PCE to ethene and TCA to chloroethane in both of these wells, but is much more likely in MW-5.

Based on these results, conditions are favorable at the Site for reductive dechlorination, especially in the direction of MW-3 to MW-5.

#### B6.2.4. Modeling

Computer modeling using BIOCHLOR (see Appendix J of the VIRP) provides further evidence that reductive dechlorination is occurring. BIOCHLOR is a computer model that simulates natural attenuation of dissolved chlorinated solvents. In an effort to conservatively model site conditions, the model was calibrated using the empirical data collected from 2004 through 2007, prior to the EHC® injections. Therefore, the model assumes that there is no impact from the injections. Model simulations were conducted through 2030 to determine estimated concentrations at different wells throughout and beyond the plume. Please refer to Appendix J of the VIRP for more information. Results from the August 2012 sampling event are compared to the 2012 model results in Figures 5 and 6 of the Progress Report.



## **B.7. Potential Receptors and Exposure Pathways**

#### B.7.1. Setting

The Site includes a single-story manufacturing building, parking lots located to the east and north of the building, loading docks on the east side of the building, a gravel driveway to the east and south of the building and small grassy areas on the eastern and northern portions of the Site.

The adjoining properties are used for commercial purposes or are currently vacant. Properties immediately adjacent to the Site include the Parish Towing Company to the north, the Anderson Company to the east and vacant wooded properties to the South and West. The area surrounding the Site is zoned for heavy manufacturing, with some general agricultural zoned areas beyond the manufacturing zoning.

#### B.7.2. Human Health

The nearest residence is greater than 2000 feet northwest of the Site. The Site and surrounding area are serviced by public drinking water system provided by Dalton Utilities. According to a representative at Dalton Utilities, all of Whitfield County is served by the utility. The closest drinking water well is located 1.125 miles from the Site. In addition, as described in the Release Notification (Tri-State, 2004b): a) groundwater flow at the Site is to the northeast and this well is to the north-northwest, b) the Site and the well are approximately at the same elevation resulting in no head difference to drive groundwater toward the well, c) based on surface water drainages the Site and the well are cross-gradient, and d) there are multiple groundwater divides between the Site and the well that would prevent groundwater migration from the Site to the well. Thus, the well is not directly downgradient of the Site and the well is located in an area were public water is available. As the Site and surrounding areas are on public water, ingestion of groundwater is not a complete exposure pathway.

The other potential exposure pathways include exposure to vadose zone soil, source material in the solid aquifer matrix, dermal contact with groundwater and vapor intrusion. The potential human receptors include an industrial worker and construction/utility worker.

#### B.7.2.1. Industrial Worker

As the area impacted by the release is mostly covered by concrete and/or gravel, exposure to vadose zone soil or potential source material in the solid aquifer matrix is not a complete exposure pathway for the industrial worker. However, due to the shallow depth of groundwater, potential exposure of workers to groundwater at the surface will be evaluated under the VRP program for this Site; however, there is no or minimal pooling of water at the ground surface.

Some chlorinated compounds have been detected in wells inside the manufacturing building. Thus, there is a potential for a vapor intrusion pathway. The EPD has requested that vapor intrusion modeling be conducted for the Site. However, as discussed in Section 6.1 of the First Semiannual Progress Report, the evaluation of vapor intrusion is inappropriate for this Site as OSHA regulations take precedence for the protection of worker safety.

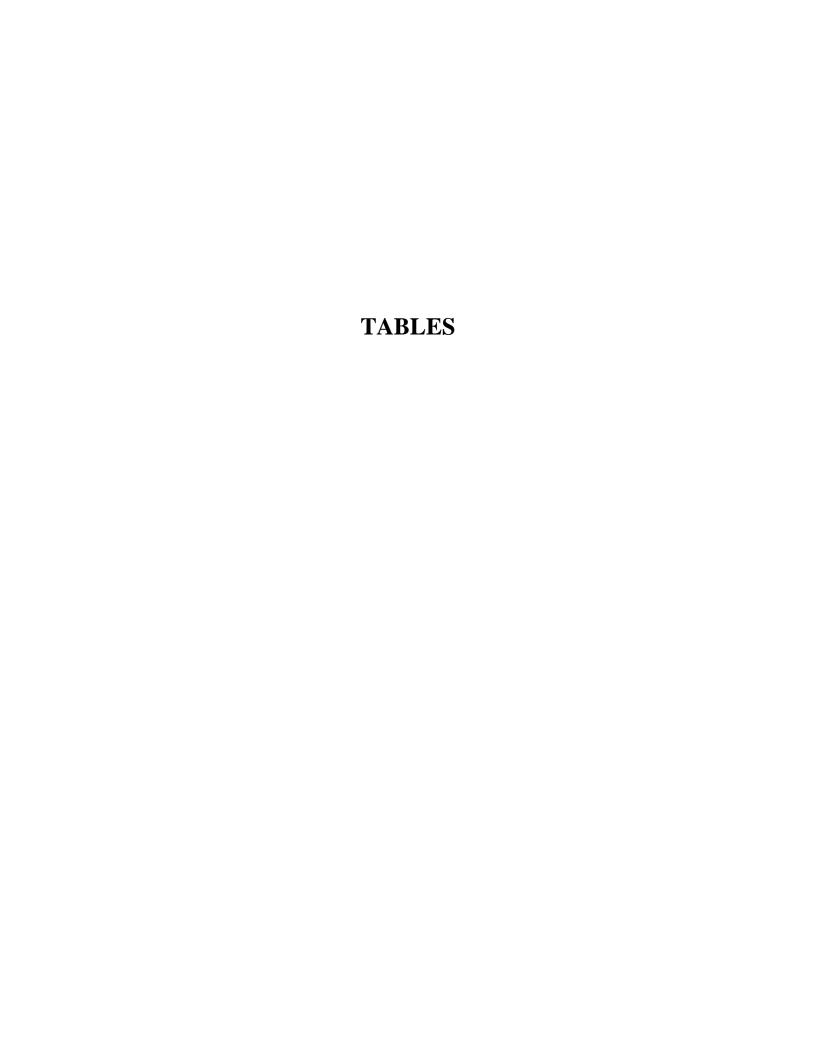


#### B.7.2.2. Construction and Utility Workers

The current and/or potential future human receptors are Construction and Utility Workers. No construction or utility activities are currently planned at the Site; however, it is possible that additional buildings could be constructed on the Site in the future. Construction or utility works may be exposed by physical contact with contaminated groundwater, vadose zone soils and/or the solid aquifer matrix. The potential risk to Construction or Utility Workers in physical contact with groundwater, vadose zone soils and/or source material in the solid aquifer matrix at the Site will be evaluated as a part of the VRP program.

#### B.7.3. Ecological

The area impacted by the release is mostly covered by concrete and/or gravel. There is continual traffic over this area and unloading operations. The area does not represent quality habitat as it lacks natural vegetative cover, structure, and diversity and is unlikely to ever have substantial vegetative cover due to ongoing maintenance activities. Disturbances from vehicles and facility operations have and will continue to disturb wildlife and cause animals to seek less frequently disturbed areas off the Site.



#### Table B-1. Analytical Results for Constituents Detected in Groundwater (mg/L)

																		Dichloro						
		Tetra		cis-1,2-	***	Total	1,1,1-	1,1-	CI.I	Total	1,1,2-	1,1-	1,2-				<i>a</i> ,	methane			Methyl			trans-1,2-
XX/~11	Data Campled	chloro	Trichloro	Dichloro	Vinyl	Chlorinated	Trichloroe	Dichloro	Chloro	Chlorinated	Trichloro	Dichloro	Dichloro	A4	D	Chlanafanna	Cyclo	(Methylene	Frank 11	F 112	cyclo	. V.J.	Talmana	Dichloroet
Well Type 1 RRS or D	Date Sampled I.	0.005	ethene 0.005	ethene 0.07	chloride 0.002	Ethenes	thane 0.2	ethane 4	ethane DL	Ethanes	0.005	0.007	ethane 0.005	Acetone 4	Benzene 0.005	Chloroform 0.08	hexane DL	chloride) 0.005	Freon-11	Freon-113 1000	hexane DL	o-Xylene 10	Toluene 1	hene 0.1
DPGW-1	3/10/09	0.24	0.25	0.058	0.016	0.564	0.08	0.038	<0.01	0.118	< 0.005	0.077	0.04	<0.05	< 0.005	0.061	<0.005	0.063	<0.005	<0.01	0.0055	< 0.005	< 0.005	0.0072
DPGW-2	3/10/09	0.0085	0.044	0.97	1.3	2.3225	0.03	0.24	0.61	0.88	< 0.005	0.22	0.33	1.8	< 0.005	0.029	< 0.005	0.077	< 0.005	0.064	< 0.005	< 0.005	< 0.005	0.085
DPGW-3	3/10/09	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	<0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<0.01	< 0.005	< 0.005	< 0.005	< 0.005
DPGW-4	3/10/09	< 0.005	0.0074	<0.005	<0.002	0.0074	<0.005	<0.005	<0.01	ND	<0.005	<0.005	< 0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	< 0.005	<0.005	<0.005
DPGW-5 DPGW-6	3/10/09 3/10/09	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.002 <0.002	ND ND	<0.005 <0.005	<0.005 <0.005	<0.01	ND ND	<0.005	<0.005 <0.005	<0.005 <0.005	<0.05	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.01 <0.01	<0.005 <0.005	<0.005 <0.005	<0.005	<0.005 <0.005
DPGW-7	3/10/09	< 0.005	< 0.005	<0.005	< 0.002	ND	< 0.005	<0.005	<0.01	ND	<0.005	< 0.005	< 0.005	<0.05	<0.005	<0.005	< 0.005	< 0.005	<0.005	<0.01	< 0.005	<0.005	<0.005	< 0.005
DPGW-8	3/10/09	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-1R	8/23/12	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-2	7/15/04	0.0424	0.0089	ND 0.0002	ND	0.0513	0.0039	ND	ND	0.0039	<0.005	ND 0.004	ND	<0.1	ND	ND 0.001		ND 0.001	ND 0.001				ND	ND 0.001
MW-2 MW-2	8/10/05 6/28/06	0.19 0.065	0.057	0.0082 <0.005	<b>0.003</b> <0.002	0.2582 0.075	0.0017 <0.005	0.017 0.004 J	<0.001	0.0187 0.004	<0.001	0.004 <0.005	<0.001 <0.005	<0.1 <0.1	<0.001	<0.001 <0.005		<0.001	<0.001 <0.005				<0.001	<0.001 <0.005
MW-2	3/7/07	< 0.005	<0.005	0.003	<0.002	0.073	< 0.005	< 0.005	<0.005	ND	<0.005	<0.005	<0.005	4.23	<0.005	<0.005		<0.005	<0.005				<0.005	<0.005
MW-2	6/25/07	< 0.005	< 0.005	0.004 J	0.061	0.065	< 0.005	< 0.005	< 0.005	ND	< 0.005	< 0.005	< 0.005	0.934	< 0.005	< 0.005		< 0.005	< 0.005				0.005	< 0.005
MW-2	9/13/07	ND	ND	ND	0.022	0.022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND		<u> </u>		0.005	ND
MW-2	4/8/08	ND 0.092	ND 0.061	ND 0.024	0.008	0.008	ND	ND	ND 10.01	ND	ND	ND	ND 40,005	ND 0.71	ND	ND	40.00°	ND	ND	-0.01	40.000	40.000	1.09	ND
MW-2 MW-2	10/14/08 6/22/09	<b>0.083</b> < 0.005	<b>0.061</b> <0.005	0.034 <0.005	0.17 0.0037	0.348 0.0037	<0.005 <0.005	<0.005 <0.005	<0.01 <0.01	ND ND	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	0.71	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.01 <0.01	<0.005 <0.005	<0.005 <0.005	<0.005	<0.005 <0.005
MW-2	10/8/10	0.069	0.096	0.033	0.0037	0.2055	<0.005	< 0.005	<0.01	ND ND	< 0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-2	2/8/12	< 0.005	< 0.005	0.0061	0.0025	0.0086	< 0.005	< 0.005	<0.01	ND	< 0.005	< 0.005	< 0.005	0.38	<0.005	<0.005	< 0.005	<0.005	<0.005	<0.01	<0.005	< 0.005	< 0.005	< 0.005
MW-2D	7/19/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.1	ND	ND		ND	ND				0.0041	ND
MW-2D	8/10/05	0.0037	0.018	<0.001	<0.001	0.0217	0.0024	<0.001	<0.001	0.0024	<0.001	<0.001	<0.001	<0.1	<0.001	<0.001		<0.001	<0.001				<0.001	<0.001
MW-2D MW-2D	6/28/06 3/7/07	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.002 <0.002	ND ND	<0.005 <0.005	<0.005 <0.005	<0.005	ND ND	<0.005	<0.005 <0.005	<0.005 <0.005	<0.1 0.138	<0.005 <0.005	<0.005 <0.005		<0.005 <0.005	<0.005 <0.005				<0.005 <0.005	<0.005 <0.005
MW-2D	6/25/07	< 0.005	<0.005	<0.005	<0.002	ND ND	<0.005	<0.005	<0.01	ND ND	< 0.005	<0.005	<0.005	<0.1	<0.005	<0.005		<0.005	<0.005				<0.005	<0.005
MW-2D	9/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND				ND	ND
MW-2D	10/14/08	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-2D	6/22/09	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	<0.01	ND	< 0.005	< 0.005	< 0.005	17	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-2D MW-2D	10/8/10 2/8/12	<0.005	<0.005 <0.005	<0.005 <0.005	<0.002 <0.002	ND ND	< 0.005	<0.005	<0.01	ND ND	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005 <0.005
MW-3	7/15/04	<0.005 <b>1.86</b>	6.15	0.123	0.002	8.1534	<0.005 <b>3.26</b>	<0.005 0.725	<0.01 ND	3.985	<0.005 <b>0.0217</b>	<0.005 <b>2.19</b>	<0.005 <b>0.86</b>	<0.1	<0.005 <b>0.0073</b>	<0.005 <b>1.2</b>	< 0.005	<0.005 <b>0.435</b>	<0.005 ND	< 0.01	< 0.005	< 0.005	<0.005	<b>0.116</b>
MW-3	8/10/05	2.6	5.2	0.14	< 0.005	7.94	2.6	0.723	< 0.005	3.01	< 0.005	1.7	0.45	<0.1	<0.05	0.64		0.45	<0.05				< 0.005	0.093
MW-3	6/26/06	2.92	4.71	0.197	0.004	7.831	1.85	0.349	< 0.005	2.199	0.016	1.67	0.495	< 0.1	< 0.005	0.643		0.494	0.01				< 0.005	0.1
MW-3	3/7/07	2.9	5.83	0.378	0.002	9.11	2.27	0.352	<0.01	2.622	0.018	1.99	1.15	<0.1	0.006	1.06		0.438	0.014				<0.005	0.104
MW-3 MW-3	6/25/07 9/14/07	2.62	5.53 5.87	0.59 0.58	0.005 0.003	8.745 9.333	1.72 1.43	0.433	<0.01 ND	2.153 1.81	0.024	3.06 2.55	0.771 0.781	<0.1 ND	0.008	1.14 0.964		0.725 0.183	0.019 ND				<0.005 ND	0.185 0.139
MW-3	4/9/08	2.41	4.1	0.636	0.003	7.157	0.7590001	0.38	ND ND	1.0920001	0.023	1.78	0.781	ND ND	0.007	0.758		0.172	ND ND				ND ND	0.139
MW-3	10/16/08	3.9	5.9	1.1	0.032	10.93	0.9300001	0.46	<0.01	1.39	0.021	3.1	0.7600001	<0.05	0.0074	1.1	0.014	0.024	0.02	0.49	0.0089	< 0.005	< 0.005	0.099
MW-3	6/23/09	3.2	4.6	0.84	0.05	8.69	0.79	0.31	< 0.01	1.1	0.021	2.4	0.77	< 0.05	< 0.005	0.99	< 0.005	0.066	0.01	0.31	0.0064	< 0.005	< 0.005	0.14
MW-3	10/7/10	3	4.5	1	0.11	8.61	0.59	0.31	<0.01	0.9	0.023	1.7	0.74	<0.05	0.0068	0.88	0.012	0.041	0.0057	0.22	0.0078	<0.005	<0.005	0.12
MW-3 MW-3	2/9/12 8/24/12	3 E 3.4	4.2 E 6.1	1.9 E 2.9	0.24 E 0.23	9.34 12.63	0.59 E 0.52	0.49 E 0.54	<0.01	1.08 1.06	0.024	2.6 E	1 E 1.3	<0.05	0.0076 0.013	1.1 E 1.8	<b>0.024</b> <0.005	0.066	0.0096 <0.005	0.24 E <0.01	0.012 6.80E-03	<0.005 0.0052	0.0052	0.17 0.18
MW-3D	7/19/04	3.32	4.72	0.0404	0.23	8.084	5.4	0.868	0.0022	6.2702	0.047	0.628	0.128	<0.03	0.0042	0.206	<0.00 <i>3</i>	0.038	0.0094	<b>₹0.01</b>	0.00E-03	0.0034	0.0072	0.0523
MW-3D	8/10/05	1.4	1.6	0.032	<0.02	3.032	2.1	0.16	<0.02	2.26	<0.02	0.29	0.067	<0.1	<0.02	0.094		<0.02	<0.02				<0.02	<0.02
MW-3D	6/26/06	1.21	1.25	0.034	0.004	2.498	1.15	0.126	< 0.005	1.276	< 0.005	0.244	0.068	< 0.1	< 0.005	0.082		< 0.005	< 0.005				< 0.005	0.017
MW-3D	3/7/07	0.94	1.22	0.04	0.002	2.20	1.74	0.122	<0.01	1.862	<0.005	0.19	0.103	<0.1	<0.005	0.09		<0.005	<0.005				<0.005	0.012
MW-3D MW-3D	6/26/07 9/14/07	0.694 0.675	1.04 0.9390001	0.09900001	0.006 0.005	1.84 1.92	1.16 1.12	0.151 0.161	<0.01 ND	1.311 1.281	<0.005 ND	0.256 0.292	0.06500001 0.087	<0.1 ND	<0.005 ND	0.095 0.086		<0.005 ND	<0.005 ND				<0.005 ND	0.02
MW-3D	4/9/08	0.073	0.886	0.304	0.003	1.841	0.762	0.161	ND	0.923	ND ND	0.232	0.037	ND ND	ND	0.095		ND	ND				ND ND	0.02
MW-3D	10/16/08	1.1	1.3	0.37	0.12	2.89	0.8	0.2	<0.01	1	< 0.005	0.59	0.13	< 0.05	< 0.005	0.13	< 0.005	< 0.005	< 0.005	0.097	< 0.005	< 0.005	< 0.005	0.033
MW-3D (Dup)	10/16/08	0.6	0.67	0.26	0.034	1.564	0.37	0.081	<0.01	0.451	<0.005	0.19	0.051	<0.05	<0.005	0.05	<0.005	< 0.005	<0.005	0.032	<0.005	<0.005	<0.005	0.017
MW-3D	6/23/09	0.93	0.9400001	0.18	0.047	2.10	0.55	0.12	<0.01	0.67	<0.005	0.31	0.12	<0.05	<0.005	0.13	<0.005	<0.005	<0.005	0.08400001	<0.005	<0.005	<0.005	0.022
MW-3D (Dup) MW-3D	6/23/09 10/7/10	0.86 1.1	0.86	0.19	0.058	1.97 2.78	0.53 0.53	0.13 0.15	<0.01	0.66 0.68	<0.005 <b>0.0065</b>	0.29 0.52	0.13	<0.05	<0.005 <0.005	0.13 0.21	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	0.098	<0.005 <0.005	<0.005 <0.005	<0.005	0.023 0.031
MW-3D	2/8/12	0.93	1.3	0.41	0.077	2.46	0.33	0.13	<0.01	0.65	< 0.005	0.52	0.16	<0.05	< 0.005	0.21	< 0.005	<0.005	<0.005	0.07	0.005	<0.005	<0.005	0.031
MW-3D (Dup)	2/8/12	0.99	1.1	0.46	0.12	2.67	0.48	0.19	<0.01	0.67	0.0056	0.6	0.16	<0.05	< 0.005	0.18	<0.005	<0.005	<0.005	0.08000001	0.0055	< 0.005	< 0.005	0.034
MW-3D	8/24/12	0.88	1.1	0.51	0.1	2.59	0.3	0.18	< 0.01	0.48	0.0079	0.46	0.24	< 0.05	< 0.005	0.23	< 0.005	0.014	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	0.033
MW-3D (Dup)	8/24/12	0.9	1.1	0.45	0.11	2.56	0.25	0.18	<0.01	0.43	0.0075	0.49	0.19	<0.05	<0.005	0.23	<0.005	0.014	<0.005	<0.01	<0.005	<0.005	<0.005	0.032
MW-3B	8/24/12	0.52	0.37	0.15	0.061	1.10	0.04	0.075	< 0.01	0.115	< 0.005	0.17	0.04	< 0.05	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	0.0089



#### Table B-1. Analytical Results for Constituents Detected in Groundwater (mg/L)

				_						iyiicai Kesuit					, <del></del>			I IV. I. I						
		<b>7</b> 5. 4				<b>7</b>				T ( )	110		1.0					Dichloro			35.0.1			1
		Tetra		cis-1,2-		Total	1,1,1-	1,1-		Total	1,1,2-	1,1-	1,2-					methane			Methyl			trans-1,2-
		chloro	Trichloro	Dichloro	Vinyl	Chlorinated	Trichloroe	Dichloro	Chloro	Chlorinated	Trichloro	Dichloro	Dichloro				Cyclo	(Methylene			cyclo			Dichloroet
Well	Date Sampled	ethene	ethene	ethene	chloride	Ethenes	thane	ethane	ethane	Ethanes	ethane	ethene	ethane	Acetone	Benzene	Chloroform	hexane	chloride)	Freon-11	Freon-113	hexane	o-Xylene	Toluene	hene
Type 1 RRS or	DL	0.005	0.005	0.07	0.002		0.2	4	DL		0.005	0.007	0.005	4	0.005	0.08	DL	0.005	2	1000	DL	10	1	0.1
MW-4	8/10/05	0.064	0.52	< 0.005	< 0.005	0.584	0.028	< 0.005	< 0.005	0.028	< 0.005	0.0078	< 0.005	< 0.1	< 0.005	0.0056		< 0.005	< 0.005				< 0.005	< 0.005
MW-4	6/27/06	0.157	0.615	< 0.005	< 0.002	0.772	0.024	< 0.005	< 0.005	0.024	< 0.005	0.017	< 0.005	< 0.1	< 0.005	0.005		< 0.005	< 0.005				< 0.005	< 0.005
MW-4	3/7/07	0.049	0.138	0.139	< 0.002	0.326	< 0.005	< 0.005	< 0.01	ND	< 0.005	0.006	< 0.005	6.3	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
MW-4	6/25/07	< 0.005	< 0.005	0.832	0.003	0.835	< 0.005	0.008	< 0.01	0.008	< 0.005	0.016	< 0.005	2.74	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
MW-4	9/14/07	ND	0.005	0.846	0.055	0.906	ND	0.014	ND	0.014	ND	0.034	0.009	ND	ND	ND		ND	ND				ND	ND
MW-4	4/8/08	0.01	0.018	0.244	0.022	0.294	ND	ND	ND	ND	ND	0.006	ND	ND	ND	ND		ND	ND				ND	ND
MW-4	10/15/08	0.013	0.034	0.7600001	0.3	1.11	< 0.005	0.011	< 0.01	0.011	< 0.005	0.022	0.0069	< 0.05	<0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-4	6/23/09	0.03	0.064	0.12	0.12	0.334	< 0.005	< 0.005	<0.01	ND	<0.005	0.0054	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	<0.005	< 0.005	< 0.005
MW-4	10/12/10	0.019	0.086	0.057	0.059	0.221	< 0.005	0.0062	<0.01	0.0062	<0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	<0.005	< 0.005	< 0.005
MW-4	2/8/12	0.017	0.041	0.033	0.011	0.102	< 0.005	< 0.005	<0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	<0.005	< 0.005	< 0.005	< 0.005	< 0.005	<0.01	< 0.005	<0.005	< 0.005	< 0.005
MW-4	8/23/12	< 0.005	0.013	0.012	0.0058	0.0308	< 0.005	< 0.005	<0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-5	8/10/05	0.016	0.56	0.093	< 0.005	0.669	0.44	0.34	< 0.005	0.78	0.0082	0.85	0.32	<0.03	< 0.005	0.34	Q0.003	<0.005	< 0.005	Q0.01	<b>VO.003</b>	Q0.003	<0.005	0.051
		0.010	1.37					0.34		0.78									<0.005	+				
MW-5	6/27/06			0.141	0.008	1.596	0.511		<0.005		0.012	1.3	0.388	<0.01	0.005	0.361		<0.005		+			<0.005	0.086
MW-5	3/6/07	0.085	1.07	1 22	0.004	2.159	<0.005	0.58	<0.01	0.58	0.012	1.87	0.781	<0.01	0.005	0.527		<0.005	<0.005	+ +		+	<0.005	0.084
MW-5	6/25/07	0.015	0.325	2.32	0.007	2.667	0.309	0.483	<0.01	0.792	0.011	1.5	0.355	<0.01	0.006	0.332		<0.005	<0.005	+ +		1	<0.005	0.11
MW-5	9/13/07	ND	0.066	2.78	0.005	2.851	0.232	0.587	ND	0.819	0.011	1.72	0.502	ND	0.005	0.252		0.009	ND	+		-	ND	0.097
MW-5	4/8/08	0.008	0.079	2.69	0.9310001	3.708	0.043	0.182	0.358	0.583	ND	0.84	0.495	ND 0.52	0.005	0.252	0.005	0.048	ND	0.0500000	0.00=	0.007	ND	0.076
MW-5	10/15/08	0.011	0.05	0.28	0.41	0.751	0.037	0.15	0.56	0.747	< 0.005	0.19	0.34	0.53	0.006	0.039	< 0.005	0.05	< 0.005	0.07600001	< 0.005	< 0.005	< 0.005	0.1
MW-5	6/22/09	<0.005	<0.005	<0.005	0.026	0.026	<0.005	0.017	0.25	0.267	<0.005	<0.005	0.085	0.48	<0.005	<0.005	<0.005	0.028	<0.005	<0.01	<0.005	<0.005	<0.005	0.041
MW-5	10/7/10	< 0.005	< 0.005	< 0.005	0.011	0.011	< 0.005	0.0051	0.24	0.2451	< 0.005	< 0.005	0.016	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	0.018
MW-5	2/9/12	< 0.005	< 0.005	< 0.005	0.011	0.011	< 0.005	0.023	0.2	0.223	< 0.005	< 0.005	0.017	< 0.05	< 0.005	< 0.005	< 0.005	0.009500001	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	0.024
MW-5	8/23/12	< 0.005	< 0.005	< 0.005	0.0044	0.0044	< 0.005	0.025	0.17	0.195	< 0.005	< 0.005	0.0085	< 0.05	< 0.005	< 0.005	< 0.005	0.0061	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	0.014
MW-6	8/10/05	0.004	0.017	< 0.001	< 0.001	0.021	0.13	0.022	< 0.001	0.152	< 0.001	0.076	0.02	< 0.01	< 0.001	< 0.001		0.0017	0.0012				< 0.001	0.0014
MW-6	6/27/06	< 0.005	< 0.005	< 0.005	< 0.002	ND	0.118	0.024	< 0.005	0.142	< 0.005	0.113	0.023	< 0.01	< 0.005	0.057		< 0.005	< 0.005				< 0.005	< 0.005
MW-6	3/6/07	< 0.005	< 0.005	< 0.005	< 0.002	ND	0.181	0.043	< 0.01	0.224	< 0.005	0.174	0.058	< 0.01	< 0.005	0.107		< 0.005	< 0.005				< 0.005	0.005
MW-6	6/25/07	< 0.005	< 0.005	< 0.005	< 0.002	ND	0.106	0.033	< 0.01	0.139	< 0.005	0.186	0.028	< 0.01	< 0.005	0.078		< 0.005	< 0.005				< 0.005	0.006
MW-6	4/9/08	ND	0.006	ND	ND	0.006	0.136	0.065	ND	0.201	ND	0.208	0.075	ND	ND	0.136		ND	ND				ND	0.01
MW-6	10/15/08	< 0.005	0.0082	< 0.005	0.0022	0.0104	0.11	0.04	< 0.01	0.15	< 0.005	0.27	0.035	< 0.05	< 0.005	0.085	< 0.005	< 0.005	< 0.005	0.045	< 0.005	< 0.005	< 0.005	0.011
MW-6	6/23/09	0.0057	0.018	0.011	0.014	0.0487	0.072	0.047	< 0.01	0.119	< 0.005	0.12	0.036	< 0.05	< 0.005	0.067	< 0.005	< 0.005	< 0.005	0.035	< 0.005	< 0.005	< 0.005	0.011
MW-6	10/8/10	< 0.005	0.036	0.0055	0.0056	0.0471	0.037	0.015	< 0.01	0.052	< 0.005	0.076	0.014	< 0.05	< 0.005	0.025	< 0.005	< 0.005	< 0.005	0.017	< 0.005	< 0.005	< 0.005	0.0052
MW-6	2/8/12	< 0.005	0.041	0.006	0.0028	0.0498	0.026	0.019	< 0.01	0.045	< 0.005	0.11	0.013	< 0.05	< 0.005	0.024	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	0.0067
MW-7	6/27/06	0.905	0.107	0.067	0.005	1.084	0.039	0.02	< 0.005	0.059	< 0.005	0.057	0.012	< 0.01	< 0.005	0.026		< 0.005	< 0.005				< 0.005	< 0.005
MW-7	3/7/07	0.788	0.084	0.085	0.006	0.963	0.031	0.014	<0.01	0.045	< 0.005	0.026	0.012	<0.01	<0.005	0.018		< 0.005	< 0.005				< 0.005	< 0.005
MW-7	6/26/07	0.678	0.129	0.137	0.026	0.97	0.031	0.014	<0.01	0.043	<0.005	0.062	0.009	<0.01	<0.005	0.018		<0.005	< 0.005				0.003 0.004 J	<0.005
MW-7	9/14/07	1.13	0.786	0.137	0.020	2.278	0.04	0.022	ND	0.354	ND	0.354	0.067	ND	ND	0.119		ND	ND				0.004 3	0.019
MW-7	4/8/08	1.06	0.786	0.335	0.104	1.725	0.039	0.082	ND	0.063	ND	0.334	0.034	ND	ND	0.067		0.007	ND				ND	0.019
MW-7	10/15/08	2	0.220	0.52	0.104	3.46	0.039	0.024	<0.01	0.003	<0.005	0.108	0.034	<0.05	< 0.005	0.007	< 0.005	0.026	< 0.005	0.13	< 0.005	< 0.005	<0.005	0.009
MW-7	6/23/09	1.3	0.19	0.32	0.27	1.98	0.18	0.093	<0.01	0.029	<0.005	0.048	0.078		< 0.005		< 0.005	<0.005	< 0.005	<0.01	<0.005	< 0.005	<0.005	< 0.02
MW-7	10/8/10	1.9	0.19	0.24	0.083	2.483	0.01	0.019	<0.01	0.029	<0.005	0.048	0.0091	0.15 <0.05	< 0.005	0.021 0.025	< 0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
			0.26							0.048		0.042												
MW-7 (Dup)	10/8/10	2.2		0.22	0.13	2.74	<0.005	0.02	<0.01		<0.005		<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-7	2/9/12	1.7	0.23	0.32	0.15	2.4	< 0.005	0.016	<0.01	0.016	<0.005	0.034	< 0.005	<0.05	<0.005	<0.005	< 0.005	<0.005	<0.005	< 0.01	< 0.005	< 0.005	<0.005	<0.005
MW-8	6/28/06	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.005	ND	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005		<0.005	<0.005			ļ	<0.005	<0.005
MW-8	3/6/07	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005		<0.005	<0.005			ļ	<0.005	<0.005
MW-8	6/25/07	< 0.005	< 0.005	<0.005	<0.002	ND	< 0.005	< 0.005	<0.01	ND	< 0.005	< 0.005	< 0.005	<0.01	< 0.005	< 0.005		< 0.005	< 0.005	1		1	< 0.005	< 0.005
MW-8	9/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ļ	ND	ND	1		<u> </u>	ND	ND
MW-8	4/8/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<u> </u>	ND	ND	1		ļ	ND	ND
MW-8	10/14/08	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-8	6/22/09	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	0.19	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-8	10/7/10	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-8	2/8/12	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-9	6/29/2006	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
MW-9	3/6/07	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
MW-9	6/25/07	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
MW-9	6/29/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND				ND	ND
MW-9	9/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND				ND	ND
MW-9	4/8/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND				ND	ND
MW-9	10/15/08	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-9	6/22/09	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	<0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-9	10/7/10	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	<0.01	ND	<0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-9	2/8/12	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	<0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<0.01	< 0.005	< 0.005	< 0.005	< 0.005
	2, 3, 12	.0.000	10.000	10.000	10.002	1,2	.0.000	.0.000	10.01	1,2	.0.000	.0.005	.0.000	10.00	.0.000	10.000	.0.005	10.000	.0.000	10.01	.0.000	.0.000	.0.000	.0.000



#### Table B-1. Analytical Results for Constituents Detected in Groundwater (mg/L)

Martist   Mart																			Dichloro						
Math			Tetra		cis-1,2-		Total	1,1,1-	1,1-		Total	1,1,2-	1,1-	1,2-					methane			Methyl			trans-1,2-
			chloro	Trichloro	Dichloro	Vinyl	Chlorinated	Trichloroe	Dichloro	Chloro	Chlorinated	Trichloro	Dichloro	Dichloro				Cyclo	(Methylene			cyclo			Dichloroet
March   1965							Ethenes		ethane		Ethanes				Acetone			hexane		Freon-11		hexane	o-Xylene	Toluene	
West   Section															-			DL			1000	DL	10	1	
Wilson																									
West																									
Mary																									
March   1966																									
West   Column   Col																		<0.005	,		<0.01	<0.005	<0.005		
West   1							-																		
																									_
West   1		2/7/12	< 0.005	0.049		< 0.002		< 0.005	< 0.005	< 0.01	ND	< 0.005		< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	
Minustration   Minu	MW-11	7/8/06	< 0.005	0.005	0.007	< 0.002	0.012	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.1	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
West	MW-11	3/7/07	< 0.005	0.006	0.005	< 0.002	0.011	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.1	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
Wilson   W	MW-11	6/26/07	< 0.005	< 0.005	0.005	< 0.002	0.005	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.1	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
	MW-11	9/14/07	ND	ND	0.005	ND	0.005	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND				ND	
West   1												ND							,						
Wilson   W	\ 1/																								
Windle   1971   1971   1972   1988																									
No.   Control																									
Wiley   1979																		<0.005			<0.01	<0.005	<0.005		
Mary   12																									
Mary   12   194897   No																									
Mary																									
Mary   1947																									
Windshift   Wind																	· ·	< 0.005	,		< 0.01	< 0.005	< 0.005		
Windle   100   1																									
Winds   Graphs   Gr			< 0.005	0.0068	0.0076	< 0.002		< 0.005		< 0.01		< 0.005		< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		< 0.005	< 0.005		
May   1	MW-12	2/7/12	< 0.005	0.0091	0.014	< 0.002	0.0231	< 0.005	0.0071	< 0.01	0.0071	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
May   13	MW-13	6/28/06	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.1	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
Wi-13   Wi-1	MW-13	3/6/07	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.1	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
Maria   4808	MW-13	6/25/07	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.1	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
Maria   1015/108   -0.005	MW-13											ND													
Martia   672/99   c0,005   c0,005   c0,005   c0,002   c0,005   c																									
MW-13																									
MW-14   G/2976   C-0.005	\ 1/																								
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	\ 1/						·																		
																		\0.003			<b>\0.01</b>	<0.003	<b>₹0.003</b>		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$																									
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$																									
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	MW-14																								
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$																			,						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	MW-14	10/15/08	< 0.005	< 0.005			ND				ND	< 0.005						< 0.005	< 0.005	1	< 0.01	< 0.005	< 0.005	< 0.005	
	MW-14	6/22/09	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
	MW-14	10/12/10	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<0.01	< 0.005	< 0.005	< 0.005	< 0.005
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	MW-14	2/8/12	<0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	<0.005	<0.005	< 0.005	<0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
	MW-15																								
	MW-15																								
																	< 0.005								
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$																	0.000								
$\frac{60}{100} = \frac{60}{100} = 6$																		.0.007			0.01	.0.007	.0.007		
$\frac{\text{MW-}15}{\text{MW-}15} \qquad \frac{10/12/10}{\text{V}} \qquad \frac{\text{0.005}}{\text{0.0089}} \qquad 0.022 \qquad \frac{\textbf{0.0059}}{\textbf{0.0089}} \qquad 0.0368 \qquad 0.0089 \qquad \frac{\text{0.005}}{\text{0.005}} \qquad 0.0089 \qquad \frac{\text{0.005}}{\text{0.001}} \qquad 0.0089 \qquad 0.0089 \qquad \frac{\text{0.005}}{\text{0.005}} \qquad 0.0089 \qquad 0.0$																									
MW-15 2/8/12 <0.005 <b>0.021</b> 0.037 <b>0.0082</b> 0.0662 0.0053 0.0057 <0.01 0.011 <0.005 <b>0.019</b> <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0																					1				
																									+
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$																				1					
	1V1 VV - 1 J	0123112	<b>\U.UU</b> 3	0.01/	0.027	0.0034	0.0494	<0.003	<0.003	<b>\U.U1</b>	ND	\U.UU3	0.010	<b>\0.003</b>	<b>\0.03</b>	\U.UU3	0.003	\U.UU3	\0.003	\U.UU3	<b>\0.01</b>	<0.003	<0.003	<b>\0.003</b>	\U.UU3



#### Table B-1. Analytical Results for Constituents Detected in Groundwater (mg/L)

										J				ounawater (										
																		Dichloro						
		Tetra		cis-1,2-		Total	1,1,1-	1,1-		Total	1,1,2-	1,1-	1,2-					methane			Methyl			trans-1,2-
		chloro	Trichloro	Dichloro	Vinyl	Chlorinated	Trichloroe	Dichloro	Chloro	Chlorinated	Trichloro	Dichloro	Dichloro				Cvclo	(Methylene			cyclo			Dichloroet
Well	Date Sampled	ethene	ethene	ethene	chloride	Ethenes	thane	ethane	ethane	Ethanes	ethane	ethene	ethane	Acetone	Benzene	Chloroform	hexane	chloride)	Freon-11	Freon-113	hexane	o-Xylene	Toluene	hene
Type 1 RRS or D	L	0.005	0.005	0.07	0.002		0.2	4	DL		0.005	0.007	0.005	4	0.005	0.08	DL	0.005	2	1000	DL	10	1	0.1
MW-16	6/29/06	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.1	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
MW-16	3/6/07	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.1	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
MW-16	6/25/07	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.1	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
MW-16	9/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND				ND	ND
MW-16	4/9/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND				ND	ND
MW-16	10/14/08	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-16	6/22/09	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-16	10/8/10	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-16	2/8/12	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-16	8/23/12	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-17	3/6/07	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.1	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
MW-17	6/26/07	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.1	< 0.005	< 0.005		< 0.005	< 0.005				< 0.005	< 0.005
MW-17	9/14/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND				ND	ND
MW-17	4/9/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND				ND	ND
MW-17	10/16/08	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-17	6/23/09	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-17	10/8/10	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
MW-17	2/7/12	< 0.005	< 0.005	< 0.005	< 0.002	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005

ND: Not detected

Note: Detection Limits from September 2007 and April 2008 are not available. If obtained, they will be added in a future report.

Result greater than RRS, or DL if no RRS

DL: Detection limit



Table B-2. Analytical Results for Constituents Detected in Subsurface Solids (mg/kg)

					. 10		T ( )	111			T ( )	110		124	1.0	1.0	1.0	1.0	105				
	Depth	Date	Tetrachlor	Trichloro	cis-1,2- Dichloro	Vinyl	Total Chlorinated	1,1,1- Trichloro	1,1- Dichloro	Chloro	Total Chlorinated	1,1,2- Trichloro	1,1- Dichloro	1,2,4- Trimethyl	1,2- Dibromo	1,2- Dichloro	1,2- Dichloro	1,2- Dichloro	1,3,5- Trimethyl	1,4-	2-Butanone	4-Methyl-2-	
Sample ID	(ft bgs)	Sampled	oethene	ethene	ethene	chloride	Ethenes	ethane	ethane	ethane	Ethanes	ethane	ethene	benzene	ethane	benzene	ethane	propane	benzene	Dioxane	(MEK)	pentanone	Acetone
Solid Aquifer Mat		9/0/05	<0.0054	<0.0054	<0.0054		ND	z0.0054			ND		<0.0054	<0.0054	ı		z0.0054	-5.1	<0.0054				
GP001 GP002	6-8 4-6	8/9/05 8/9/05	<0.0054	<0.0054 <0.0049	<0.0054 <0.0049		ND ND	<0.0054 <0.0049			ND ND		<0.0054	<0.0054 <0.0049			<0.0054	<5.4 <4.9	<0.0054				
GP003	2-4	8/9/05	<0.0048	<0.0048	<0.0048		ND	<0.0048			ND		<0.0048	<0.0048			<0.0048	<4.8	<0.0048				
GP004	4-6	8/9/05	< 0.004	< 0.004	< 0.004		ND	< 0.004			ND		< 0.004	< 0.004			< 0.004	<4	< 0.004				
GP005	4-6	8/9/05	<0.0045	<0.0045	< 0.0045		ND	<0.0045			ND		<0.0045	<0.0045			<0.0045	<4.5	<0.0045				
GP006 GP009	2-4 2-4	8/9/05 8/10/05	<0.0046	<0.0046 <0.0043	<0.0046 <0.0043		ND ND	<0.0046 <0.0043			ND ND		<0.0046	<0.0046 <0.0043			<0.0046	<4.6 <4.3	<0.0046				
GP010	4-6	8/10/05	0.13	0.33	< 0.067		0.46	0.15			0.15		0.093	< 0.0043			< 0.067	<4.3 <67	<0.067				
GP011	2-4	8/10/05	0.13	0.63	< 0.061		0.76	< 0.061			ND		0.099	< 0.061			< 0.061	<61	< 0.061				
GP012	4-6	8/10/05	1.5	1.8	0.56		3.86	0.41			0.41		0.72	< 0.063			0.15	150	< 0.063				
GP013	4-6	8/10/05	< 0.0052	<0.0052	<0.0052	0.025	ND	<0.0052	0.10	0.012	ND	0.020	<0.0052	<0.0052	0.006	0.006	<0.0052	<5.2	<0.0052	0.400.02	0.06	0.012	0.12
MIP-1 MIP-1	5	10/16/08 10/16/08	0.036	0.02	2.2 <0.0067	0.025 <0.013	29.225 0.056	0.2 <0.0067	0.18 <0.0067	<0.012	0.38 ND	0.029 <0.0067	0.35 <0.0067	NA NA	<0.006 <0.0067	<0.006 <0.0067	0.36 <0.0067	<0.006 <0.0067	NA NA	<8.40E-02 <0.2	<0.06 <0.067	<0.012 <0.013	<0.12 <0.13
MIP-1	9	10/16/08	0.034	0.0052	0.018	0.015	0.0622	<0.0029	<0.0029	<0.0058	ND	<0.0029	<0.0029	NA	<0.0029	<0.0029	<0.0029	<0.0029	NA	<8.80E-02	<0.029	<0.0058	<0.058
MIP-5	3	10/16/08	< 0.0022	<0.0022	<0.0022	<0.0045	ND	< 0.0022	< 0.0022	< 0.0045	ND	< 0.0022	< 0.0022	NA	< 0.0022	< 0.0022	< 0.0022	< 0.0022	NA	< 0.067	< 0.022	< 0.0045	< 0.045
MIP-6	6	10/16/08	< 0.008	<0.008	< 0.008	< 0.016	ND	< 0.008	< 0.008	< 0.016	ND	< 0.008	< 0.008	NA	< 0.008	< 0.008	< 0.008	< 0.008	NA	< 0.24	< 0.08	< 0.016	< 0.16
MIP-8 MIP-8	2	10/16/08	0.37	0.2	0.068 <0.007	0.04 <0.014	2.878 0.291	0.014 <0.007	0.031 <0.007	<0.0026	0.045 ND	0.0048 <0.007	0.21 <0.007	NA NA	<0.0013	<0.0013	0.14 <0.007	<0.0013	NA NA	<0.039 <0.21	<0.013	<0.0026 <0.014	0.54 <0.14
MIP-8 MIP-12	12	10/16/08	0.091	0.2	<0.007	0.0056	1.1156	0.13	0.018	<0.014	0.148	0.0022	0.21	NA NA	<0.007	<0.007	0.038	<0.007	NA NA	<0.21	<0.07	<0.014	<0.14
MIP-12	4	10/16/08	<0.0069	<0.0069	<0.0069	< 0.014	ND	<0.0069	<0.0069	< 0.014	ND	< 0.0069	<0.0069	NA	<0.0069	<0.0069	< 0.0069	<0.0069	NA	<0.21	<0.069	< 0.014	<0.14
MIP-12	6	10/16/08	< 0.0076	< 0.0076	< 0.0076	< 0.015	ND	< 0.0076	< 0.0076	< 0.015	ND	< 0.0076	< 0.0076	NA	< 0.0076	< 0.0076	0.026	< 0.0076	NA	< 0.23	< 0.076	< 0.015	< 0.15
MIP-13	1	10/16/08	0.0087	<0.0038	0.0068	0.54	0.5555	< 0.0038	0.12	0.42	0.54	<0.0038	<0.0038	NA	<0.0038	<0.0038	0.052	< 0.0038	NA	1.4	0.12	0.0098	< 0.076
MIP-13 MIP-13	3	10/16/08	0.0069	0.0093 2.6	0.058	0.79 0.66	0.8642 6.76	0.0034	0.22 0.44	0.14	0.3634 0.89	<0.0027 0.017	0.047 1.8	NA NA	<0.0027 <0.0027	<0.0027 <0.0027	0.046 0.78	<0.0027 <0.0027	NA NA	0.510 0.64	<0.027 <0.027	<0.0053 <0.0054	<0.053 <0.054
MIP-19	1	10/16/08	<0.0059	<0.0059	< 0.0059	<0.012	0.70 ND	< 0.0059	<0.0059	<0.012	ND	<0.0059	<0.0059	NA NA	<0.0027	<0.0027	<0.0059	<0.0027	NA NA	<0.18	<0.027	<0.0034	<0.034
MIP-19	3	10/16/08	< 0.0071	< 0.0071	< 0.0071	< 0.014	ND	< 0.0071	< 0.0071	< 0.014	ND	< 0.0071	< 0.0071	NA	< 0.0071	< 0.0071	< 0.0071	< 0.0071	NA	<0.21	< 0.071	< 0.014	<0.14
MW-1D	8-10	7/13/04	< 0.0019	< 0.0019	< 0.0019	< 0.0019	ND	< 0.0019	< 0.0019	< 0.0019	ND	< 0.0019	< 0.0019	< 0.0019	< 0.00184	< 0.0019	< 0.0019	<1.9	< 0.00184	NA	< 0.0461	< 0.00921	< 0.0461
MW-2D	8-10	7/13/04	<0.0017	<0.0017	< 0.0017	< 0.0017	ND	<0.0017	< 0.0017	< 0.0017	ND	<0.0017	<0.0017	< 0.0017	<0.0017	<0.0017	<0.0017	<1.7	< 0.0017	NA	<0.0428	<0.00856	<0.0428
MW-3 MW-3D	8-10 13-15	7/14/04 7/14/04	0.0191 2.44	0.0138 1.31	<0.0018 <0.134	<0.0018	0.0329 3.75	0.0312 0.416	<0.0018	<0.0018	0.0312 0.416	<0.0018	0.0025 <0.134	<0.0018 <0.134	<0.0018 <0.134	<0.0018 <0.134	0.0067 <0.134	6.7 <134	<0.0018	NA NA	<0.0448	<0.00895 <0.67	<0.0448
MW-8	8-10	6/27/06	< 0.005	<0.005	<0.005	<0.01	ND	< 0.005	<0.005	<0.134	ND	<0.005	< 0.005	<0.005	<0.005	<0.005	<0.005	<5	< 0.005	NA	<0.1	<0.05	<0.1
MW-9	8-10	6/27/06	< 0.005	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<5	< 0.005	NA	<0.1	< 0.05	<0.1
MW-10	5-10	7/7/06	< 0.005	0.006	< 0.005	< 0.01	0.006	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<5	< 0.005	NA	< 0.1	< 0.05	<0.1
MW-11 MW-12	5-10 5-10	7/6/06 7/6/06	<0.005 <0.005	0.008 <0.005	0.005 <0.005	<0.01	0.013 ND	<0.005 <0.005	<0.005	<0.01	ND ND	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<5 <5	<0.005 <0.005	NA NA	<0.1	<0.05 <0.05	<0.1
MW-12 MW-13	13-15	6/27/06	<0.005	<0.005	<0.005	<0.01	ND ND	<0.005	<0.005	<0.01	ND ND	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	NA NA	<0.1	<0.05	<0.1 <0.1
MW-14	13-15	6/27/06	< 0.005	< 0.005	< 0.005	<0.01	ND	< 0.005	< 0.005	<0.01	ND	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<5	< 0.005	NA	<0.1	< 0.05	<0.1
MW-15	8-10	6/28/06	< 0.005	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	0.215	< 0.005	< 0.005	< 0.005	<5	0.074	NA	<0.1	< 0.05	<0.1
MW-16	8-10	6/27/06	< 0.005	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.01	ND	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<5	< 0.005	NA	<0.1	< 0.05	< 0.1
SO-2 SO-2	3	3/10/09	<0.0029	<0.0029	0.003	0.33	0.333	<0.0029	0.42	0.023	0.443	<0.0029	<0.0029	NA NA	<0.0029 <0.0029	<0.0029 <0.0029	0.0069	<0.0029	NA NA	NA NA	<0.029	<0.0059	<0.059
SO-2 SO-3	1	3/10/09	0.098 2700	62	1.1 7.6	0.57 <5.7	1.878 2769.6	5.3	0.78 <2.8	<0.0059 <5.7	0.7864 5.3	<0.0029	0.23 <2.8	NA NA	<0.0029	<0.0029	0.18 <2.8	<0.0029 <2.8	NA NA	NA NA	<0.029 <28	<0.0059 <5.7	<0.059 <57
SO-3	3	3/10/09	23	4.9	12	<4.8	39.9	<2.4	<2.4	<4.8	ND	<2.4	<2.4	NA	<2.4	<2.4	<2.4	<2.4	NA	NA	<24	<4.8	<48
SO-4	1	3/10/09	0.74	1.2	0.48	< 0.0063	2.42	< 0.0032	0.035	< 0.0063	0.035	0.0033	0.44	NA	< 0.0032	< 0.0032	0.042	< 0.0032	NA	NA	< 0.032	< 0.0063	< 0.063
SO-4	3	3/10/09	0.93	1.6	0.7	<0.23	3.23	<0.11	<0.11	<0.23	ND 0.00	<0.11	0.63	NA NA	<0.11	<0.11	<0.11	<0.11	NA NA	NA NA	<1.1	<0.23	<2.3
SO-5 SO-5	5	3/10/09	0.39 <0.0062	0.35 <0.0062	0.035 <0.0062	<0.006	0.775 ND	0.07 <0.0062	<0.0062	<0.006 <0.012	0.09 ND	<0.003	<0.0062	NA NA	<0.003 <0.0062	<0.003 <0.0062	0.053 <0.0062	<0.003	NA NA	NA NA	<0.03 <0.062	<0.006 <0.012	<0.06 <0.12
SO-6	5	3/10/09	0.066	0.0062	0.48	0.16	0.795	0.0062	0.087	<0.012	0.097	<0.0062	0.19	NA NA	<0.0062	<0.0062	0.0062	<0.0062	NA NA	NA NA	<0.062	<0.012	<0.12
SO-7	3	3/10/09	1.9	2.4	0.015	<0.01	4.315	0.072	0.18	<0.01	0.252	0.0072	0.89	NA	<0.0052	<0.0052	0.13	< 0.0052	NA	NA	<0.052	<0.01	<0.1
SO-10	1	10/12/10	43	16	7.8	< 0.241	66.8	7.2	4.2	< 0.241	0.252	< 0.121	0.63	NA	<0.121	<0.121	3.4	< 0.121	NA	<1.21	<1.21	< 0.241	<2.41
SS-AST-1	1	1/12/09	7.09	0.159	0.0768	0.0207	7.3465	0.0805	0.0663	<0.00632	0.1468	<0.00316	0.107	NA	<0.00316	<0.00316	0.0407	<0.00316	NA	NA	<0.0316	<0.00632	<0.0632
SS-AST-2	1	1/12/09	12.2	7.75	5.95	0.0331	25.9331	1.11	3.45	<0.00532	4.56	0.197	0.59	NA	<0.00266	0.00713	1.69	< 0.00266	NA	NA	<0.0266	0.0476	0.739
SS-AST-3 SS-AST-3	2	7/23/12 7/23/12	0.11	0.058	3.6	0.042	3.81 3.911	<0.003	0.05	<0.0061	0.05 0.075												
SS-AST-4	1	7/23/12	0.0047	<0.0028	0.0031	< 0.0056	0.0078	<0.0032	<0.0028	< 0.0056	ND												
SS-AST-4	2	7/23/12	0.0042	< 0.0033	< 0.0033	<0.0066	0.0042	< 0.0033	< 0.0033	< 0.0066	ND		_										
SS-AST-5	1	7/23/12	0.0039	<0.0027	<0.0027	< 0.0055	0.0039	<0.0027	< 0.0027	< 0.0055	ND												
SS-AST-5	2	7/23/12	0.011	<0.0032	0.0083	<0.0064	0.0193	<0.0032	<0.0032	<0.0064	ND												
SS-AST-6	1	7/23/12	0.039	0.0088	0.011	< 0.0057	0.0588	0.0035	< 0.0028	< 0.0057	0.0035												



Table B-2. Analytical Results for Constituents Detected in Subsurface Solids (mg/kg)

	_									ixcourts for C		2 0000000		ee Bolles (III	-8'8'								
										Dichloro		Freon-11											
					Carbon			cis/trans1,2-		methane		(Trichlorof					Methyl						trans-1,2-
	n a	D 4				CI.I			G 1		D4 1					3.5 (1.1	-		D 1		D ( 1		,
	Depth	Date		Carbon	tetra	Chloro		Dichloro	Cyclo	(Methylene	Ethyl	luorometha		Isopropyl	m&p-	Methyl	cyclo		n-Propyl		sec-Butyl		Dichloro
Sample ID	(ft bgs)	Sampled	Benzene	disulfide	chloride	benzene	Chloroform	ethene	hexane	chloride)	benzene	ne	Freon-113	benzene	Xylene	acetate	hexane	Naphthalene	benzene	o-Xylene	benzene	Toluene	ethene
Solid Aquifer Matr	_														<u> </u>					·			
•	_	0./0./05	ı	1	1	T T	-0.0054	-0.0054		-0.0054	.0.0054	ı		-0.0054	1			-0.0054	.0.0054		.0.005.4	.0.0054	
GP001	6-8	8/9/05					< 0.0054	< 0.0054		< 0.0054	< 0.0054			< 0.0054				< 0.0054	< 0.0054		< 0.0054	< 0.0054	
GP002	4-6	8/9/05					< 0.0049	< 0.0049		< 0.0049	< 0.0049			< 0.0049				< 0.0049	< 0.0049		< 0.0049	< 0.0049	
GP003	2-4	8/9/05					< 0.0048	< 0.0048		< 0.0048	< 0.0048			< 0.0048				< 0.0048	< 0.0048		< 0.0048	< 0.0048	
GP004	4-6	8/9/05					< 0.004	< 0.004		< 0.004	<0.004			< 0.004	†			< 0.004	<0.004		< 0.004	<0.004	
GP005	4-6	8/9/05					< 0.0045	< 0.0045		< 0.0045	< 0.0045			< 0.0045				< 0.0045	< 0.0045		< 0.0045	< 0.0045	
GP006	2-4	8/9/05					< 0.0046	< 0.0046		< 0.0046	< 0.0046			< 0.0046				< 0.0046	< 0.0046		< 0.0046	< 0.0046	
GP009	2-4	8/10/05					< 0.0043	< 0.0043		< 0.0043	< 0.0043			< 0.0043				< 0.0043	< 0.0043		< 0.0043	< 0.0043	
GP010	4-6	8/10/05					< 0.067	0.093		< 0.067	< 0.067			< 0.067				< 0.067	< 0.067		< 0.067	< 0.067	
GP011	2-4	8/10/05					0.064	0.099		< 0.061	< 0.061			< 0.061				< 0.061	< 0.061		< 0.061	< 0.061	
GP012	4-6	8/10/05					0.29	0.72		0.29	< 0.063			< 0.063				< 0.063	< 0.063		< 0.063	< 0.063	
GP013	4-6	8/10/05					< 0.0052	< 0.0052		< 0.0052	< 0.0052			< 0.0052	1			< 0.0052	< 0.0052		< 0.0052	< 0.0052	
			0.006	0.012	0.006	0.006			0.006			0.006	0.012		0.010	0.006	0.0004			0.006			0.055
MIP-1	2	10/16/08	< 0.006	< 0.012	< 0.006	< 0.006	0.73	NA	< 0.006	< 0.006	< 0.006	< 0.006	< 0.012	< 0.006	< 0.012	< 0.006	0.0094	NA	NA	< 0.006	NA	0.027	0.055
MIP-1	5	10/16/08	< 0.0067	< 0.013	< 0.0067	< 0.0067	< 0.0067	NA	< 0.0067	< 0.0067	< 0.0067	< 0.0067	< 0.013	< 0.0067	< 0.013	< 0.0067	< 0.0067	NA	NA	< 0.0067	NA	< 0.0067	< 0.0067
MIP-1	9	10/16/08	< 0.0029	< 0.0058	< 0.0029	< 0.0029	< 0.0029	NA	< 0.0029	< 0.0029	< 0.0029	< 0.0029	< 0.0058	< 0.0029	< 0.0058	< 0.0029	< 0.0029	NA	NA	< 0.0029	NA	< 0.0029	< 0.0029
MIP-5	3	10/16/08	<0.0022	< 0.0045	<0.0022	<0.0022	< 0.0022	NA	< 0.0022	< 0.0022	<0.0022	<0.0022	< 0.0045	<0.0022	< 0.0045	<0.0022	<0.0022	NA	NA	<0.0022	NA	<0.0022	< 0.0022
	_												1										
MIP-6	6	10/16/08	< 0.008	< 0.016	< 0.008	< 0.008	< 0.008	NA	< 0.008	< 0.008	< 0.008	< 0.008	< 0.016	< 0.008	< 0.016	< 0.008	< 0.008	NA	NA	< 0.008	NA	< 0.008	< 0.008
MIP-8	2	10/16/08	< 0.0013	< 0.0026	< 0.0013	< 0.0013	0.069	NA	< 0.0013	0.11	< 0.0013	< 0.0013	< 0.0026	< 0.0013	< 0.0026	< 0.0013	0.015	NA	NA	< 0.0013	NA	0.006	0.014
MIP-8	4	10/16/08	< 0.007	< 0.014	< 0.007	< 0.007	< 0.007	NA	< 0.007	< 0.007	< 0.007	< 0.007	< 0.014	< 0.007	< 0.014	< 0.007	< 0.007	NA	NA	< 0.007	NA	0.0076	< 0.007
MIP-12	12	10/16/08	<0.0019	<0.0038	<0.0019	<0.0019	0.12	NA	< 0.0019	< 0.0019	<0.0019	0.0027	<0.0038	< 0.0019	<0.0038	< 0.0019	< 0.0019	NA	NA	< 0.0019	NA	<0.0019	0.0077
	12																						
MIP-12	4	10/16/08	< 0.0069	< 0.014	< 0.0069	< 0.0069	< 0.0069	NA	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.014	< 0.0069	< 0.014	< 0.0069	< 0.0069	NA	NA	< 0.0069	NA	< 0.0069	< 0.0069
MIP-12	6	10/16/08	< 0.0076	< 0.015	< 0.0076	< 0.0076	< 0.0076	NA	< 0.0076	< 0.0076	< 0.0076	< 0.0076	< 0.015	< 0.0076	< 0.015	< 0.0076	< 0.0076	NA	NA	< 0.0076	NA	< 0.0076	< 0.0076
MIP-13	1	10/16/08	0.0071	< 0.0076	< 0.0038	< 0.0038	< 0.0038	NA	0.014	0.12	< 0.0038	< 0.0038	0.073	< 0.0038	< 0.0076	< 0.0038	0.18	NA	NA	< 0.0038	NA	0.096	0.02
	2												1										
MIP-13	3	10/16/08	< 0.0027	< 0.0053	< 0.0027	< 0.0027	0.029	NA	< 0.0027	0.067	< 0.0027	< 0.0027	< 0.0053	< 0.0027	< 0.0053	< 0.0027	0.031	NA	NA	< 0.0027	NA	0.02	0.011
MIP-13	6	10/16/08	0.0066	< 0.0054	< 0.0027	< 0.0027	1.4	NA	< 0.0027	1.9	< 0.0027	0.0067	< 0.0054	< 0.0027	< 0.0054	< 0.0027	0.013	NA	NA	< 0.0027	NA	0.017	0.058
MIP-19	1	10/16/08	< 0.0059	< 0.012	< 0.0059	< 0.0059	< 0.0059	NA	< 0.0059	< 0.0059	< 0.0059	< 0.0059	< 0.012	< 0.0059	< 0.012	< 0.0059	< 0.0059	NA	NA	< 0.0059	NA	< 0.0059	< 0.0059
MIP-19	3	10/16/08	< 0.0071	< 0.014	< 0.0071	< 0.0071	< 0.0071	NA	< 0.0071	< 0.0071	< 0.0071	< 0.0071	< 0.014	< 0.0071	< 0.014	< 0.0071	< 0.0071	NA	NA	< 0.0071	NA	< 0.0071	< 0.0071
MW-1D	8-10	7/13/04	< 0.0019	< 0.00184	< 0.0019	< 0.0019	< 0.0019	< 0.0019	NA	< 0.0046	< 0.0019	< 0.0019	NA	< 0.00184	NA	NA	NA	< 0.00461	< 0.00184	NA	< 0.00184	< 0.0019	< 0.0019
MW-2D	8-10	7/13/04	< 0.0017	< 0.0171	< 0.0017	< 0.0017	< 0.0017	< 0.0017	NA	< 0.0043	< 0.0017	< 0.0017	NA	< 0.00171	NA	NA	NA	< 0.00428	< 0.00171	NA	< 0.00171	0.0026	< 0.0017
MW-3	8-10	7/14/04	< 0.0018	< 0.0018	< 0.0018	< 0.0018	0.0078	0.0025	NA	< 0.0045	< 0.0018	< 0.0018	NA	< 0.0018	NA	NA	NA	< 0.0048	< 0.0018	NA	< 0.0018	< 0.0018	< 0.0018
MW-3D	13-15	7/14/04	< 0.134	< 0.134	< 0.134	< 0.134	< 0.134	< 0.134	NA	< 0.336	< 0.134	< 0.134	NA	< 0.134	NA	NA	NA	< 0.366	< 0.134	NA	< 0.134	< 0.134	< 0.134
	-													1	<u> </u>								
MW-8	8-10	6/27/06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.01	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
MW-9	8-10	6/27/06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.01	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
MW-10	5-10	7/7/06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.01	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
MW-11	5-10	7/6/06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.005	< 0.005	NA	< 0.005	<0.01	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	-																						
MW-12	5-10	7/6/06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.01	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
MW-13	13-15	6/27/06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.01	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
MW-14	13-15	6/27/06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.01	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	-					1												<del> </del>					
MW-15	8-10	6/28/06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	< 0.005	0.022	< 0.005	NA	0.005	0.085	NA	NA	0.14	0.026	0.055	0.005	0.027	< 0.005
MW-16	8-10	6/27/06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.005	< 0.005	NA	< 0.005	< 0.01	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
SO-2	1	3/10/09	< 0.0029	< 0.0059	< 0.0029	< 0.0029	< 0.0029	NA	0.0036	< 0.0029	< 0.0029	< 0.0029	< 0.0059	< 0.0029	< 0.0059	< 0.0029	< 0.0029	NA	NA	< 0.0029	NA	0.051	0.0047
SO-2	3	3/10/09	<0.0029	< 0.0059	<0.0029	< 0.0029	0.04	NA	0.14	< 0.0029	<0.0029	<0.0029	< 0.0059	< 0.0029	< 0.0059	< 0.0029	0.087	NA	NA	<0.0029	NA	0.05	0.026
	1					1								1									
SO-3	1	3/10/09	<2.8	<5.7	<2.8	<2.8	<2.8	NA	8	<2.8	<2.8	<2.8	<5.7	<2.8	<5.7	<2.8	130	NA	NA	<2.8	NA	3.3	<2.8
SO-3	3	3/10/09	<2.4	<4.8	<2.4	<2.4	2.5	NA	<2.4	4.5	<2.4	<2.4	<4.8	<2.4	<4.8	<2.4	<2.4	NA	NA	<2.4	NA	<2.4	<2.4
SO-4	1	3/10/09	< 0.0032	< 0.0063	< 0.0032	< 0.0032	0.06	NA	< 0.0032	< 0.0032	< 0.0032	< 0.0032	< 0.0063	< 0.0032	< 0.0063	< 0.0032	0.032	NA	NA	< 0.0032	NA	< 0.0032	0.0055
SO-4	3	3/10/09	<0.11	<0.23	<0.11	<0.11	0.13	NA	<0.11	<0.11	<0.11	<0.11	<0.23	<0.11	<0.23	<0.11	<0.11	NA	NA	<0.11	NA	<0.11	<0.11
						1																	
SO-5	5	3/10/09	< 0.003	< 0.006	0.004	< 0.003	0.12	NA	< 0.003	< 0.003	< 0.003	< 0.003	< 0.006	< 0.003	< 0.006	< 0.003	< 0.003	NA	NA	< 0.003	NA	< 0.003	0.015
SO-5	9	3/10/09	< 0.0062	< 0.012	< 0.0062	< 0.0062	< 0.0062	NA	< 0.0062	< 0.0062	< 0.0062	< 0.0062	< 0.012	< 0.0062	< 0.012	< 0.0062	< 0.0062	NA	NA	< 0.0062	NA	< 0.0062	< 0.0062
SO-6	5	3/10/09	< 0.0026	< 0.0052	< 0.0026	< 0.0026	0.084	NA	< 0.0026	< 0.0026	< 0.0026	< 0.0026	< 0.0052	< 0.0026	< 0.0052	< 0.0026	< 0.0026	NA	NA	< 0.0026	NA	< 0.0026	0.017
SO-7						1								1				<del> </del>					
	3	3/10/09	<0.0052	<0.01	<0.0052	<0.0052	0.17	NA	<0.0052	0.049	<0.0052	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	NA	NA	<0.0052	NA	< 0.0052	0.025
SO-10	1	10/12/10	< 0.121	< 0.241	< 0.121	< 0.121	3.1	NA	< 0.121	5.9	< 0.121	< 0.121	< 0.241	< 0.121	0.34	0.13	0.26	NA	NA	0.16	NA	1.1	0.17
SS-AST-1	1	1/12/09	< 0.00316	< 0.00632	< 0.00316	< 0.00316	0.0397	NA	0.0178	< 0.00316	< 0.00316	< 0.00316	0.155	< 0.00316	0.0156	< 0.00316	0.0494	NA	NA	< 0.00316	NA	0.0105	0.00856
SS-AST-2	1	1/12/09	0.0147	0.0121	< 0.00266	0.00319	1.31	NA	0.00707	3.8	0.012	< 0.00266	<0.00532	<0.00266	0.0534	<0.00266	0.0123	NA	NA	0.021	NA	2.17	0.187
	1		0.0147	0.0121	<u> </u>	0.00319	1.31	INA	0.00707	3.0	0.012	<u> </u>	NO.00332	<u></u> \0.00200	0.0554	<u></u> \0.00∠00	0.0123	INA	INA	0.021	INA	4.1/	0.10/
SS-AST-3	1	7/23/12	<u> </u>	<u> </u>	<u> </u>	<u> </u>				ļ		<u> </u>		<u> </u>	<u> </u>			<u> </u>					
SS-AST-3	2	7/23/12													1		<u></u>						
SS-AST-4	1	7/23/12	Ī			1						Ī		1	1								
	1		<del> </del>	<del> </del>	1	1	1			1	1	<del> </del>	1	1	+								
SS-AST-4	2	7/23/12	<b>.</b>	<b>.</b>	ļ		<b></b>			ļ		<b>.</b>	1		<b>_</b>								
SS-AST-5	1	7/23/12	<u> </u>	<u> </u>		<u> </u>	<u> </u>			<u></u>	<u> </u>	<u> </u>			<u> </u>		<u> </u>						
SS-AST-5	2	7/23/12									1												
SS-AST-6	1	7/23/12	†	†	1	İ				1		†	1	İ	†								
33-A31-0	1	1143114	1	1		1	1			1		1	I										



Table B-2. Analytical Results for Constituents Detected in Subsurface Solids (mg/kg)

								Table D-2	. Anaiyuca	ii Resuits 10	r Constituent	is Detected I	n Subsuria	ce Sonas (n	ig/kg)								
Sample ID	Depth (ft bgs)	Date Sampled	Tetrachlor oethene	Trichloro ethene	cis-1,2- Dichloro ethene	Vinyl chloride	Total Chlorinated Ethenes	1,1,1- Trichloro ethane	1,1- Dichloro ethane	Chloro ethane	Total Chlorinated Ethanes	1,1,2- Trichloro ethane	1,1- Dichloro ethene	1,2,4- Trimethyl benzene	1,2- Dibromo ethane	1,2- Dichloro benzene	1,2- Dichloro ethane	1,2- Dichloro propane	1,3,5- Trimethyl benzene	1,4- Dioxane	2-Butanone (MEK)	4-Methyl-2- pentanone	Acetone
SS-AST-6	2	7/23/12	0.047	0.011	0.0077	<0.0066	0.0657	< 0.0033	< 0.0033	<0.0066	ND							1 1			,		
SS-AST-7	1	7/23/12	0.047	0.0011	1.9	0.24	2.1626	< 0.0033	0.62	0.07	0.69				-								
SS-AST-7	2	7/23/12	0.013	0.0096	2	0.24	2.3326	< 0.003	1.2	0.07	1.237												
SS-AST-8	1	7/23/12	64	58	11	<3.4	133	66	6.8	<3.4	72.8												
SS-AST-8	2	7/23/12	6.5	13	6.2	<3.4	25.7	4.7	8.7	<3.2	13.4												
SS-AST-9	1	7/23/12	380	34	66	<3	480	2.1	1.5	<3	3.6												
SS-AST-9	2	7/23/12	660	97	55	<3.7	812	15	2.1	<3.7	17.1												
SS-AST-10	1	7/23/12	0.0054	<0.0029	0.004	< 0.0057	0.0094	< 0.0029	<0.0029	<0.0057	ND												
SS-AST-10	2	7/23/12	0.02	0.01	0.004	< 0.0067	0.043	< 0.0023	<0.0023	< 0.0067	ND												
SS-AST-10 (Dup)	1	7/23/12	0.058	0.018	0.016	< 0.0074	0.092	0.0043	< 0.0037	< 0.0074	0.0043												
SS-AST-11	1	7/23/12	0.0095	0.0061	0.0066	< 0.0057	0.0222	<0.0028	0.0043	< 0.0057	0.0043												
SS-AST-11	2	7/23/12	0.013	0.008	0.0091	< 0.0067	0.0301	< 0.0034	< 0.0034	< 0.0067	ND												
SS-BLDG-1	1	1/12/09	< 0.0024	< 0.0024	0.0061	< 0.0048	0.0061	< 0.0024	< 0.0024	< 0.0048	ND	< 0.0024	< 0.0024	NA	< 0.0024	< 0.0024	< 0.0024	< 0.0024	NA	NA	< 0.024	< 0.0048	< 0.048
SS-BLDG-1	5	1/12/09	< 0.00284	< 0.00284	0.00409	< 0.00568	0.00409	< 0.00284	< 0.00284	< 0.00568	ND	< 0.00284	< 0.00284	NA	< 0.00284	< 0.00284	< 0.00284	< 0.00284	NA	NA	< 0.0284	< 0.00568	< 0.0568
SS-BLDG-2	5	1/12/09	< 0.00349	< 0.00349	< 0.00349	< 0.00697	ND	< 0.00349	< 0.00349	< 0.00697	ND	< 0.00349	< 0.00349	NA	< 0.00349	< 0.00349	< 0.00349	< 0.00349	NA	NA	< 0.0349	< 0.00697	< 0.0697
SS-BLDG-5	1	1/12/09	< 0.00247	< 0.00247	< 0.00247	< 0.00495	ND	< 0.00247	< 0.00247	< 0.00495	ND	< 0.00247	< 0.00247	NA	< 0.00247	< 0.00247	< 0.00247	< 0.00247	NA	NA	< 0.0247	< 0.00495	< 0.0495
SS-BLDG-6	1	1/12/09	0.0037	0.00288	0.0188	0.0267	0.05208	< 0.00246	0.0135	< 0.00493	0.0135	< 0.00246	0.0259	NA	< 0.00246	< 0.00246	< 0.00246	< 0.00246	NA	NA	< 0.0246	< 0.00493	< 0.0493
SS-HA-1	1	1/12/09	0.0108	< 0.00284	0.0093	0.0987	0.1188	< 0.00284	0.0121	< 0.00569	0.0121	< 0.00284	< 0.00284	NA	< 0.00284	< 0.00284	0.00369	< 0.00284	NA	NA	< 0.0284	< 0.00569	< 0.0569
SS-HA-2	1	1/12/09	0.0139	< 0.00325	0.0556	0.0433	0.1128	< 0.00325	0.0448	< 0.0065	0.0448	< 0.00325	0.00754	NA	< 0.00325	< 0.00325	0.00702	< 0.00325	NA	NA	< 0.0325	< 0.0065	0.2
Vadose Zone Soil	•																						
GP007	2-4	8/9/05	< 0.0045	< 0.0045	< 0.0045		ND	< 0.0045			ND		< 0.0045	< 0.0045			< 0.0045	<4.5	< 0.0045				
GP008	2-4	8/9/05	< 0.0054	< 0.0054	< 0.0054		ND	< 0.0054			ND		< 0.0054	< 0.0054			< 0.0054	<5.4	< 0.0054			_	
SS-BLDG-2	1	1/12/09	< 0.00268	< 0.00268	< 0.00268	< 0.00536	ND	< 0.00268	< 0.00268	< 0.00536	ND	< 0.00268	< 0.00268	NA	< 0.00268	< 0.00268	< 0.00268	< 0.00268	NA	NA	< 0.0268	< 0.00536	< 0.0536
SS-BLDG-3	1	1/12/09	< 0.00301	< 0.00301	< 0.00301	< 0.00602	ND	< 0.00301	< 0.00301	< 0.00602	ND	< 0.00301	< 0.00301	NA	< 0.00301	< 0.00301	< 0.00301	< 0.00301	NA	NA	< 0.0301	< 0.00602	< 0.0602
SS-BLDG-4	1	1/12/09	< 0.00299	0.161	< 0.00299	< 0.00598	0.161	< 0.00299	< 0.00299	< 0.00598	ND	< 0.00299	< 0.00299	NA	< 0.00299	< 0.00299	< 0.00299	< 0.00299	NA	NA	< 0.0299	< 0.00598	< 0.0598
Other (sediment)																							
South Ditch	0-2	6/19/04	< 0.0064	0.012	0.016		0.028	< 0.0064	•		ND		< 0.0064				< 0.0064	<6.4					

NA: Not analyzed ND: Not detected Matrix:

Vadose Zone Soil - sample collected above or at the high water table mark Solid Aquifer Matrix - sample collected below the high water table mark



Table B-2. Analytical Results for Constituents Detected in Subsurface Solids (mg/kg)

								Table D-2.	Analytical	Results for C	onstituent	S Detecteu I	i Subsuitac	e Solius (III	ig/Kg)								
Sample ID	Depth (ft bgs)	Date Sampled	Benzene	Carbon disulfide	Carbon tetra chloride	Chloro benzene	Chloroform	cis/trans1,2- Dichloro ethene	Cyclo hexane	Dichloro methane (Methylene chloride)	Ethyl benzene	Freon-11 (Trichlorof luorometha ne	Freon-113	Isopropyl benzene	m&p- Xylene	Methyl acetate	Methyl cyclo hexane	Naphthalene	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Toluene	trans-1,2- Dichloro ethene
SS-AST-6	2	7/23/12																					
SS-AST-7	1	7/23/12																					
SS-AST-7	2	7/23/12																					
SS-AST-8	1	7/23/12																					
SS-AST-8	2	7/23/12																					
SS-AST-9	1	7/23/12																					
SS-AST-9	2	7/23/12																					
SS-AST-10	1	7/23/12																					
SS-AST-10	2	7/23/12																					
SS-AST-10 (Dup)	1	7/23/12																					
SS-AST-11	1	7/23/12																					
SS-AST-11	2	7/23/12																					
SS-BLDG-1	1	1/12/09	< 0.0024	< 0.0048	< 0.0024	< 0.0024	< 0.0024	NA	< 0.0024	< 0.0024	< 0.0024	< 0.0024	0.012	< 0.0024	< 0.0048	< 0.0024	< 0.0024	NA	NA	< 0.0024	NA	< 0.0024	< 0.0024
SS-BLDG-1	5	1/12/09	< 0.00284	< 0.00568	< 0.00284	< 0.00284	< 0.00284	NA	< 0.00284	< 0.00284	< 0.00284	< 0.00284	0.0615	< 0.00284	< 0.00568	< 0.00284	0.00426	NA	NA	< 0.00284	NA	< 0.00284	< 0.00284
SS-BLDG-2	5	1/12/09	< 0.00349	< 0.00697	< 0.00349	< 0.00349	< 0.00349	NA	< 0.00349	< 0.00349	< 0.00349	< 0.00349	< 0.00697	< 0.00349	< 0.00697	< 0.00349	< 0.00349	NA	NA	< 0.00349	NA	< 0.00349	< 0.00349
SS-BLDG-5	1	1/12/09	< 0.00247	< 0.00495	< 0.00247	< 0.00247	< 0.00247	NA	< 0.00247	< 0.00247	< 0.00247	< 0.00247	< 0.00495	< 0.00247	< 0.00495	< 0.00247	< 0.00247	NA	NA	< 0.00247	NA	< 0.00247	< 0.00247
SS-BLDG-6	1	1/12/09	< 0.00246	< 0.00493	< 0.00246	< 0.00246	< 0.00246	NA	< 0.00246	< 0.00246	< 0.00246	< 0.00246	< 0.00493	< 0.00246	< 0.00493	< 0.00246	< 0.00246	NA	NA	< 0.00246	NA	< 0.00246	< 0.00246
SS-HA-1	1	1/12/09	< 0.00284	< 0.00569	< 0.00284	< 0.00284	< 0.00284	NA	< 0.00284	< 0.00284	< 0.00284	< 0.00284	< 0.00569	< 0.00284	< 0.00569	< 0.00284	0.00657	NA	NA	< 0.00284	NA	0.00674	< 0.00284
SS-HA-2	1	1/12/09	< 0.00325	< 0.0065	< 0.00325	< 0.00325	< 0.00325	NA	0.00716	< 0.00325	< 0.00325	< 0.00325	< 0.0065	< 0.00325	< 0.0065	< 0.00325	0.178	NA	NA	< 0.00325	NA	0.00473	< 0.00325
Vadose Zone Soil																							
GP007	2-4	8/9/05					< 0.0045	< 0.0045		< 0.0045	< 0.0045			< 0.0045				< 0.0045	< 0.0045		< 0.0045	< 0.0045	
GP008	2-4	8/9/05					< 0.0054	< 0.0054		< 0.0054	< 0.0054			< 0.0054				< 0.0054	< 0.0054		< 0.0054	< 0.0054	
SS-BLDG-2	1	1/12/09	< 0.00268	< 0.00536	< 0.00268	< 0.00268	< 0.00268	NA	< 0.00268	< 0.00268	< 0.00268	< 0.00268	< 0.00536	< 0.00268	< 0.00536	< 0.00268	< 0.00268	NA	NA	< 0.00268	NA	< 0.00268	< 0.00268
SS-BLDG-3	1	1/12/09	< 0.00301	< 0.00602	< 0.00301	< 0.00301	< 0.00301	NA	< 0.00301	< 0.00301	< 0.00301	< 0.00301	< 0.00602	< 0.00301	< 0.00602	< 0.00301	< 0.00301	NA	NA	< 0.00301	NA	< 0.00301	< 0.00301
SS-BLDG-4	1	1/12/09	< 0.00299	< 0.00598	< 0.00299	< 0.00299	< 0.00299	NA	< 0.00299	< 0.00299	< 0.00299	< 0.00299	< 0.00598	< 0.00299	< 0.00598	< 0.00299	< 0.00299	NA	NA	< 0.00299	NA	< 0.00299	< 0.00299
Other (sediment)																							
South Ditch	0-2	6/19/04					< 0.0064	< 0.0064		0.0082	< 0.0064												1

NA: Not analyzed ND: Not detected Matrix:

Vadose Zone Soil - sample collected above or at the high water table mark Solid Aquifer Matrix - sample collected below the high water table mark



Table B-3. Anaerobic Biodegradation Preliminary Screening

		Scoring		Plu				adient	Downgradient	Upgradient
Indicator Parameter	Criterion	Value	MW-3	MW-3D	MW-4	MW-5	MW-12	MW-14	MW-16	MW-8
Oxygen	< 0.5 mg/L	3	0.44	0.53	0.41	0.26	0.3	0.69	0.37	0.62
Nitrate	< 1 mg/L	2	0.019	0.017	0.016	0.015				1
Iron II	> 1 mg/L	3	0.1	0.6	0.5	3.4				
Total Iron	>10		0.791	0.549	7.15	7.46				
Sulfate	< 20 mg/L	2	11	8	5	5				6
Sulfide	> 1 mg/L	3	ND	ND	ND	ND				ND
Methane	<0.5 mg/L	0	1.5	0.27	4.3	8.1				0.004
	>0.5 mg/L	3								
ORP	< 50 mV	1	-54	-109	-57	-147	160	76	137	98
	< -100 mV	2								
pН	5-9	0	6.71	7.07	6.73	6.9	6.66	7.39	6.48	6.82
	<5 or >9	-2								
TOC	> 20 mg/L	2	1.3	0.5	0.7	5.9				< 5
Phosphorus			0.028	< 0.02	0.049	0.115				
Temp	> 20 C	1	23.67	21.24	22.88	28.7	21.44	18.77	20.72	20.63
Carbon Dioxide	$> 2 \times Bkg$	1								
Alkalinity	$> 2 \times Bkg$	1	181	160	233	915				126
Chloride	$> 2 \times Bkg$	2	34	15	9.7	33				6.5
Hydrogen	> 1 nM	3								
Volatile Fatty Acids	> 0.1 mg/L	2								
TCE		2	4.5	1.3	0.086	< 0.005	0.0068	< 0.005	< 0.005	< 0.005
DCE		2	1	0.3	0.057	< 0.005	0.0076	< 0.005	< 0.005	< 0.005
VC		2	0.11	0.077	0.059	0.011	< 0.002	< 0.002	< 0.002	< 0.002
DCA		2	0.31	0.15	0.0062	0.0051	< 0.005	< 0.005	< 0.005	< 0.005
Chloroethane		2	< 0.01	< 0.01	< 0.01	0.24	< 0.01	< 0.01	< 0.01	< 0.01
Ethene/Ethane	> 0.01 mg/L	2	0.055	ND	0.048	0.31				ND
	> 0.1 mg/L	3		-						
Score			28	24.5	26	31	12	7.5	8	12.5
Evidence for reductive	dechlorination	l	Strong	Strong	Strong	Strong	Limited	Limited	Limited	Limited

Strong (>20) = Strong evidence for reductive dechlorination

Adequate (15-20) = Adequate evidence for reductive dechlorination

Limited (6-14) = Limited evidence for reductive dechlorination

Inadequate (0-5) = Inadequate evidence for reductive dechlorination

Data from October 2010

Meets criterion



Capitol Adhesives
Table B-4. Anaerobic Microbial Testing Results (October, 2010)

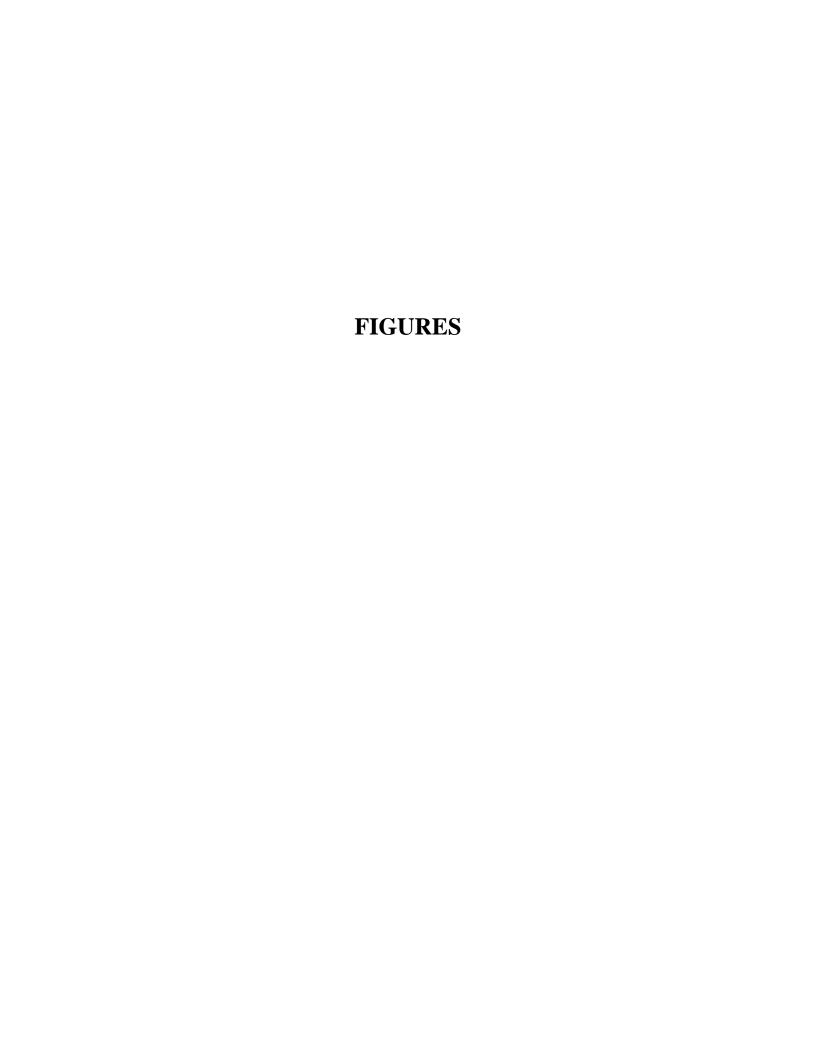
		r	Test 1: Plate Coutin	ng			Test	2: CENSUS		
	Anaerobic CFU/mL at 48 hrs	% Strain 1A (low discrimination)	% Strain 5A (Achromobacter denitrificans)	% Strain 6 (Kocuria kristinae)	% Strain 7 (low discrimination)	Dehalococcoid es spp. (cells/mL)	tceA Reductase	vinyl chloride reductase	bva Reductase	Dehaloba cter spp.
Groundwat	er Testing									
MW-3	70		10%	90%		93.9	42.2	5.6	< 0.4	1600
MW-3D	20	34%		33%	33%					
MW-5	30		100%			64,800	3,860	37,300	< 0.8	7340
MW-4	<10	'								
Endpoint A	ssay									
111-TCA		Excellent	Excellent	No Effect	Inhibited					
TCE		Excellent	Excellent	Inhibited	Good	10.1.000				

10-1,000 potential if VC Rdases present >10,000 good if RDases present

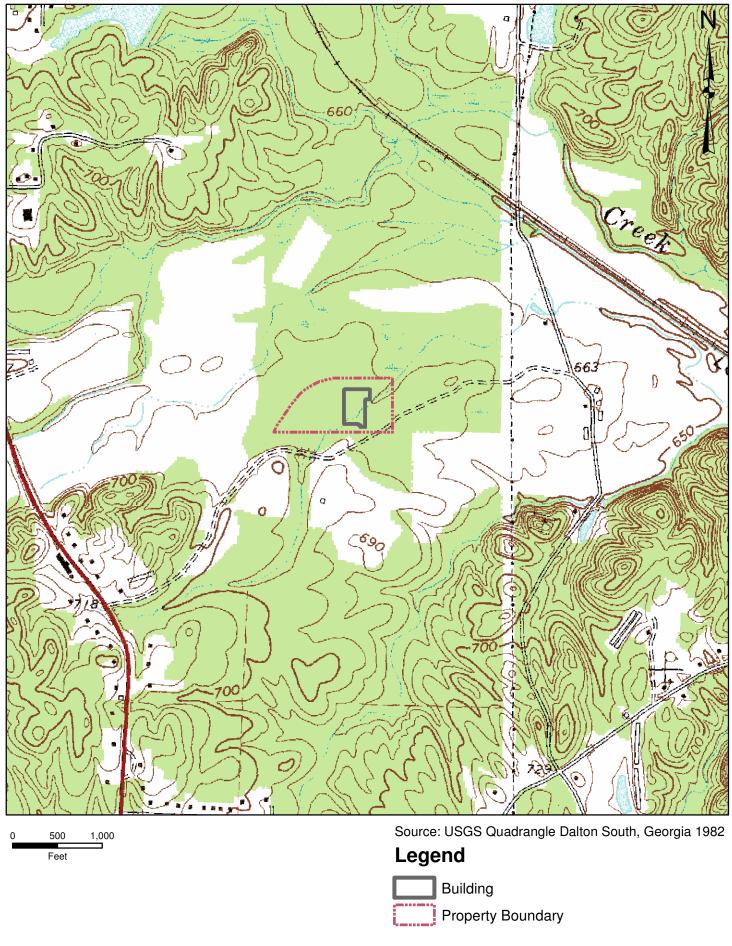
Table B-5. Aerobic Microbial Testing Results (October, 2010)

			Test 1: Pla	te Counting		
	Aerobic CFU/mL at 48 hrs	% Strain 1 (Kocuria kristinae)	% Strain 2 (Micrococcus luteus / lylae )	% Strain 3 (Pseudomonas aeruginosa)	% Strain 4 (Pseudomonas aeruginosa)	% Strain 5 (unidentified)
Groundwa	ter Testing					
MW-3	100	95%	5%			
MW-3D	<10					
MW-5	250			98%	2%	
MW-4	70					100%
Endpoing A	Assay					
111-TCA		Minimal	Inhibited	Excellent	Excellent	Fair
TCE		No Effect	Inhibited	Excellent	Excellent	Minimal

Good indication of biodegradation Moderate indication of biodegradation



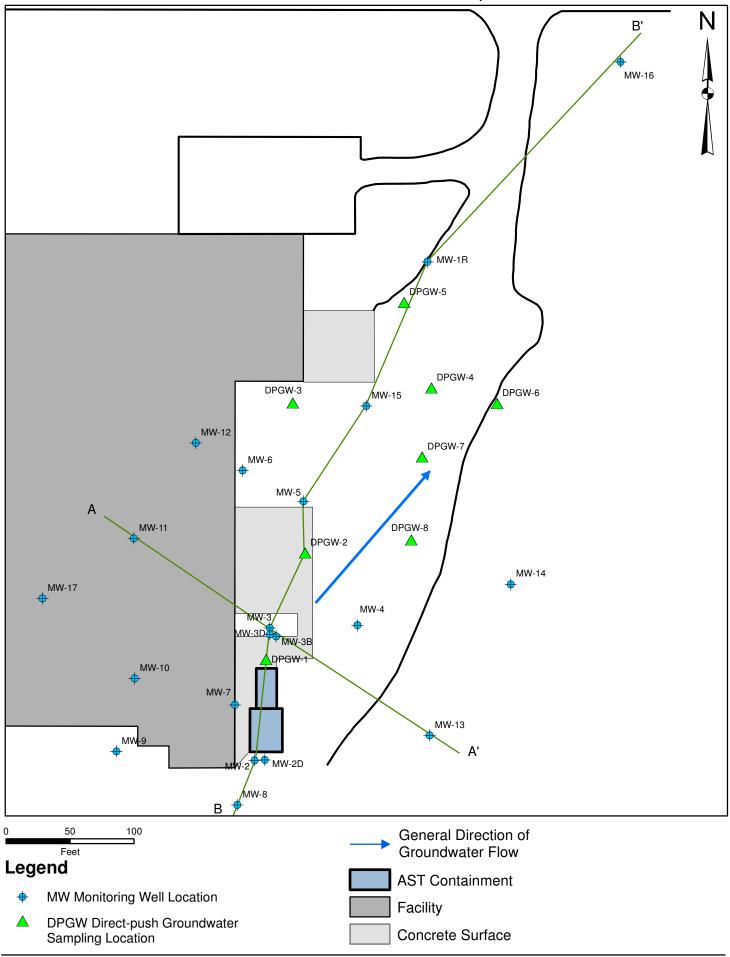
# Capitol Adhesives Topographic Map

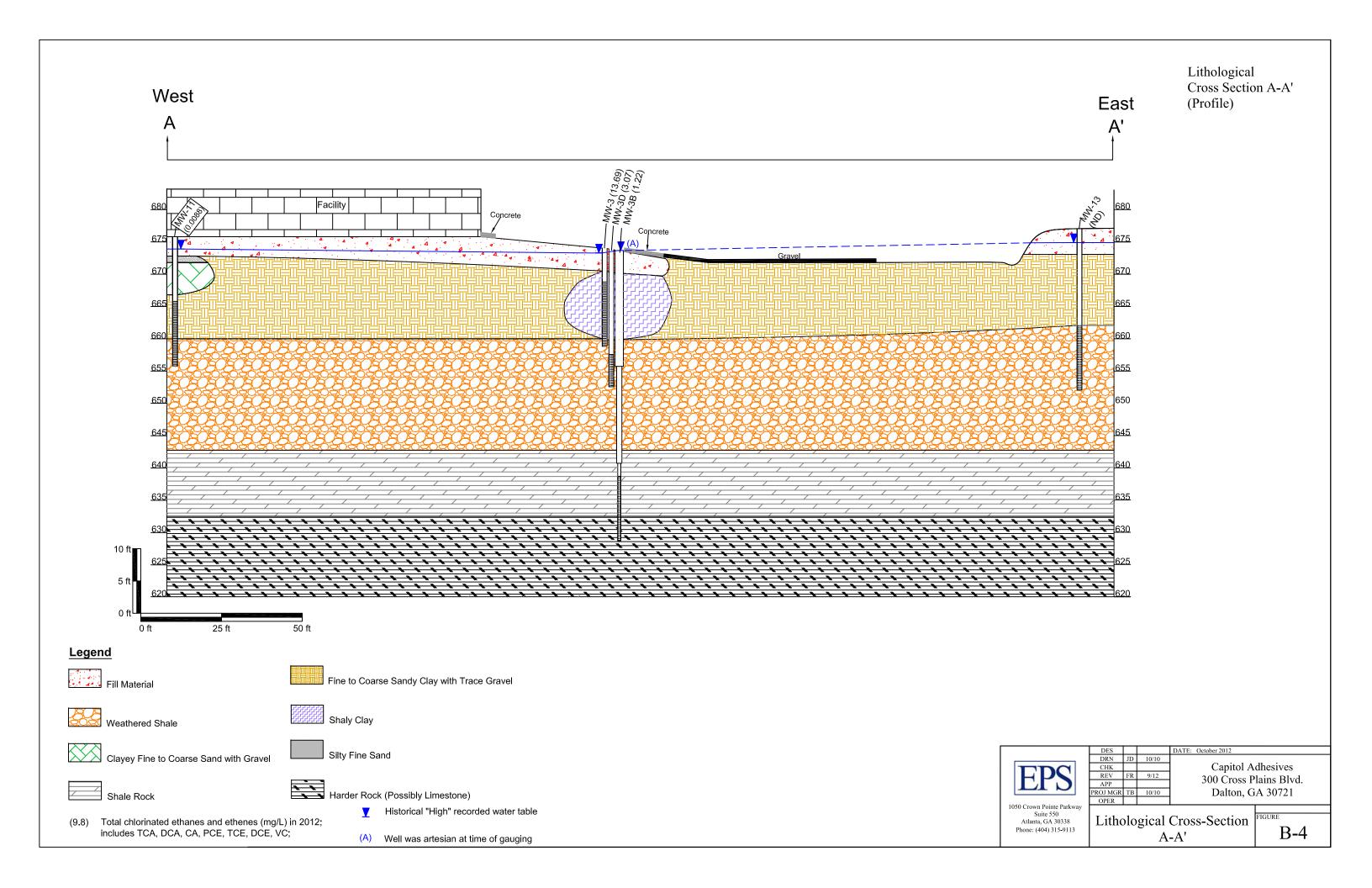


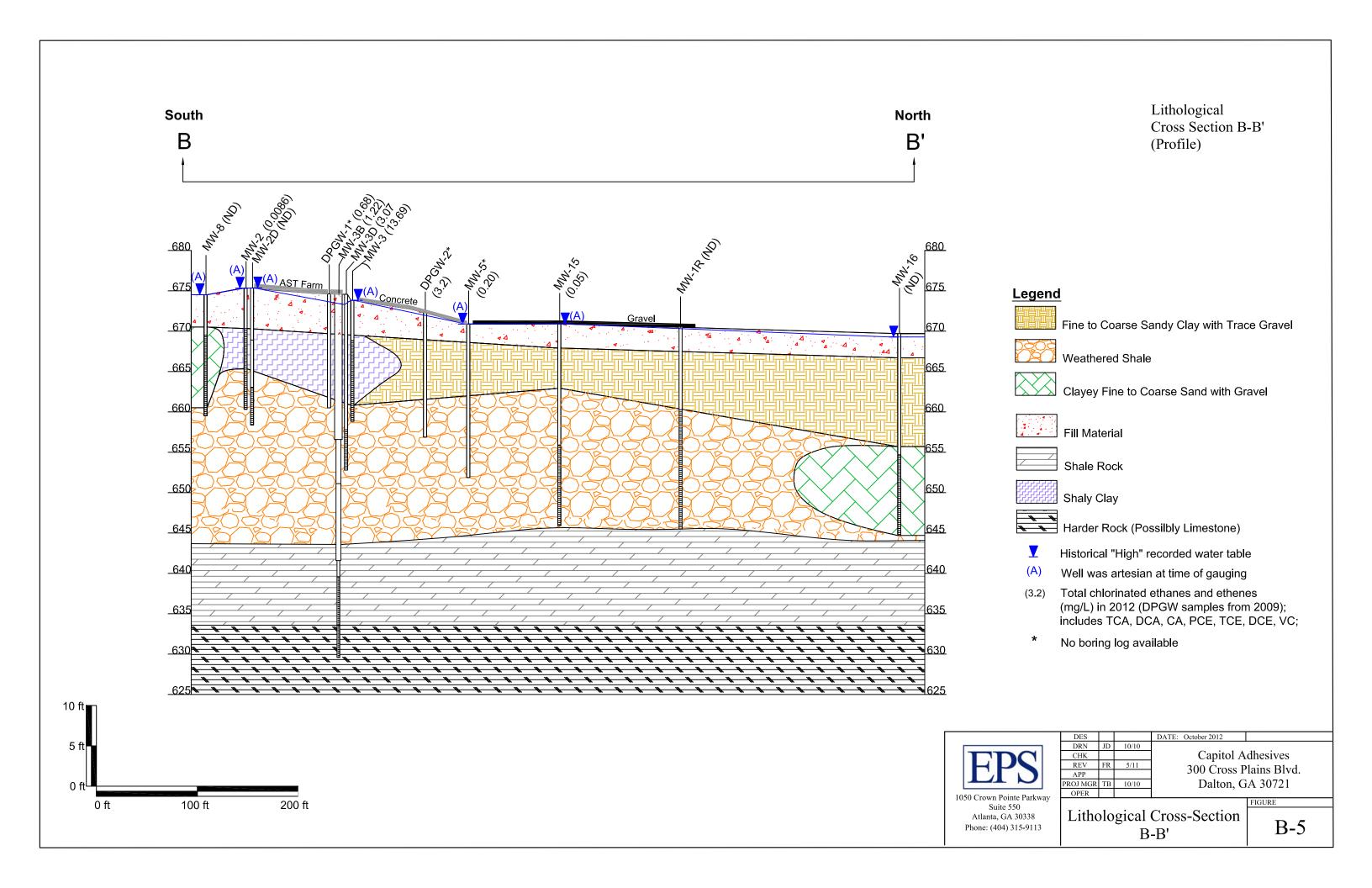
## Capitol Adhesives Aerial of Property and Site Features



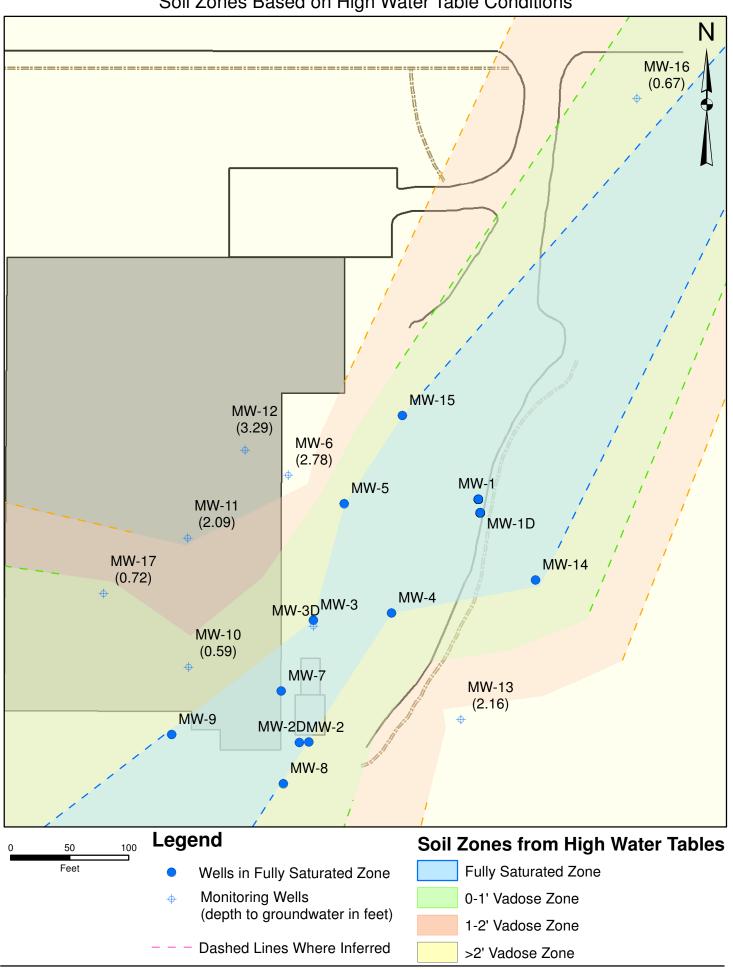
## Capitol Adhesives Cross-Section Location Map



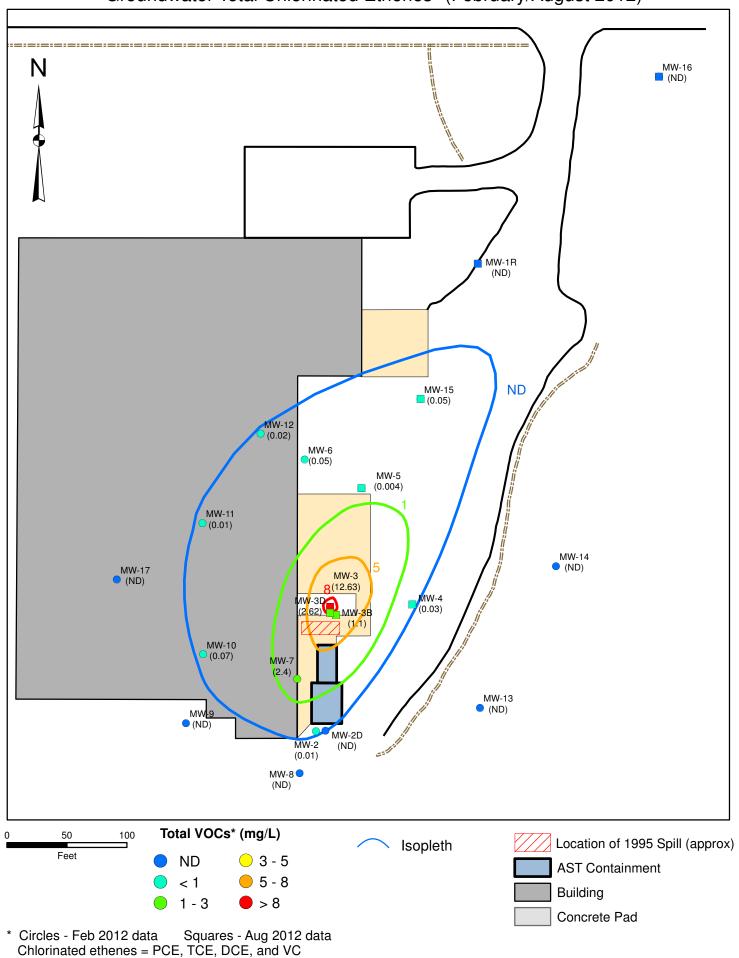




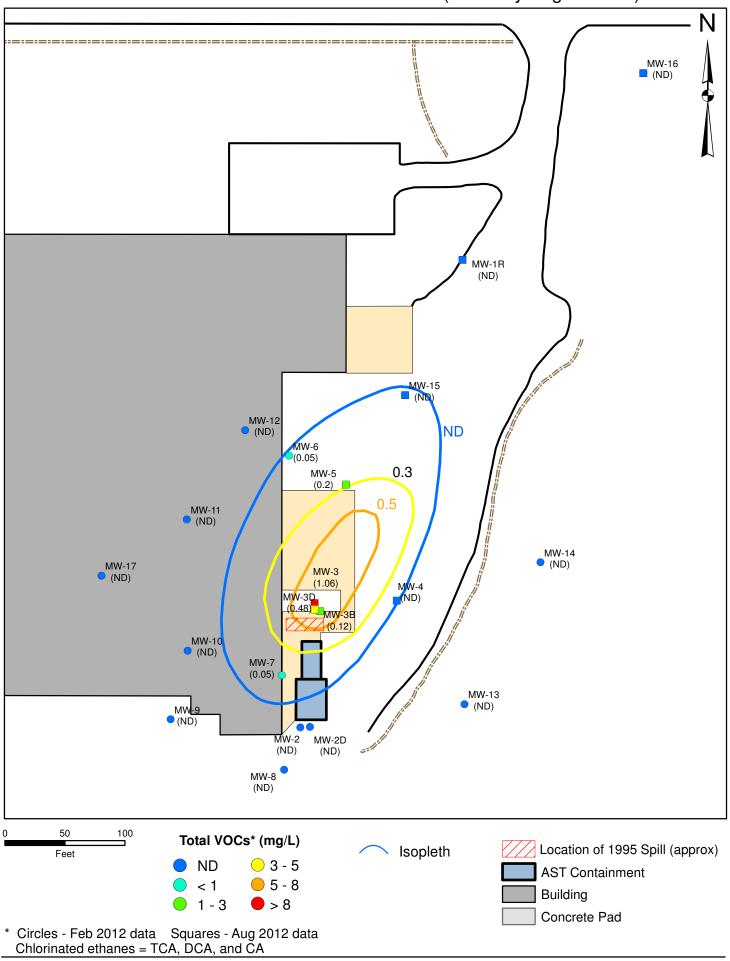
## Capitol Adhesives Soil Zones Based on High Water Table Conditions

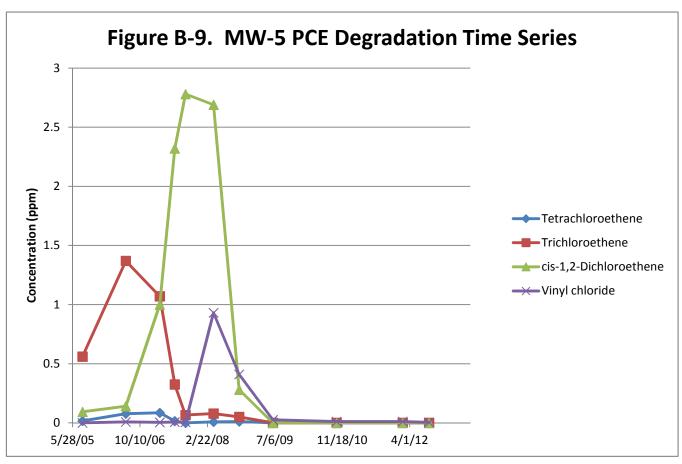


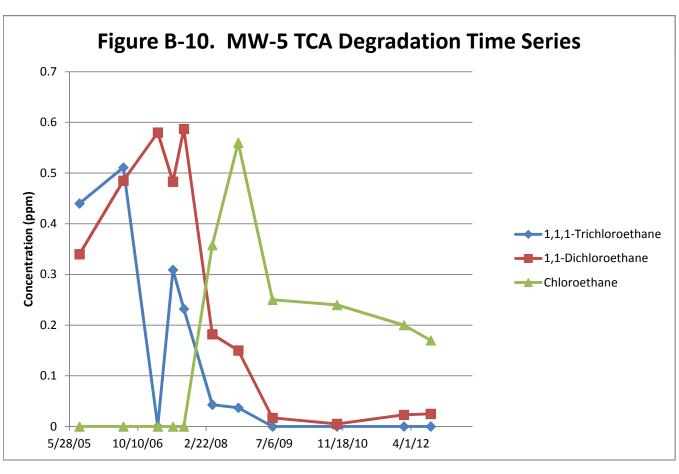
# Capitol Adhesives Groundwater Total Chlorinated Ethenes\* (February/August 2012)



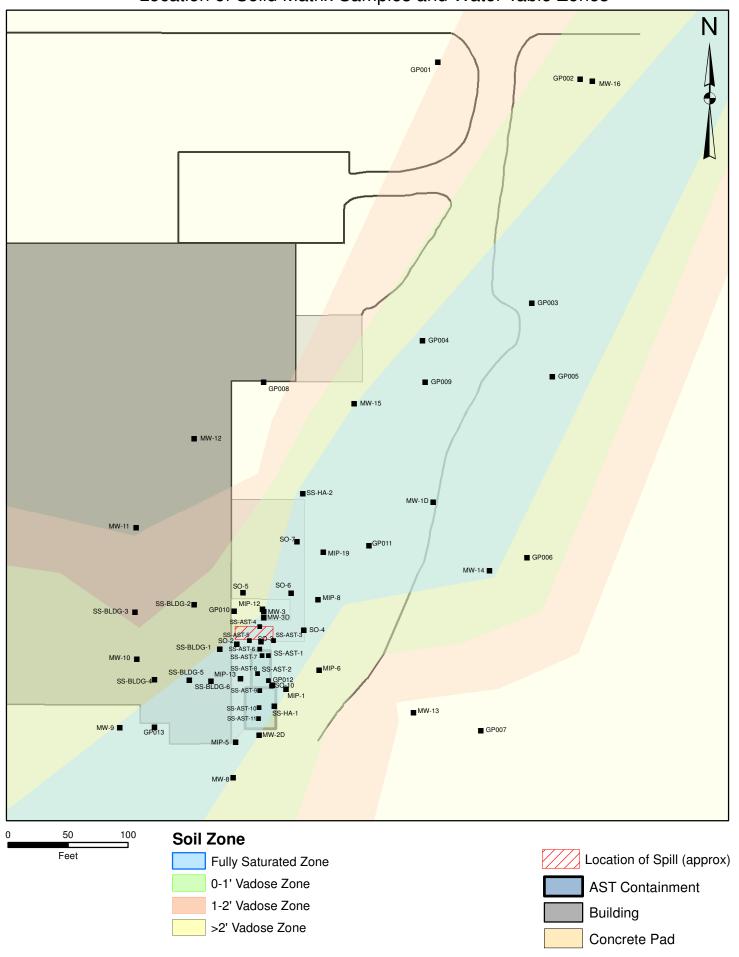
# Capitol Adhesives Groundwater Total Chlorinated Ethanes\* (February/August 2012)



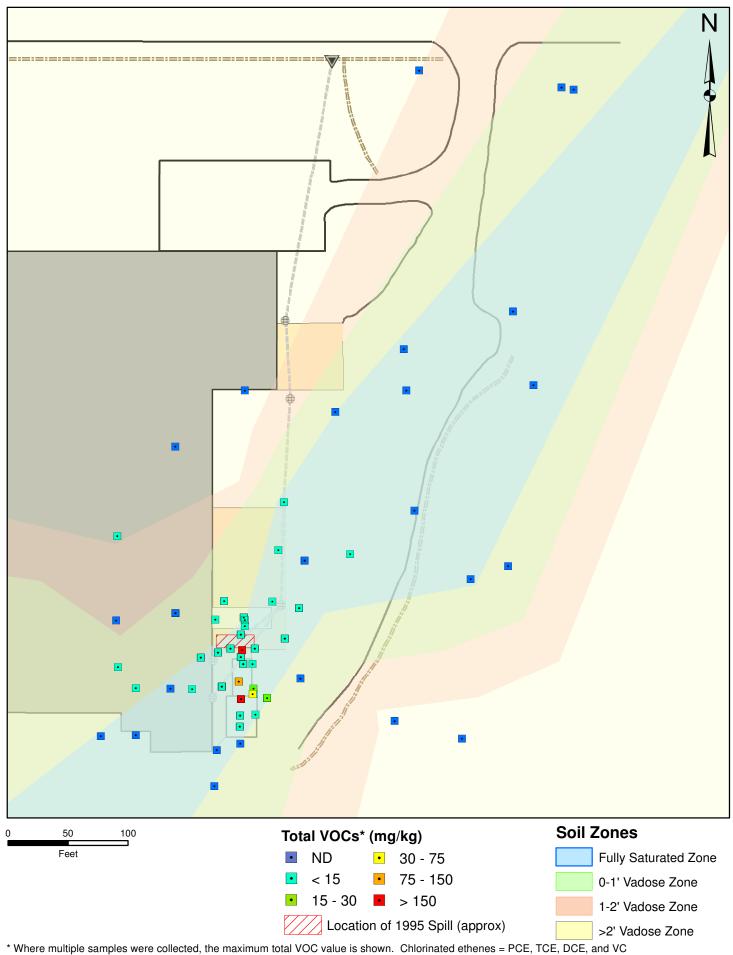




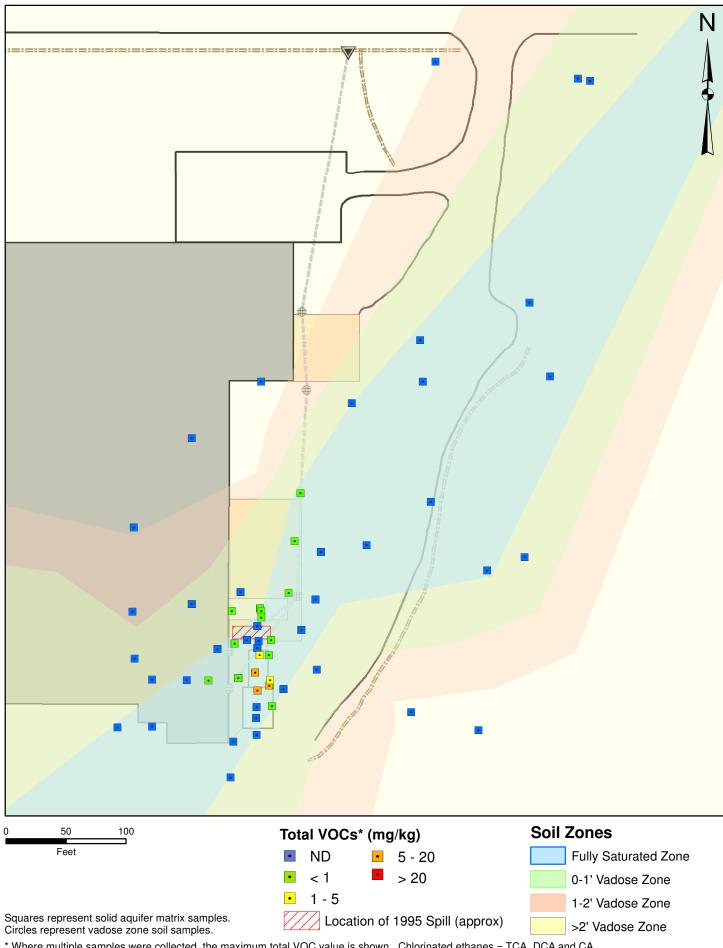
## Capitol Adhesives Location of Solid Matrix Samples and Water Table Zones



# Capitol Adhesives Total Chlorinated Ethenes\* in Subsurface Solids



# Capitol Adhesives Total Chlorinated Ethanes\* in Subsurface Solids

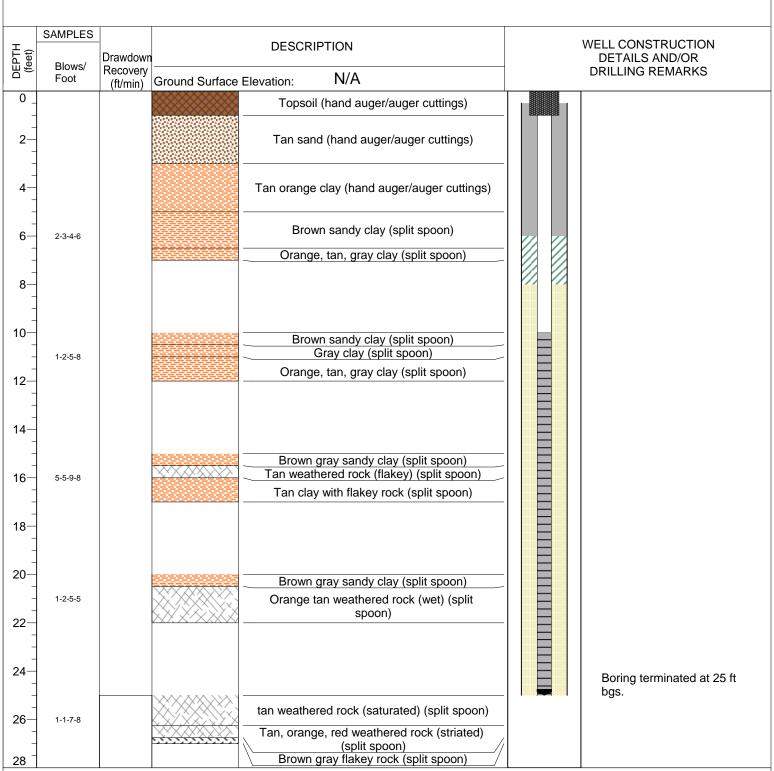


<sup>\*</sup> Where multiple samples were collected, the maximum total VOC value is shown. Chlorinated ethanes = TCA, DCA and CA



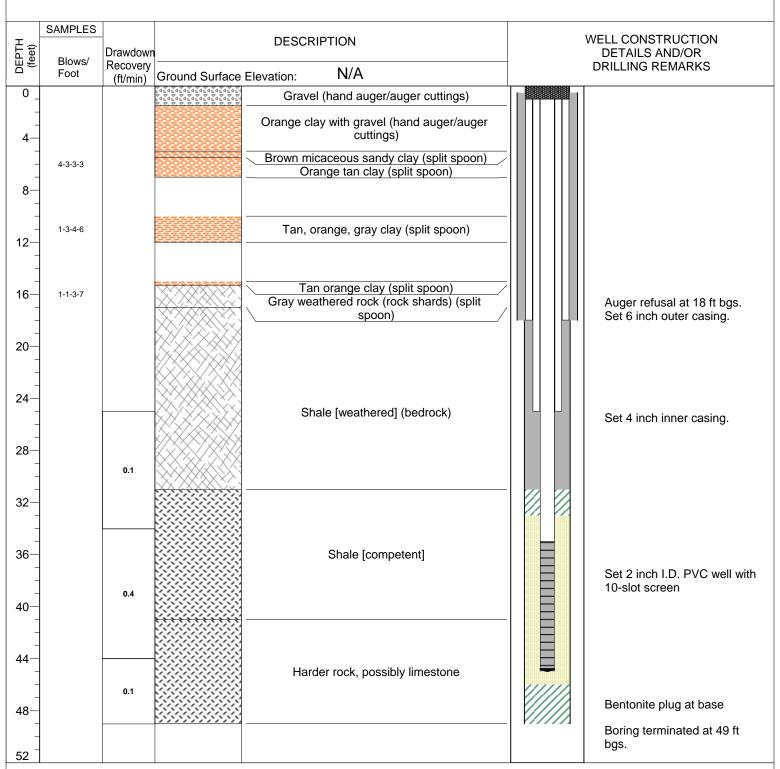
# APPENDIX C WELL CONSTRUCTION DIAGRAMS

PROJECT:  Capitol Adhesives	Log of Boring No. MW-1R
SITE LOCATION: Dalton, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Geo-Lab	DATE STARTED: DATE FINISHED: 8/20/12
DRILLING METHOD: Hollow Stem Auger	TOTAL DEPTH (ft.): SCREEN INTERVAL (ft.): 10-25
DRILLING EQUIPMENT: CME-55	DEPTH TO WATER AT TIME CASING (ft.):  OF BORING (ft.): ~15.5  CASING (ft.): 0-10
SAMPLING METHOD: None	LOGGED BY:  J. Dennis





PROJECT:  Capitol Adhesives		Log of Boring	No. MW-3B	
SITE LOCATION:	alton, GA	TOP OF CASING ELEVATION	DN (ft): N/A	
DRILLING CONTRACTOR: Ge	o-Lab	DATE STARTED: 8/20/12	DATE FINISHED: 8/22/12	
DRILLING METHOD: Hollow Stem Auge	r/Rock Hammer	TOTAL DEPTH (ft.):	9 SCREEN INTERVAL (ft.):	
DRILLING EQUIPMENT: CME	-55	DEPTH TO WATER AT TIME OF BORING (ft.): ~1(	- 0.05	
SAMPLING METHOD: None		LOGGED BY:	LOGGED BY:  J. Dennis	







# **APPENDIX D**

# GROUNDWATER LABORATORY DATA REPORT AND WELL FORMS

## ANALYTICAL ENVIRONMENTAL SERVICES, INC.



August 31, 2012

Timmerly Bullman
Environmental Planning Specialists, Inc.
1050 Crown Pointe Parkway
Atlanta GA 30338

TEL: (404) 315-9113 FAX: (404) 315-8509

RE: Capitol Adhesives

Dear Timmerly Bullman: Order No: 1208J49

Analytical Environmental Services, Inc. received 11 samples on 8/24/2012 3:45:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- -NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
- -AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Tara Esbeck

Project Manager

Taralesback

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Presidential Parkway, Atlanta GA 30340-3704

 ${f AES}$  Tel.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

σţ Page Date: 8-2412

Work Order: 108549

2 No # of Containers M M Μ  $\sim$ MM ~ 2 Same Day Rush (auth req.) your results, place bottle to check on the status of Turnaround Time Request www.aesatlanta.com Standard 5 Business Days Fax? Y/N Next Business Day Rush ESCRIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. 2 Business Day Rush Visit our website Total # of Containers RECEIPT orders, etc. STATE PROGRAM (if any): REMARKS DATA PACKAGE: E-mail? Y/N; 000 SEND REPORT TO: + Lulland @ emuplensing Com PROJECT INFORMATION ANALYSIS REQUESTED PRESERVATION (See codes) Dalton 6A Adhesiva IF DIFFERENT FROM ABOVE) Cap tol POJECT NAME SITE ADDRESS: NVOICE TO: 400 。 今 ヘ ROJECT × **DOOTE** 701 × ĸ 6E × 5 C K 6E 66 3 5 39 1050 Crown Point Play str. 55 3 DATE/TIME 9 S S (See codes) Matrix JENT Fedex UPS MAIL COURIER 30338 Composite SHIPMENT METHOD VIA ኢ Grab بح OTHER × 9H81 348 Atlanta, 6.4 OHU 200 1640 1135 1020 1610 = 15 **GREYHOUND** TIME RECEIVAGE BY 8-24-12 8-2412 8-23-12 8-24-12 SIGNATURE 8-23-12 8-12-12 8-2412 8-2412 21-52-8 8-23-12 DATE OUT Z DATE/TIME SAMPLE ID PHONE: (404) 315-9113 Jeff Dennis SPECIAL INSTRUCTIONS/COMMENTS 12237-MW-3D 12237-MW-38 1223 - MW-15 12236 - MW-1R 12236-MV-16 12237-M41-3 12237 - Rinsate 12236-MW-4 12236-1440-5 EPS Inc. 12237-1225 **JELINQUISHED BY** SAMPLED BY: 10 14 13

WW = Waste Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE. GW = Groundwater SE = Sediment SO = Soil SW = Surface Water

Page 2 of 32

Client: Environmental Planning Specialists, Inc.

Project: Capitol Adhesives Case Narrative

Date:

31-Aug-12

**Lab ID:** 1208J49

Sample Receiving Nonconformance:

A Trip Blank was provided but not listed on the Chain of Custody. Trip blank analyzed at no cost to the client.

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12236-MW-1R

Project Name:Capitol AdhesivesCollection Date:8/23/2012 10:20:00 AMLab ID:1208J49-001Matrix:Groundwater

Date:

31-Aug-12

Reporting Dilution BatchID Analyses Result Qual Units Date Analyzed Analyst **Factor** Limit TCL VOLATILE ORGANICS SW8260B (SW5030B) BRL 5.0 ug/L 165773 08/29/2012 17:39 NP 1,1,1-Trichloroethane BRL NP 5.0 165773 1,1,2,2-Tetrachloroethane ug/L 08/29/2012 17:39 1,1,2-Trichloroethane BRL 5.0 ug/L 165773 1 08/29/2012 17:39 NP 1,1-Dichloroethane **BRL** 5.0 ug/L 165773 1 08/29/2012 17:39 NP BRL 5.0 ug/L 165773 1 08/29/2012 17:39 NP 1,1-Dichloroethene BRL 165773 1,2,4-Trichlorobenzene 5.0 ug/L 1 08/29/2012 17:39 NP BRL 5.0 ug/L 165773 1 08/29/2012 17:39 NP 1,2-Dibromo-3-chloropropane BRL 5.0 ug/L 165773 1 08/29/2012 17:39 NP 1.2-Dibromoethane BRL 165773 NP 5.0 ug/L 1 08/29/2012 17:39 1,2-Dichlorobenzene 1.2-Dichloroethane **BRL** 5.0 ug/L 165773 1 08/29/2012 17:39 NP BRL 5.0 ug/L 165773 1 NP 08/29/2012 17:39 1,2-Dichloropropane BRL 5.0 165773 08/29/2012 17:39 1,3-Dichlorobenzene ug/L NP BRL 5.0 ug/L 165773 08/29/2012 17:39 NP 1.4-Dichlorobenzene 1 BRL 165773 2-Butanone 50 ug/L 1 08/29/2012 17:39 NP 2-Hexanone **BRL** 10 ug/L 165773 1 08/29/2012 17:39 NP BRL 10 ug/L 165773 1 08/29/2012 17:39 NP 4-Methyl-2-pentanone BRL 50 165773 Acetone ug/L 1 08/29/2012 17:39 NP Benzene BRL 5.0 ug/L 165773 1 08/29/2012 17:39 NP Bromodichloromethane BRL 5.0 ug/L 165773 1 08/29/2012 17:39 NP BRL 5.0 165773 NP ug/L 1 08/29/2012 17:39 Bromoform Bromomethane **BRL** 5.0 ug/L 165773 1 08/29/2012 17:39 NP BRL NP 5.0 ug/L 165773 08/29/2012 17:39 Carbon disulfide 1 Carbon tetrachloride BRL 5.0 ug/L 165773 08/29/2012 17:39 NP BRL 165773 Chlorobenzene 5.0 ug/L 1 08/29/2012 17:39 NP BRL Chloroethane 10 ug/L 165773 1 08/29/2012 17:39 NP Chloroform **BRL** 5.0 ug/L 165773 1 08/29/2012 17:39 NP BRL 10 ug/L 165773 1 08/29/2012 17:39 NP Chloromethane cis-1,2-Dichloroethene BRL 5.0 ug/L 165773 1 08/29/2012 17:39 NP BRL 5.0 ug/L 165773 1 08/29/2012 17:39 NP cis-1,3-Dichloropropene **BRL** 5.0 ug/L 165773 1 08/29/2012 17:39 NP Cyclohexane Dibromochloromethane BRL 165773 NP 5.0 ug/L 1 08/29/2012 17:39 Dichlorodifluoromethane **BRL** 10 ug/L 165773 1 08/29/2012 17:39 NP BRL 5.0 ug/L 165773 1 08/29/2012 17:39 NP Ethylbenzene BRL 10 165773 08/29/2012 17:39 Freon-113 ug/L NP BRL 5.0 165773 ug/L 08/29/2012 17:39 NP Isopropylbenzene 1 BRL 165773 m,p-Xylene 5.0 ug/L 1 08/29/2012 17:39 NP Methyl acetate **BRL** 5.0 ug/L 165773 1 08/29/2012 17:39 NP Methyl tert-butyl ether BRL 5.0 ug/L 165773 1 08/29/2012 17:39 NP BRL 165773 Methylcyclohexane 5.0 ug/L 1 08/29/2012 17:39 NP BRL 5.0 ug/L 165773 1 NP Methylene chloride 08/29/2012 17:39 **BRL** 5.0 ug/L 165773 1 08/29/2012 17:39 NP o-Xylene

Qualifiers:

Narr See case narrative

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

NC Not confirmed

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12236-MW-1R

Project Name: Capitol Adhesives Collection Date: 8/23/2012 10:20:00 AM

Date:

31-Aug-12

Lab ID:1208J49-001Matrix:Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				(SW	/5030B)			
Styrene	BRL	5.0		ug/L	165773	1	08/29/2012 17:39	NP
Tetrachloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 17:39	NP
Toluene	BRL	5.0		ug/L	165773	1	08/29/2012 17:39	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 17:39	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 17:39	NP
Trichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 17:39	NP
Trichlorofluoromethane	BRL	5.0		ug/L	165773	1	08/29/2012 17:39	NP
Vinyl chloride	BRL	2.0		ug/L	165773	1	08/29/2012 17:39	NP
Surr: 4-Bromofluorobenzene	94.6	67.4-123		%REC	165773	1	08/29/2012 17:39	NP
Surr: Dibromofluoromethane	113	75.5-128		%REC	165773	1	08/29/2012 17:39	NP
Surr: Toluene-d8	96.6	70-120		%REC	165773	1	08/29/2012 17:39	NP
BOD (5 day) (E405.1/SM5210B)								
Biochemical Oxygen Demand	BRL	5.0		mg/L	165632	1	08/24/2012 17:30	MG

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12236-MW-16

Project Name: Capitol Adhesives Collection Date: 8/23/2012 4:10:00 PM

Lab ID:1208J49-002Matrix:Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
TCL VOLATILE ORGANICS SW82	60B			(SV	V5030B)			
1,1,1-Trichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,1-Dichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,1-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,2-Dibromoethane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,2-Dichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,2-Dichloropropane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
2-Butanone	BRL	50		ug/L	165773	1	08/29/2012 06:23	NP
2-Hexanone	BRL	10		ug/L	165773	1	08/29/2012 06:23	NP
4-Methyl-2-pentanone	BRL	10		ug/L	165773	1	08/29/2012 06:23	NP
Acetone	BRL	50		ug/L	165773	1	08/29/2012 06:23	NP
Benzene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Bromodichloromethane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Bromoform	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Bromomethane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Carbon disulfide	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Carbon tetrachloride	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Chlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Chloroethane	BRL	10		ug/L	165773	1	08/29/2012 06:23	NP
Chloroform	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Chloromethane	BRL	10		ug/L	165773	1	08/29/2012 06:23	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Cyclohexane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Dibromochloromethane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Dichlorodifluoromethane	BRL	10		ug/L	165773	1	08/29/2012 06:23	NP
Ethylbenzene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Freon-113	BRL	10		ug/L	165773	1	08/29/2012 06:23	NP
Isopropylbenzene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
m,p-Xylene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Methyl acetate	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Methylcyclohexane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Methylene chloride	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
o-Xylene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP

Qualifiers:

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

E Estimated (value above quantitation range)

Date:

31-Aug-12

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12236-MW-16

Project Name: Capitol Adhesives Collection Date: 8/23/2012 4:10:00 PM

Date:

31-Aug-12

Lab ID: 1208J49-002 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW820	60B			(SW	/5030B)			
Styrene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Tetrachloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Toluene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Trichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Trichlorofluoromethane	BRL	5.0		ug/L	165773	1	08/29/2012 06:23	NP
Vinyl chloride	BRL	2.0		ug/L	165773	1	08/29/2012 06:23	NP
Surr: 4-Bromofluorobenzene	98.5	67.4-123		%REC	165773	1	08/29/2012 06:23	NP
Surr: Dibromofluoromethane	119	75.5-128		%REC	165773	1	08/29/2012 06:23	NP
Surr: Toluene-d8	98.6	70-120		%REC	165773	1	08/29/2012 06:23	NP
BOD (5 day) (E405.1/SM5210B)								
Biochemical Oxygen Demand	BRL	5.0		mg/L	165632	1	08/24/2012 17:30	MG

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12236-MW-15

Project Name:Capitol AdhesivesCollection Date:8/23/2012 4:40:00 PMLab ID:1208J49-003Matrix:Groundwater

Reporting Dilution Result Qual Units BatchID Analyses Date Analyzed Analyst Limit Factor TCL VOLATILE ORGANICS SW8260B (SW5030B) BRL ug/L 5.0 165773 08/29/2012 06:52 NP 1,1,1-Trichloroethane ug/L BRL 5.0 165773 08/29/2012 06:52 NP 1,1,2,2-Tetrachloroethane ug/L 1,1,2-Trichloroethane **BRL** 5.0 165773 08/29/2012 06:52 NP BRL 5.0 ug/L 165773 1 08/29/2012 06:52 NP 1,1-Dichloroethane 1,1-Dichloroethene 16 5.0 ug/L 165773 1 08/29/2012 06:52 NP BRL 5.0 ug/L 165773 08/29/2012 06:52 NP 1,2,4-Trichlorobenzene 1 BRL ug/L 165773 08/29/2012 06:52 NP 1,2-Dibromo-3-chloropropane 5.0 ug/L 165773 1,2-Dibromoethane **BRL** 5.0 08/29/2012 06:52 NP 1,2-Dichlorobenzene **BRL** 5.0 ug/L 165773 08/29/2012 06:52 NP ug/L 165773 NP **BRL** 5.0 08/29/2012 06:52 1,2-Dichloroethane BRL 5.0 ug/L 165773 1 08/29/2012 06:52 NP 1,2-Dichloropropane ug/L 1,3-Dichlorobenzene **BRL** 5.0 165773 1 08/29/2012 06:52 NP BRL 5.0 ug/L 165773 1 08/29/2012 06:52 NP 1,4-Dichlorobenzene 2-Butanone **BRL** 50 ug/L 165773 1 08/29/2012 06:52 NP BRL 10 ug/L 165773 08/29/2012 06:52 NP 1 2-Hexanone 4-Methyl-2-pentanone **BRL** 10 ug/L 165773 08/29/2012 06:52 NP BRL 50 ug/L 165773 08/29/2012 06:52 NP Acetone BRL ug/L 165773 08/29/2012 06:52 Benzene 5.0 NP ug/L **BRL** 5.0 165773 1 08/29/2012 06:52 NP Bromodichloromethane ug/L 08/29/2012 06:52 Bromoform **BRL** 5.0 165773 1 NP ug/L **BRL** 5.0 165773 08/29/2012 06:52 NP Bromomethane 1 ug/L Carbon disulfide BRL 5.0 165773 08/29/2012 06:52 NP ug/L Carbon tetrachloride BRL 5.0 165773 08/29/2012 06:52 NP Chlorobenzene BRL 5.0 ug/L 165773 1 08/29/2012 06:52 NP ug/L Chloroethane BRL 10 165773 08/29/2012 06:52 NP ug/L 165773 08/29/2012 06:52 NP Chloroform 5.0 5.0 1 Chloromethane BRL 10 ug/L 165773 1 08/29/2012 06:52 NP 27 5.0 ug/L 165773 08/29/2012 06:52 NP cis-1,2-Dichloroethene 1 cis-1,3-Dichloropropene BRL 5.0 ug/L 165773 08/29/2012 06:52 NP ug/L 165773 BRL 5.0 08/29/2012 06:52 NP Cyclohexane ug/L 165773 08/29/2012 06:52 Dibromochloromethane **BRL** 5.0 NP ug/L 165773 NP **BRL** 10 08/29/2012 06:52 Dichlorodifluoromethane Ethylbenzene BRL 5.0 ug/L 165773 1 08/29/2012 06:52 NP Freon-113 BRL 10 ug/L 165773 1 08/29/2012 06:52 NP BRL 5.0 ug/L 165773 1 08/29/2012 06:52 NP Isopropylbenzene ug/L m,p-Xvlene BRL 5.0 165773 08/29/2012 06:52 NP BRL ug/L 165773 08/29/2012 06:52 NP 5.0 1 Methyl acetate ug/L Methyl tert-butyl ether **BRL** 5.0 165773 08/29/2012 06:52 NP Methylcyclohexane BRL 5.0 ug/L 165773 08/29/2012 06:52 NP BRL ug/L 165773 08/29/2012 06:52 NP Methylene chloride 5.0 BRL ug/L 165773 o-Xylene 5.0 1 08/29/2012 06:52 NP

Qualifiers:

BRL Below reporting limit

Date:

31-Aug-12

Narr See case narrative

NC Not confirmed

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

Second Second

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12236-MW-15

**Project Name:** Capitol Adhesives Collection Date: 8/23/2012 4:40:00 PM

Date:

31-Aug-12

**Lab ID:** 1208J49-003 **Matrix:** Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				(SW	/5030B)			
Styrene	BRL	5.0		ug/L	165773	1	08/29/2012 06:52	NP
Tetrachloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 06:52	NP
Toluene	BRL	5.0		ug/L	165773	1	08/29/2012 06:52	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 06:52	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 06:52	NP
Trichloroethene	17	5.0		ug/L	165773	1	08/29/2012 06:52	NP
Trichlorofluoromethane	BRL	5.0		ug/L	165773	1	08/29/2012 06:52	NP
Vinyl chloride	5.4	2.0		ug/L	165773	1	08/29/2012 06:52	NP
Surr: 4-Bromofluorobenzene	91.3	67.4-123		%REC	165773	1	08/29/2012 06:52	NP
Surr: Dibromofluoromethane	113	75.5-128		%REC	165773	1	08/29/2012 06:52	NP
Surr: Toluene-d8	96.6	70-120		%REC	165773	1	08/29/2012 06:52	NP
BOD (5 day) (E405.1/SM5210B)								
Biochemical Oxygen Demand	BRL	5.0		mg/L	165632	1	08/24/2012 17:30	MG

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12236-MW-4

**Project Name:** Capitol Adhesives Collection Date: 8/23/2012 5:40:00 PM

Date:

31-Aug-12

Lab ID:1208J49-004Matrix:Groundwater

Analyses		Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
TCL VOLATILE ORGANICS S	W8260B				(SV	/5030B)			
1,1,1-Trichloroethane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,1,2,2-Tetrachloroethane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,1,2-Trichloroethane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,1-Dichloroethane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,1-Dichloroethene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,2,4-Trichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,2-Dibromo-3-chloropropane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,2-Dibromoethane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,2-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,2-Dichloroethane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,2-Dichloropropane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,3-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
1,4-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
2-Butanone		BRL	50		ug/L	165773	1	08/29/2012 07:20	NP
2-Hexanone		BRL	10		ug/L	165773	1	08/29/2012 07:20	NP
4-Methyl-2-pentanone		BRL	10		ug/L	165773	1	08/29/2012 07:20	NP
Acetone		BRL	50		ug/L	165773	1	08/29/2012 07:20	NP
Benzene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Bromodichloromethane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Bromoform		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Bromomethane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Carbon disulfide		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Carbon tetrachloride		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Chlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Chloroethane		BRL	10		ug/L	165773	1	08/29/2012 07:20	NP
Chloroform		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Chloromethane		BRL	10		ug/L	165773	1	08/29/2012 07:20	NP
cis-1,2-Dichloroethene		12	5.0		ug/L	165773	1	08/29/2012 07:20	NP
cis-1,3-Dichloropropene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Cyclohexane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Dibromochloromethane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Dichlorodifluoromethane		BRL	10		ug/L	165773	1	08/29/2012 07:20	NP
Ethylbenzene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Freon-113		BRL	10		ug/L	165773	1	08/29/2012 07:20	NP
Isopropylbenzene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
m,p-Xylene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Methyl acetate		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Methyl tert-butyl ether		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Methylcyclohexane		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Methylene chloride		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
o-Xylene		BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP

Qualifiers:

Narr See case narrative

NC Not confirmed

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12236-MW-4

**Project Name:** Capitol Adhesives Collection Date: 8/23/2012 5:40:00 PM

Date:

31-Aug-12

Lab ID: 1208J49-004 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				(SW	/5030B)			
Styrene	BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Tetrachloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Toluene	BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Trichloroethene	13	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Trichlorofluoromethane	BRL	5.0		ug/L	165773	1	08/29/2012 07:20	NP
Vinyl chloride	5.8	2.0		ug/L	165773	1	08/29/2012 07:20	NP
Surr: 4-Bromofluorobenzene	97.5	67.4-123		%REC	165773	1	08/29/2012 07:20	NP
Surr: Dibromofluoromethane	108	75.5-128		%REC	165773	1	08/29/2012 07:20	NP
Surr: Toluene-d8	98	70-120		%REC	165773	1	08/29/2012 07:20	NP
BOD (5 day) (E405.1/SM5210B)								
Biochemical Oxygen Demand	BRL	5.0		mg/L	165632	1	08/24/2012 17:30	MG

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12236-MW-5

**Project Name:** Capitol Adhesives Collection Date: 8/23/2012 6:40:00 PM

Lab ID:1208J49-005Matrix:Groundwater

Analyses		Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
TCL VOLATILE ORGANICS	SW8260B				(SV	V5030B)			
1,1,1-Trichloroethane		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,1,2,2-Tetrachloroethane		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,1,2-Trichloroethane		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,1-Dichloroethane		25	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,1-Dichloroethene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,2,4-Trichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,2-Dibromo-3-chloropropane		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,2-Dibromoethane		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,2-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,2-Dichloroethane		8.5	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,2-Dichloropropane		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,3-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
1,4-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
2-Butanone		BRL	50		ug/L	165773	1	08/29/2012 19:06	NP
2-Hexanone		BRL	10		ug/L	165773	1	08/29/2012 19:06	NP
4-Methyl-2-pentanone		BRL	10		ug/L	165773	1	08/29/2012 19:06	NP
Acetone		BRL	50		ug/L	165773	1	08/29/2012 19:06	NP
Benzene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Bromodichloromethane		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Bromoform		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Bromomethane		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Carbon disulfide		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Carbon tetrachloride		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Chlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Chloroethane		170	10		ug/L	165773	1	08/29/2012 19:06	NP
Chloroform		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Chloromethane		BRL	10		ug/L	165773	1	08/29/2012 19:06	NP
cis-1,2-Dichloroethene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
cis-1,3-Dichloropropene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Cyclohexane		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Dibromochloromethane		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Dichlorodifluoromethane		BRL	10		ug/L	165773	1	08/29/2012 19:06	NP
Ethylbenzene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Freon-113		BRL	10		ug/L	165773	1	08/29/2012 19:06	NP
Isopropylbenzene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
m,p-Xylene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Methyl acetate		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Methyl tert-butyl ether		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Methylcyclohexane		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Methylene chloride		6.1	5.0		ug/L	165773	1	08/29/2012 19:06	NP
o-Xylene		BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP

Qualifiers:

BRL Below reporting limit

Date:

31-Aug-12

Narr See case narrative

NC Not confirmed

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12236-MW-5

**Project Name:** Capitol Adhesives Collection Date: 8/23/2012 6:40:00 PM

Date:

31-Aug-12

Lab ID:1208J49-005Matrix:Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260E	3			(SW	/5030B)			
Styrene	BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Tetrachloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Toluene	BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
trans-1,2-Dichloroethene	14	5.0		ug/L	165773	1	08/29/2012 19:06	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Trichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Trichlorofluoromethane	BRL	5.0		ug/L	165773	1	08/29/2012 19:06	NP
Vinyl chloride	4.4	2.0		ug/L	165773	1	08/29/2012 19:06	NP
Surr: 4-Bromofluorobenzene	91	67.4-123		%REC	165773	1	08/29/2012 19:06	NP
Surr: Dibromofluoromethane	110	75.5-128		%REC	165773	1	08/29/2012 19:06	NP
Surr: Toluene-d8	94.9	70-120		%REC	165773	1	08/29/2012 19:06	NP
BOD (5 day) (E405.1/SM5210B)								
Biochemical Oxygen Demand	BRL	5.0		mg/L	165632	1	08/24/2012 17:30	MG

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative
NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12237-MW-3D

Project Name: Capitol Adhesives Collection Date: 8/24/2012 9:45:00 AM

Date:

31-Aug-12

Lab ID: 1208J49-006 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst			
TCL VOLATILE ORGANICS SW826	0B	(SW5030B)									
1,1,1-Trichloroethane	300	50		ug/L	165773	10	08/29/2012 05:54	NP			
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
1,1,2-Trichloroethane	7.9	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
1,1-Dichloroethane	180	50		ug/L	165773	10	08/29/2012 05:54	NP			
1,1-Dichloroethene	460	50		ug/L	165773	10	08/29/2012 05:54	NP			
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
1,2-Dibromoethane	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
1,2-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
1,2-Dichloroethane	240	50		ug/L	165773	10	08/29/2012 05:54	NP			
1,2-Dichloropropane	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
1,3-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
1,4-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
2-Butanone	BRL	50		ug/L	165773	1	08/29/2012 19:35	NP			
2-Hexanone	BRL	10		ug/L	165773	1	08/29/2012 19:35	NP			
4-Methyl-2-pentanone	BRL	10		ug/L	165773	1	08/29/2012 19:35	NP			
Acetone	BRL	50		ug/L	165773	1	08/29/2012 19:35	NP			
Benzene	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Bromodichloromethane	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Bromoform	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Bromomethane	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Carbon disulfide	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Carbon tetrachloride	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Chlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Chloroethane	BRL	10		ug/L	165773	1	08/29/2012 19:35	NP			
Chloroform	230	50		ug/L	165773	10	08/29/2012 05:54	NP			
Chloromethane	BRL	10		ug/L	165773	1	08/29/2012 19:35	NP			
cis-1,2-Dichloroethene	510	50		ug/L	165773	10	08/29/2012 05:54	NP			
cis-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Cyclohexane	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Dibromochloromethane	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Dichlorodifluoromethane	BRL	10		ug/L	165773	1	08/29/2012 19:35	NP			
Ethylbenzene	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Freon-113	BRL	10		ug/L	165773	1	08/29/2012 19:35	NP			
Isopropylbenzene	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
m,p-Xylene	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Methyl acetate	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Methyl tert-butyl ether	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Methylcyclohexane	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
Methylene chloride	14	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
o-Xylene	BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP			
o Aylene	DICL	5.0			103773	1	00/2//2012 17.55	111			

Qualifiers:

BRL Below reporting limit

Narr See case narrative

NC Not confirmed

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12237-MW-3D

**Project Name:** Capitol Adhesives Collection Date: 8/24/2012 9:45:00 AM

Date:

31-Aug-12

Lab ID: 1208J49-006 Matrix: Groundwater

Analyses		Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS S	W8260B				(SW	/5030B)			
Styrene		BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP
Tetrachloroethene		880	50		ug/L	165773	10	08/29/2012 05:54	NP
Toluene		BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP
trans-1,2-Dichloroethene		33	5.0		ug/L	165773	1	08/29/2012 19:35	NP
trans-1,3-Dichloropropene		BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP
Trichloroethene		1100	50		ug/L	165773	10	08/29/2012 05:54	NP
Trichlorofluoromethane		BRL	5.0		ug/L	165773	1	08/29/2012 19:35	NP
Vinyl chloride		100	2.0		ug/L	165773	1	08/29/2012 19:35	NP
Surr: 4-Bromofluorobenzene		92.5	67.4-123		%REC	165773	1	08/29/2012 19:35	NP
Surr: 4-Bromofluorobenzene		92.9	67.4-123		%REC	165773	10	08/29/2012 05:54	NP
Surr: Dibromofluoromethane		105	75.5-128		%REC	165773	10	08/29/2012 05:54	NP
Surr: Dibromofluoromethane		115	75.5-128		%REC	165773	1	08/29/2012 19:35	NP
Surr: Toluene-d8		93.5	70-120		%REC	165773	10	08/29/2012 05:54	NP
Surr: Toluene-d8		96.2	70-120		%REC	165773	1	08/29/2012 19:35	NP
BOD (5 day) (E405.1/SM5210B)									
Biochemical Oxygen Demand		BRL	5.0		mg/L	165632	1	08/24/2012 17:30	MG

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative
NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12237-MW-3

**Project Name:** Capitol Adhesives Collection Date: 8/24/2012 11:15:00 AM

Date:

31-Aug-12

Lab ID: 1208J49-007 Matrix: Groundwater

1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	520 BRL	100		(SV	(/5020D)							
1,1,2,2-Tetrachloroethane	BRL	100	(SW5030B)									
		100		ug/L	165773	20	08/29/2012 04:57	NP				
		5.0		ug/L	165773	1	08/29/2012 20:04	NP				
1,1,2-Trichloroethane	47	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
1,1-Dichloroethane	540	100		ug/L	165773	20	08/29/2012 04:57	NP				
1,1-Dichloroethene	3000	100		ug/L	165773	20	08/29/2012 04:57	NP				
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
1,2-Dibromoethane	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
1,2-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
1,2-Dichloroethane	1300	100		ug/L	165773	20	08/29/2012 04:57	NP				
1,2-Dichloropropane	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
1,3-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
1,4-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
2-Butanone	BRL	50		ug/L	165773	1	08/29/2012 20:04	NP				
2-Hexanone	BRL	10		ug/L	165773	1	08/29/2012 20:04	NP				
4-Methyl-2-pentanone	BRL	10		ug/L	165773	1	08/29/2012 20:04	NP				
Acetone	BRL	50		ug/L	165773	1	08/29/2012 20:04	NP				
Benzene	13	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Bromodichloromethane	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Bromoform	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Bromomethane	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Carbon disulfide	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Carbon tetrachloride	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Chlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Chloroethane	BRL	10		ug/L	165773	1	08/29/2012 20:04	NP				
Chloroform	1800	100		ug/L	165773	20	08/29/2012 04:57	NP				
Chloromethane	BRL	10		ug/L	165773	1	08/29/2012 20:04	NP				
cis-1,2-Dichloroethene	2900	100		ug/L	165773	20	08/29/2012 04:57	NP				
cis-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Cyclohexane	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Dibromochloromethane	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Dichlorodifluoromethane	BRL	10		ug/L	165773	1	08/29/2012 20:04	NP				
Ethylbenzene	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Freon-113	BRL	10		ug/L	165773	1	08/29/2012 20:04	NP				
Isopropylbenzene	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
m,p-Xylene	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Methyl acetate	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Methyl tert-butyl ether	BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Methylcyclohexane	6.8	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
Methylene chloride	45	5.0		ug/L	165773	1	08/29/2012 20:04	NP				
o-Xylene	5.2	5.0		ug/L	165773	1	08/29/2012 20:04	NP				

Qualifiers:

Narr See case narrative

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

NC Not confirmed

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12237-MW-3

**Project Name:** Capitol Adhesives Collection Date: 8/24/2012 11:15:00 AM

Date:

31-Aug-12

Lab ID: 1208J49-007 Matrix: Groundwater

Analyses		Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS S	SW8260B				(SW	V5030B)			
Styrene		BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP
Tetrachloroethene		3400	100		ug/L	165773	20	08/29/2012 04:57	NP
Toluene		7.2	5.0		ug/L	165773	1	08/29/2012 20:04	NP
trans-1,2-Dichloroethene		180	100		ug/L	165773	20	08/29/2012 04:57	NP
trans-1,3-Dichloropropene		BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP
Trichloroethene		6100	250		ug/L	165773	50	08/29/2012 03:00	NP
Trichlorofluoromethane		BRL	5.0		ug/L	165773	1	08/29/2012 20:04	NP
Vinyl chloride		230	40		ug/L	165773	20	08/29/2012 04:57	NP
Surr: 4-Bromofluorobenzene		93.1	67.4-123		%REC	165773	50	08/29/2012 03:00	NP
Surr: 4-Bromofluorobenzene		94.5	67.4-123		%REC	165773	1	08/29/2012 20:04	NP
Surr: 4-Bromofluorobenzene		96.8	67.4-123		%REC	165773	20	08/29/2012 04:57	NP
Surr: Dibromofluoromethane		113	75.5-128		%REC	165773	20	08/29/2012 04:57	NP
Surr: Dibromofluoromethane		108	75.5-128		%REC	165773	50	08/29/2012 03:00	NP
Surr: Dibromofluoromethane		114	75.5-128		%REC	165773	1	08/29/2012 20:04	NP
Surr: Toluene-d8		96.5	70-120		%REC	165773	50	08/29/2012 03:00	NP
Surr: Toluene-d8		102	70-120		%REC	165773	1	08/29/2012 20:04	NP
Surr: Toluene-d8		98.7	70-120		%REC	165773	20	08/29/2012 04:57	NP
BOD (5 day) (E405.1/SM5210B)									
Biochemical Oxygen Demand		BRL	5.0		mg/L	165632	1	08/24/2012 17:30	MG

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12237-MW-3B

Project Name: Capitol Adhesives Collection Date: 8/24/2012 11:35:00 AM

Date:

31-Aug-12

Lab ID: 1208J49-008 Matrix: Groundwater

Analyses		Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
TCL VOLATILE ORGANICS	SW8260B				(SV	V5030B)			
1,1,1-Trichloroethane		40	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,1,2,2-Tetrachloroethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,1,2-Trichloroethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,1-Dichloroethane		75	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,1-Dichloroethene		170	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,2,4-Trichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,2-Dibromo-3-chloropropane		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,2-Dibromoethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,2-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,2-Dichloroethane		40	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,2-Dichloropropane		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,3-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
1,4-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
2-Butanone		BRL	50		ug/L	165773	1	08/29/2012 18:09	NP
2-Hexanone		BRL	10		ug/L	165773	1	08/29/2012 18:09	NP
4-Methyl-2-pentanone		BRL	10		ug/L	165773	1	08/29/2012 18:09	NP
Acetone		BRL	50		ug/L	165773	1	08/29/2012 18:09	NP
Benzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Bromodichloromethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Bromoform		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Bromomethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Carbon disulfide		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Carbon tetrachloride		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Chlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Chloroethane		BRL	10		ug/L	165773	1	08/29/2012 18:09	NP
Chloroform		20	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Chloromethane		BRL	10		ug/L	165773	1	08/29/2012 18:09	NP
cis-1,2-Dichloroethene		150	5.0		ug/L	165773	1	08/29/2012 18:09	NP
cis-1,3-Dichloropropene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Cyclohexane		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Dibromochloromethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Dichlorodifluoromethane		BRL	10		ug/L	165773	1	08/29/2012 18:09	NP
Ethylbenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Freon-113		BRL	10		ug/L	165773	1	08/29/2012 18:09	NP
Isopropylbenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
m,p-Xylene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Methyl acetate		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Methyl tert-butyl ether		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Methylcyclohexane		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
Methylene chloride		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP
o-Xylene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP

Qualifiers:

Narr See case narrative

NC Not confirmed

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12237-MW-3B

Project Name: Capitol Adhesives Collection Date: 8/24/2012 11:35:00 AM

Lab ID: 1208J49-008 Matrix: Groundwater

Analyses		Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst		
TCL VOLATILE ORGANICS S	W8260B	(SW5030B)									
Styrene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP		
Tetrachloroethene		520	50		ug/L	165773	10	08/30/2012 12:35	JT		
Toluene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP		
trans-1,2-Dichloroethene		8.9	5.0		ug/L	165773	1	08/29/2012 18:09	NP		
trans-1,3-Dichloropropene		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP		
Trichloroethene		370	50		ug/L	165773	10	08/30/2012 12:35	JT		
Trichlorofluoromethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:09	NP		
Vinyl chloride		61	2.0		ug/L	165773	1	08/29/2012 18:09	NP		
Surr: 4-Bromofluorobenzene		85.1	67.4-123		%REC	165773	10	08/30/2012 12:35	JT		
Surr: 4-Bromofluorobenzene		93.1	67.4-123		%REC	165773	1	08/29/2012 18:09	NP		
Surr: Dibromofluoromethane		102	75.5-128		%REC	165773	10	08/30/2012 12:35	JT		
Surr: Dibromofluoromethane		114	75.5-128		%REC	165773	1	08/29/2012 18:09	NP		
Surr: Toluene-d8		95.7	70-120		%REC	165773	10	08/30/2012 12:35	JT		
Surr: Toluene-d8		96	70-120		%REC	165773	1	08/29/2012 18:09	NP		
BOD (5 day) (E405.1/SM5210B)											
Biochemical Oxygen Demand		BRL	5.0		mg/L	165632	1	08/24/2012 17:30	MG		

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

Date:

31-Aug-12

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc.

**Project Name:** Capitol Adhesives **Lab ID:** 1208J49-009

**Date:** 31-Aug-12

Client Sample ID:12237-DUPCollection Date:8/24/2012Matrix:Groundwater

Analyses		Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS	SW8260B				(SV	V5030B)			
1,1,1-Trichloroethane		250	100		ug/L	165773	20	08/30/2012 12:05	JT
1,1,2,2-Tetrachloroethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
1,1,2-Trichloroethane		7.5	5.0		ug/L	165773	1	08/29/2012 18:37	NP
1,1-Dichloroethane		180	5.0		ug/L	165773	1	08/29/2012 18:37	NP
1,1-Dichloroethene		490	100		ug/L	165773	20	08/30/2012 12:05	JT
1,2,4-Trichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
1,2-Dibromo-3-chloropropane		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
1,2-Dibromoethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
1,2-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
1,2-Dichloroethane		190	100		ug/L	165773	20	08/30/2012 12:05	JT
1,2-Dichloropropane		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
1,3-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
1,4-Dichlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
2-Butanone		BRL	50		ug/L	165773	1	08/29/2012 18:37	NP
2-Hexanone		BRL	10		ug/L	165773	1	08/29/2012 18:37	NP
4-Methyl-2-pentanone		BRL	10		ug/L	165773	1	08/29/2012 18:37	NP
Acetone		BRL	50		ug/L	165773	1	08/29/2012 18:37	NP
Benzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Bromodichloromethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Bromoform		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Bromomethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Carbon disulfide		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Carbon tetrachloride		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Chlorobenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Chloroethane		BRL	10		ug/L	165773	1	08/29/2012 18:37	NP
Chloroform		230	100		ug/L	165773	20	08/30/2012 12:05	JT
Chloromethane		BRL	10		ug/L	165773	1	08/29/2012 18:37	NP
cis-1,2-Dichloroethene		450	100		ug/L	165773	20	08/30/2012 12:05	JT
cis-1,3-Dichloropropene		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Cyclohexane		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Dibromochloromethane		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Dichlorodifluoromethane		BRL	10		ug/L	165773	1	08/29/2012 18:37	NP
Ethylbenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Freon-113		BRL	10		ug/L	165773	1	08/29/2012 18:37	NP
Isopropylbenzene		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
m,p-Xylene		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Methyl acetate		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Methyl tert-butyl ether		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Methylcyclohexane		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Methylene chloride		14	5.0		ug/L	165773	1	08/29/2012 18:37	NP
o-Xylene		BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP

Qualifiers:

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc.

**Project Name:** Capitol Adhesives **Lab ID:** 1208J49-009

**Date:** 31-Aug-12

Client Sample ID: 12237-DUP
Collection Date: 8/24/2012
Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW826	0B			(SW	(5030B)			
Styrene	BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Tetrachloroethene	900	100		ug/L	165773	20	08/30/2012 12:05	JT
Toluene	BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
trans-1,2-Dichloroethene	32	5.0		ug/L	165773	1	08/29/2012 18:37	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Trichloroethene	1100	100		ug/L	165773	20	08/30/2012 12:05	JT
Trichlorofluoromethane	BRL	5.0		ug/L	165773	1	08/29/2012 18:37	NP
Vinyl chloride	110	2.0		ug/L	165773	1	08/29/2012 18:37	NP
Surr: 4-Bromofluorobenzene	97.5	67.4-123		%REC	165773	1	08/29/2012 18:37	NP
Surr: 4-Bromofluorobenzene	84.6	67.4-123		%REC	165773	20	08/30/2012 12:05	JT
Surr: Dibromofluoromethane	103	75.5-128		%REC	165773	20	08/30/2012 12:05	JT
Surr: Dibromofluoromethane	110	75.5-128		%REC	165773	1	08/29/2012 18:37	NP
Surr: Toluene-d8	94.7	70-120		%REC	165773	1	08/29/2012 18:37	NP
Surr: Toluene-d8	93.3	70-120		%REC	165773	20	08/30/2012 12:05	JT
BOD (5 day) (E405.1/SM5210B)								
Biochemical Oxygen Demand	BRL	5.0		mg/L	165632	1	08/24/2012 17:30	MG

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative
NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12237-RINSATE

**Project Name:** Capitol Adhesives Collection Date: 8/24/2012 11:50:00 AM

Date:

31-Aug-12

Lab ID:1208J49-010Matrix:Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8	260B			(SV	V5030B)			
1,1,1-Trichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,1-Dichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,1-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,2-Dibromoethane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,2-Dichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,2-Dichloropropane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
2-Butanone	BRL	50		ug/L	165773	1	08/29/2012 07:50	NP
2-Hexanone	BRL	10		ug/L	165773	1	08/29/2012 07:50	NP
4-Methyl-2-pentanone	BRL	10		ug/L	165773	1	08/29/2012 07:50	NP
Acetone	BRL	50		ug/L	165773	1	08/29/2012 07:50	NP
Benzene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Bromodichloromethane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Bromoform	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Bromomethane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Carbon disulfide	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Carbon tetrachloride	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Chlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Chloroethane	BRL	10		ug/L	165773	1	08/29/2012 07:50	NP
Chloroform	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Chloromethane	BRL	10		ug/L	165773	1	08/29/2012 07:50	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Cyclohexane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Dibromochloromethane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Dichlorodifluoromethane	BRL	10		ug/L	165773	1	08/29/2012 07:50	NP
Ethylbenzene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Freon-113	BRL	10		ug/L	165773	1	08/29/2012 07:50	NP
Isopropylbenzene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
m,p-Xylene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Methyl acetate	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Methylcyclohexane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
Methylene chloride	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP
o-Xylene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP

Qualifiers:

Narr See case narrative

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

NC Not confirmed

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12237-RINSATE

Project Name: Capitol Adhesives Collection Date: 8/24/2012 11:50:00 AM

Date:

31-Aug-12

Lab ID:1208J49-010Matrix:Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst			
TCL VOLATILE ORGANICS SW82	60B	OB (SW5030B)									
Styrene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP			
Tetrachloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP			
Toluene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP			
trans-1,2-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP			
trans-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP			
Trichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP			
Trichlorofluoromethane	BRL	5.0		ug/L	165773	1	08/29/2012 07:50	NP			
Vinyl chloride	BRL	2.0		ug/L	165773	1	08/29/2012 07:50	NP			
Surr: 4-Bromofluorobenzene	94.1	67.4-123		%REC	165773	1	08/29/2012 07:50	NP			
Surr: Dibromofluoromethane	112	75.5-128		%REC	165773	1	08/29/2012 07:50	NP			
Surr: Toluene-d8	98.6	70-120		%REC	165773	1	08/29/2012 07:50	NP			

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:TRIP BLANKProject Name:Capitol AdhesivesCollection Date:8/24/2012

Project Name:Capitol AdhesivesCollection Date:8/24/2012Lab ID:1208J49-011Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
TCL VOLATILE ORGANICS SW8	260B			(SV	V5030B)			
1,1,1-Trichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,1-Dichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,1-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,2-Dibromoethane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,2-Dichloroethane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,2-Dichloropropane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
2-Butanone	BRL	50		ug/L	165773	1	08/29/2012 03:58	NP
2-Hexanone	BRL	10		ug/L	165773	1	08/29/2012 03:58	NP
4-Methyl-2-pentanone	BRL	10		ug/L	165773	1	08/29/2012 03:58	NP
Acetone	BRL	50		ug/L	165773	1	08/29/2012 03:58	NP
Benzene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Bromodichloromethane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Bromoform	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Bromomethane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Carbon disulfide	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Carbon tetrachloride	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Chlorobenzene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Chloroethane	BRL	10		ug/L	165773	1	08/29/2012 03:58	NP
Chloroform	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Chloromethane	BRL	10		ug/L	165773	1	08/29/2012 03:58	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Cyclohexane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Dibromochloromethane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Dichlorodifluoromethane	BRL	10		ug/L	165773	1	08/29/2012 03:58	NP
Ethylbenzene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Freon-113	BRL	10		ug/L	165773	1	08/29/2012 03:58	NP
Isopropylbenzene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
m,p-Xylene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Methyl acetate	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Methylcyclohexane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Methylene chloride	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
o-Xylene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP

Qualifiers:

BRL Below reporting limit

Date:

31-Aug-12

Narr See case narrative

NC Not confirmed

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client:Environmental Planning Specialists, Inc.Client Sample ID:TRIP BLANKProject Name:Capitol AdhesivesCollection Date:8/24/2012

Project Name:Capitol AdhesivesCollection Date:8/24/2012Lab ID:1208J49-011Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8	260B			(SW	/5030B)			
Styrene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Tetrachloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Toluene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Trichloroethene	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Trichlorofluoromethane	BRL	5.0		ug/L	165773	1	08/29/2012 03:58	NP
Vinyl chloride	BRL	2.0		ug/L	165773	1	08/29/2012 03:58	NP
Surr: 4-Bromofluorobenzene	99.8	67.4-123		%REC	165773	1	08/29/2012 03:58	NP
Surr: Dibromofluoromethane	103	75.5-128		%REC	165773	1	08/29/2012 03:58	NP
Surr: Toluene-d8	95.1	70-120		%REC	165773	1	08/29/2012 03:58	NP

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

Date:

31-Aug-12

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

## Sample/Cooler Receipt Checklist

Client EPS		Work Order	r Number	1208549
Checklist completed by	24/20n			
Carrier name: FedEx UPS Courier Client US	S Mail Other		_	
Shipping container/cooler in good condition?	Yes _	No	Not Present	
Custody seals intact on shipping container/cooler?	Yes	No	Not Present _	
Custody seals intact on sample bottles?	Yes	No	Not Present/	
Container/Temp Blank temperature in compliance? (4°C±2)*	Yes _	No		
Cooler #1 3, 7 Cooler #2 Cooler #3	Cooler #4	Coc	oler#5	Cooler #6
Chain of custody present?	Yes _	No		
Chain of custody signed when relinquished and received?	Yes _	No		
Chain of custody agrees with sample labels?	Yes _	No		
Samples in proper container/bottle?	Yes _	No		
Sample containers intact?	Yes _	No _		
Sufficient sample volume for indicated test?	Yes _	No		
All samples received within holding time?	Yes _	No		
Was TAT marked on the COC?	Yes _	No		
Proceed with Standard TAT as per project history?	Yes	No	Not Applicable	_
Water - VOA vials have zero headspace? No VOA vials su	ıbmitted	Yes 🟒	No	
Water - pH acceptable upon receipt?	Yes _	No	Not Applicable	_
Adjusted?				
Sample Condition: Good Other(Explain)				
(For diffusive samples or AIHA lead) Is a known blank include	led? Ves	N	Jo /	

See Case Narrative for resolution of the Non-Conformance.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample\_Cooler\_Receipt\_Checklist

<sup>\*</sup> Samples do not have to comply with the given range for certain parameters.

**Date:** 31-Aug-12

Client: Environmental Planning Specialists, Inc.

Project: Capitol Adhesives

**Lab Order:** 1208J49

## **Dates Report**

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1208J49-001A	12236-MW-1R	8/23/2012 10:20:00AM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/29/2012
1208J49-001B	12236-MW-1R	8/23/2012 10:20:00AM	Groundwater	Biochemical Oxygen Demand (BOD)		08/24/2012	08/24/2012
1208J49-002A	12236-MW-16	8/23/2012 4:10:00PM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/29/2012
1208J49-002B	12236-MW-16	8/23/2012 4:10:00PM	Groundwater	Biochemical Oxygen Demand (BOD)		08/24/2012	08/24/2012
1208J49-003A	12236-MW-15	8/23/2012 4:40:00PM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/29/2012
1208J49-003B	12236-MW-15	8/23/2012 4:40:00PM	Groundwater	Biochemical Oxygen Demand (BOD)		08/24/2012	08/24/2012
1208J49-004A	12236-MW-4	8/23/2012 5:40:00PM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/29/2012
1208J49-004B	12236-MW-4	8/23/2012 5:40:00PM	Groundwater	Biochemical Oxygen Demand (BOD)		08/24/2012	08/24/2012
1208J49-005A	12236-MW-5	8/23/2012 6:40:00PM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/29/2012
1208J49-005B	12236-MW-5	8/23/2012 6:40:00PM	Groundwater	Biochemical Oxygen Demand (BOD)		08/24/2012	08/24/2012
1208J49-006A	12237-MW-3D	8/24/2012 9:45:00AM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/29/2012
1208J49-006B	12237-MW-3D	8/24/2012 9:45:00AM	Groundwater	Biochemical Oxygen Demand (BOD)		08/24/2012	08/24/2012
1208J49-007A	12237-MW-3	8/24/2012 11:15:00AM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/29/2012
1208J49-007B	12237-MW-3	8/24/2012 11:15:00AM	Groundwater	Biochemical Oxygen Demand (BOD)		08/24/2012	08/24/2012
1208J49-008A	12237-MW-3B	8/24/2012 11:35:00AM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/29/2012
1208J49-008A	12237-MW-3B	8/24/2012 11:35:00AM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/30/2012
1208J49-008B	12237-MW-3B	8/24/2012 11:35:00AM	Groundwater	Biochemical Oxygen Demand (BOD)		08/24/2012	08/24/2012
1208J49-009A	12237-DUP	8/24/2012 12:00:00AM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/29/2012
1208J49-009A	12237-DUP	8/24/2012 12:00:00AM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/30/2012
1208J49-009B	12237-DUP	8/24/2012 12:00:00AM	Groundwater	Biochemical Oxygen Demand (BOD)		08/24/2012	08/24/2012
1208J49-010A	12237-RINSATE	8/24/2012 11:50:00AM	Groundwater	TCL VOLATILE ORGANICS		08/29/2012	08/29/2012
1208J49-011A	TRIP BLANK	8/24/2012 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		08/29/2012	08/29/2012

Environmental Planning Specialists, Inc. **Client:** 

Capitol Adhesives **Project Name:** 

Workorder: 1208J49

### ANALYTICAL QC SUMMARY REPORT

Date:

31-Aug-12

BatchID: 165632

Sample ID: MB-165632 Sample Type: MBLK	Client ID: TestCode: BO	D (5 day) (E405.1/SM	(5210B)		Uni Bat	ts: <b>mg/L</b> chID: <b>165632</b>			1/2012 1/2012	Run No: <b>227974</b> Seq No: <b>4771921</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Biochemical Oxygen Demand	BRL	0.2	0	0	0	0	0	0	0	0
Sample ID: LCS-165632	Client ID:				Uni	ts: mg/L	Prep	Date: 08/24	1/2012	Run No: 227974
SampleType: LCS	TestCode: BO	D (5 day) (E405.1/SM	(5210B)		Bat	chID: 165632	Ana	lysis Date: 08/24	1/2012	Seq No: <b>4771932</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Biochemical Oxygen Demand	197.3	5.0	198	0	99.6	85	115	0	0	0
Sample ID: LCSD-165632	Client ID:				Uni	ts: mg/L	Prep	Date: 08/24	1/2012	Run No: 227974
SampleType: LCSD	TestCode: BO	D (5 day) (E405.1/SM	(5210B)		Bat	chID: 165632	Ana	lysis Date: 08/24	1/2012	Seq No: <b>4771933</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Biochemical Oxygen Demand	205.8	5.0	198	0	104	85	115	197.3	4.22	20

Qualifiers: Greater than Result value

> BRL Below reporting limit

Rpt Lim Reporting Limit

Estimated value detected below Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

**Client:** Environmental Planning Specialists, Inc.

Capitol Adhesives **Project Name:** 

Workorder: 1208J49

## ANALYTICAL QC SUMMARY REPORT

BatchID: 165773

Date:

31-Aug-12

Sample ID: MB-165773 SampleType: MBLK	Client ID: TestCode: TCL VOLATILE ORGANICS SW8260B					Units: ug/L Prep Date: 08/2 BatchID: 165773 Analysis Date: 08/2			8/29/2012 Run No: 227933 8/29/2012 Seq No: 4770672		
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual	
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	
Acetone	BRL	50	0	0	0	0	0	0	0	0	
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	

Qualifiers:

Greater than Result value

BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

**Client:** Environmental Planning Specialists, Inc.

Capitol Adhesives **Project Name:** 

Workorder: 1208J49

### ANALYTICAL QC SUMMARY REPORT

Date:

31-Aug-12

BatchID: 165773

Sample ID: MB-165773 SampleType: MBLK	Client ID: TestCode: TCL VOLATILE ORGANICS SW8260B				Un Bat	its: <b>ug/L</b> tchID: <b>16577</b> 3		Date: <b>08/29</b> lysis Date: <b>08/29</b>		Run No: <b>227933</b> Seq No: <b>4770672</b>	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual	
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Freon-113	BRL	10	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	47.81	0	50	0	95.6	67.4	123	0	0	0	
Surr: Dibromofluoromethane	58.47	0	50	0	117	75.5	128	0	0	0	
Surr: Toluene-d8	49.48	0	50	0	99	70	120	0	0	0	

Qualifiers: Greater than Result value

> BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

Client: Environmental Planning Specialists, Inc.

**Project Name:** Capitol Adhesives

Rpt Lim Reporting Limit

roject Name: Capitol Adhesives

Workorder: 1208J49

## ANALYTICAL QC SUMMARY REPORT

Date:

31-Aug-12

BatchID: 165773

Sample ID: LCS-165773 SampleType: LCS	Client ID: TestCode: TCL	VOLATILE ORGA	ANICS SW8260	В	Un Bat	its: <b>ug/L</b> rchID: <b>165773</b>		Date: 08/29 alysis Date: 08/29		Run No: <b>227933</b> Seq No: <b>4770661</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
1,1-Dichloroethene	49.26	5.0	50	0	98.5	60	140	0	0	0
Benzene	51.08	5.0	50	0	102	70	130	0	0	0
Chlorobenzene	46.92	5.0	50	0	93.8	70	130	0	0	0
Toluene	51.47	5.0	50	0	103	70	130	0	0	0
Trichloroethene	52.26	5.0	50	0	105	70	130	0	0	0
Surr: 4-Bromofluorobenzene	50.01	0	50	0	100	67.4	123	0	0	0
Surr: Dibromofluoromethane	52.31	0	50	0	105	75.5	128	0	0	0
Surr: Toluene-d8	48.96	0	50	0	97.9	70	120	0	0	0
Sample ID: 1208J49-007AMS SampleType: MS		D: 12237-MW-3 de: TCL VOLATILE ORGANICS SW8260B		Units: ug/L BatchID: 165773			Prep Date: <b>08/29</b> /2. Analysis Date: <b>08/29</b> /2.		Run No: <b>227933</b> Seq No: <b>4770663</b>	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
,1-Dichloroethene	5306	250	2500	3042	90.6	50.1	179	0	0	0
Benzene	2513	250	2500	0	101	61.2	150	0	0	0
Chlorobenzene	2180	250	2500	0	87.2	72.1	140	0	0	0
Coluene	2478	250	2500	0	99.1	58.7	154	0	0	0
richloroethene	8749	250	2500	6113	105	68.3	149	0	0	0
Surr: 4-Bromofluorobenzene	2594	0	2500	0	104	67.4	123	0	0	0
Surr: Dibromofluoromethane	2718	0	2500	0	109	75.5	128	0	0	0
Surr: Toluene-d8	2552	0	2500	0	102	70	120	0	0	0
Sample ID: 1208J49-007AMSD SampleType: MSD	Client ID: 1223 TestCode: TCL		ANICS SW8260	В	Un: Bat	its: <b>ug/L</b> cchID: <b>165773</b>		Date: 08/29 alysis Date: 08/29		Run No: <b>227933</b> Seq No: <b>4770666</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
,1-Dichloroethene	5366	250	2500	3042	93	50.1	179	5306	1.12	23.3
Benzene	2568	250	2500	0	103	61.2	150	2513	2.18	19
Qualifiers: > Greater than Result value  BRL Below reporting limit  J Estimated value detector	ne ed below Reporting Limit		E Estim	than Result value ated (value above quantitate te not NELAC certified	ation range)		Н	Analyte detected in the associated Holding times for preparation RPD outside limits due to	ion or analysis	

S Spike Recovery outside limits due to matrix

Client: Environmental Planning Specialists, Inc.

**Project Name:** Capitol Adhesives

Workendon 1200140

Workorder: 1208J49

## ANALYTICAL QC SUMMARY REPORT

BatchID: 165773

Date:

31-Aug-12

Sample ID: 1208J49-007AMSD	Client ID: 12				Uni	ts: ug/L	Prep	Date: 08/29/	/2012 H	Run No: 227933
SampleType: MSD	TestCode: To	TestCode: TCL VOLATILE ORGANICS SW8260B				chID: 165773	Ana	Analysis Date: <b>08/29/2012</b> Seq No: <b>477066</b>		
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Chlorobenzene	2277	250	2500	0	91.1	72.1	140	2180	4.38	21.5
Toluene	2560	250	2500	0	102	58.7	154	2478	3.26	20
Trichloroethene	8992	250	2500	6113	115	68.3	149	8749	2.73	17.7
Surr: 4-Bromofluorobenzene	2599	0	2500	0	104	67.4	123	2594	0	0
Surr: Dibromofluoromethane	2769	0	2500	0	111	75.5	128	2718	0	0
Surr: Toluene-d8	2493	0	2500	0	99.7	70	120	2552	0	0

BRL Below reporting limit

J Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

< Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded



# Monitoring Well \_ampling Form

EPS Project: Capitol Adhesives	Date: 08/23/2012
Well ID: MW-1R Sampling Performed By: Ben Conve. Jeff Dennis	Field Conditions: Clear, ~86°F
Well Construction:  Well Labeled:  Well Cap:   General Condition of Well:  Condition of surrounding area:   Depth to Water from TOC:  Method of measure:  21.22  Three Well Volumes (gal): 10.20	
Purging Method:  Sample Method:  ds rect	Time @ Start of Purge: 0910 Sample Parameters: voc /BoD

Time	Volume (gal)	Temp (oC)	рН	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
10:00	39.0	19.83	6.39	.240	3.42	26.3	150	6.80	
0'-05	44.0	19.83	6.10	1240	1.66	24.0	148	6.80	
101.10	49.0	19.83	6-13	.240	0.81	24.6	146	6.80	17
10:15	54.0	19.87	6.12	, lyo	0.74	24.5	146	6.80	
									N'
		301-001	-						
									Fe (et) = 0.0 mg/1
								1	-0 2516

Sample ID: 12236- NW-IR

Time Collected: 10: 20

Technician Signature

## Monitoring Wei. Jampling Form

EPS Project	t: Capitol Ad	hesives			Date: 8/23/17						
	tion:  m TOC: (in): water in well (V	Well Cap:	Well Locked: 5.03  evel from TOC):	Depth to Water from TOC: 2.62  Method of measure: 22-41 WI.M  E 22-41							
Volume of water in well (Ht. x(.16 for 2")(.653 for 4" )(1.469 for 6"):  Purging Method:  Sample Method:			1000	Time @ Start of Purge:  3'.50  Sample Parameters: Voc. 80D							
Time	Volume (gal)	Temp (oC)	рН	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	Comments			
1455	7.00	19.67	6.14	0.652	0.00	13.0	64	2.99		.67	
(505	8.00	19.95	6.18	0.640	0.00	9.06	61	2.99			
1515	9.50	20.25	6.23	0,621	0.00	6.15	58	2,99/	45		
1525	10.50	20.26	6.29	6,609	6.00	3.96	54	2.99			
1545	13.0	20.14	(6.35	0.607	6.00	3.09	50	3.00	7		
フ・フ			6.44	0.584	9.00	7.78	39	2.99			
1555	14.0	13.			0.00	1.00	2 1	5-1/			
1555 (605	14.0 15.0	20.94	6.53	0.582	0.00	2.83	34	3.01			
					৩.৬০			3.01			

Sample ID: 12236 - MW - 16

Time Collected: Lato Technician Signature

FO(E) = 0.0 mg/4

## Monitoring Wel. Jampling Form

EDC Draine	v Comital Ad	h										
EPS Project	: Capitol Adl	nesives			Date: 8-23-12							
Well ID:	MW-15			2-4	Field Conditions: 85°F clear							
Sampling Perf			sett Dennis /	(70) Bay C	Crowl							
Well Construc	tion:		2" Flush	mount	General Condition of Well:							
Well Labeled:	_ GA	Well Cap:	ues	Well Locked:	Condition of surrounding area:							
Well depth from TOC: 23.89						Depth to Wate	r from TOC:	1 3.	07			
Well Diameter	ET A.			Method of measure:								
		ell depth from		20.82								
		(.16 for 2")(.653	for 6"):	3.33 Three Well Volumes (gal): 9.99								
Purging Method:					Time @ Start of Purge:   \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\							
Sample Method:					Samp	le Parameters:	VOC. ROT					
		1			•			-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -				
	Volume		99	Cond.		Turbidity						
Time	(gal)	Temp (oC)	рН	(mS/cm)	DO (mg/L)	(NTU)	ORP (mV)	DTW	Comments			
1508	7.00	24.94	7.24	0.352	0.55	52.6	139	3.34				
1520	8.50	24.08	7.23	0.358	0.25	22.7	146	3.41				
1530	10.00	24.00	7.21	0.357	0.23	21.3	145	3.41				
1540	11.00	23.97	7.23	0.359	0.24	18.3	136	3.41	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20			
1550	12.50	24.05	7.19	0.359	0.25	15.6	132	3.39				
1600	13.50	23.85	7.14	0.759	0.21	20.1	137	3.39				
1420	4.75.50 CB	23. 87	7.17	0.360	0.19'	16.3	124	3.40		111111111111111111111111111111111111111		
lla 35	17.75	23.84	7.20	0.359	0.17	18.6	121	3.42				
					I 100					_		
									Sec. 1997			

Sample ID: 127236- MW-15

Time Collected: ( Q 4 )

Technician Signature

Fe(2+) = 0.0 mg/L

## Monitoring Wel. Jampling Form

EPS Project: Capitol Adh	esives	Date: 8-23 −12						
Well ID: MW-4		Field Conditions: Goof Clear						
Sampling Performed By:	Jeff Danis / Ban Clowe							
Well Construction:	2" flook against	General Condition of Well:						
Well Labeled: 🔥 🐧	Well Con: Well Looked:	Condition of surrounding area:						
Well depth from TOC:	9.68	Depth to Water from TOC: 7.62						
Well Diameter (in):	7"	Method of measure:						
Height (Ht) of water in well (W	ell depth from TOC - Static level from TOC):	7-06						
Volume of water in well (Ht. x	(.16 for 2")(.653 for 4" )(1.469 for 6"):	Three Well Volumes (gal): 3.39						
Purging Method:	peristaltic pump	Time @ Start of Purge: 16:30						
Sample Method:	Straw Direch	Sample Parameters: VOC , BOD						

Volume			Cond.		Turbidity		Depth	9
(gal)	Temp (oC)	рН	(mS/cm)	DO (mg/L)	(NTU)	ORP (mV)	un ter	Comments
1.25	27.15	6.62	0.415	1.52	47.8	-58	4.08	
2.50	26.03	6.64	6.408	0.05	15.9	-68	4.09	
3.25	25.70	6.57	0.405	0.00	12.3	-67	4.10	
4-25	25.50	6.60	0-402	0.00	10.4	-71		
5.25	25.35	6.61	0.001	0.00	7.36	-73	4.04	9
****					C.E. WEE			
								100 mm
ALAMASS AL-						12 12 2002		
				2				
**************************************								
#F								
								٧.(ك)
								Fe(4) = 0.2 mg/c
		- initial						
	(gal)	(gal) Temp (oC) 1.25 27.15 2.60 26.03 3.25 25.70 4-25 25.50	(gal) Temp (oC) pH 1.25 27.15 6.62 2.50 26.03 6.69 3.25 25.70 6.57 4-25 25.50 6.60	(gal) Temp (oC) pH (mS/cm) 1.25 27.15 6.62 0.415 1.50 26.03 6.64 0.408 3.25 25.70 6.57 0.405 4-25 25.50 6.60 0.402	(gal)         Temp (oC)         pH         (mS/cm)         DO (mg/L)           1.25         27.15         6.62         0.415         1.52           2.50         26.63         6.69         0.408         0.00           3.25         25.70         6.57         0.465         0.00           4-25         25.50         6.60         0.402         0.00	(gal)         Temp (oC)         pH         (mS/cm)         DO (mg/L)         (NTU)           1.25         27.15         6.62         0.415         1.52         47.8           2.50         26.63         6.64         0.408         0.00         15.9           3.25         25.70         6.57         0.405         0.00         12.3           4-25         25.50         6.60         0.402         0.00         10.4	1.25 $27.15$ $6.62$ $0.415$ $1.52$ $47.8$ $-58$ $1.60$ $26.03$ $6.64$ $6.408$ $6.06$ $15.9$ $-68$ $3.25$ $25.70$ $6.57$ $0.405$ $0.00$ $12.3$ $-67$ $4.25$ $25.50$ $6.60$ $0.402$ $0.00$ $10.4$ $-7/$	(gal)         Temp (oC)         pH         (mS/cm)         DO (mg/L)         (NTU)         ORP (mV) $a \neq b \neq b$ 1.25 $\frac{37.15}{5}$ $\frac{6.62}{6.62}$ $\frac{0.415}{5}$ $\frac{1.52}{1.52}$ $\frac{47.8}{7.8}$ $\frac{-58}{5}$ $\frac{4.08}{4.08}$ 2.50 $\frac{26.69}{6.57}$ $\frac{6.405}{6.60}$ $\frac{6.60}{6.60}$ <t< td=""></t<>

Sample ID: 12236 - MW-4

Time Collected: 1740

Technician Signature\_\_\_\_

ire from

#### Monitoring Wel. Jampling Form

EDC Decises	. 0 14 - 1 A - 1				1100							
EPS Project	: Capitol Ad	nesives	**************************************				Date: 8	23-12				
Well ID:	MW-5				Field Conditions: 90 °F clear							
Sampling Perf		Jeff :	Dennis / Ben 1									
Well Construc Well Labeled:		14/. 11.0	2" Flush	t <sub>m</sub> u osn	General Condition of Well:							
Well depth fro	NO.	Well Cap:		Well Locked:	NO		urrounding are	21700	el desig			
	Diameter (in):					Depth to Wate			2.47			
		Vall danth from		TOC		d of measure:						
Height (Ht) of water in well (Well depth from TOC - Static level from TOC) Volume of water in well (Ht. x(.16 for 2")(.653 for 4" )(1.469 for 6"):							15.34		N.			
					2.4		Three Well V	olumes (g	jal): <u>7.36</u>			
						Start of Purge:						
	u.	Straw diest			Sample Parameters: VOL							
				T			r					
	Volume	1		Cond.		Turbidity		1				
Time	(gal)	Temp (oC)	рН	(mS/cm)	DO (mg/L)	(NTU)	ORP (mV)	DTW	Comments			
1745	3.0	22.43	6.92	0.7 <b>1</b> 4	3.57	39.0	-109	2.95				
1755	4.75	22.33	6.93	0.776	0.03	26.5	-112	2.94				
1805	6.00	22.26	6.99	0.771	0.00	19.8	-114	2.97				
1815	7.00	21.97	6.91	0.774	0.00	160.8	-113	2.97	•			
1825	8.00	22.06	6.87	0.769	6.00	12.4	1	2.98	- 10 0 10 10 10 10 10 10 10 10 10 10 10 1			
1835	0					12.7	-112	2.40				
)	9.00	21.77	6.90	0.774	0.00	9.48	- 114	2.98				
	9,00	21.77	6.90			9.48						
	_ 9,00	21.77	6.90			9.48						
	9,00	21.77	G.90			9.48						
	9,00	11.77	6.90			9.48						
	9,00	11.77	6.90			9.48						
	4,00	11.77	6.90			9.48						
	7,00	11.77	6.90			9.48						

Fer: 2.2 mg/1

Sample ID: 12 236 - MW-5

Time Collected: 1840

Technician Signature\_\_\_\_\_



#### Monitoring Web Jampling Form

EPS Project: Capitol Adh	esives				Date:	8-24-12	
Well ID: MW-3D	8 C 15-01	20. 1:		Field Conditions:	clear ,	~70° F	
Sampling Performed By: Well Construction:	Ben Crowe / Jeft 5	Dennis		General Condit			
Well Labeled: No 6	Well Cap: √es	Well Locked:	NO	Condition of su	rrounding a	area: good acoss	19 cavel
Well depth from TOC:	71:	81		Depth to Water			
Well Diameter (in):	2 inch		Me	thod of measure:	INLM		
Height (Ht) of water in well (W		level from TOC):		16.56	Alexander of the second	3. 190. 1	
Volume of water in well (Ht. x	.16 for 2")(.653 for 4" )(1.46	9 for 6"):	2.65		Three Wel	l Volumes (gal):	7.95
Purging Method:	low flow low st.	ress -		@ Start of Purge:	8:00	CANTON AND IN	
Sample Method:	Strau, direct		Sa	mple Parameters:	VCCs	3005	

Time	Volume (gal)	Temp (oC)	рН	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DIW	Comments
0846	4.00	19.76	7.30	0.390	0.94	19.2	41	5.63	
0856	5.00	19.88	7.28	0.390	0.83	6.75	30	5.65	
0906	5.75	20.10	7.31	0.389	0.44	5.23	22	5.67	
0921	2565	20.28	7.32	0.388	0.39	2.93	18	5.68	
0931	7.75	20.53	7.34	0.388	0.38	2.42	14	5.69	2
0941	8.75	20.69	7.36	0 -385	0.40	2.54	1/	5.72	
						1000			
				Language of the second		525 5395 500 500 500 500 500 500 500 500 500 50			
	4								
				The same second second	·	i i i	<u> </u>		
			<u> </u>				30000=301-30		
					-	:			
			Skara						Fe(0+) = 0 mg/L
									1 2

Sample ID: 12237-MW-3D

Time Collected: 09 45



#### Monitoring Wel₁ Jampling Form

Date: 8-2€12
Field Conditions: Clear , ~ 70° F
General Condition of Well:
Depth to Water from TOC: 5.40
Method of measure: NCM
Three Well Volumes (gal): 4.43
Sample Parameters: VoCs Bon

Time	Volume (gal)	Temp (oC)	рН	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
0832	2.00	32.11	6.69	0.531	1.38	175	210	6.37	
0842	2.75	21.90	6.67	0.527	5 Co 1.14	156	205	6.42	slowed pump
0852	3.25	22.02	6.68	0.518	1.04	95.7	201	6.44	- I I I I
0902	4.00	22.37	6.83	0.508	0.86	48.6	187	6.51	Slowed Pamp
0912	4.75	22.65	6.84	0.503	8.77	38.4	183	6.49	7
0920	5.25	22.97	6.84	0.498	0.79	36.4	18)	6.51	
6930	5.75	23.42	Co. 86	0-491	0-68	25.7	178	6.53	
09.10	6.00	23.98	6-86	0.485	0.65	25.1	178	6.55	
0950	6.50	24.90	6.85	0.475	0.60	24.0	173	6.60	Slowed DUMP
1000	7.00	25.42	6.85	0.469	0.52	23.4	174	6.56	of the fact of the second section of the section of the second section of the se
1010	7,50	26.12	6.87	0.461	0.49	18.6	173	0.52	_
1000	8.00	26.82	6.86	0.456	0.47	15.3	172	6.51	
10 30	8.50	27,21	6.87	0.497	0.48	14.8	172	6.54	
1040	9.00	27.81	6.87	0.441	0.48	13.5	17/	6.54	
1050	9.50	28.39	6.87	0.437	0.46	12.8	170	6.61	
1100	10.06	28,90	6.86	0.434	3.46	12.2	170	6.70	
1110	10.50	29,30	6.85	0.431	0.48	9.86	17(	6.84	
									Pe (21) = 0.0 mg/L

Sample ID: 12237-MW-3

Time Collected: 1) 15

Technician Signature\_\_\_\_

v 32



#### Monitoring Wel. Jampling Form

EPS Projec	t: Capitol Ad	hesives			Date: 08/24/2012						
Well ID:	MW-3B		<u> </u>		Field Conditions: clear, ~80° F						
Sampling Perl Well Construc	1000 to 1000 to 1000 to 1000 to 1000 to 1000 to 1000 to 1000 to 1000 to 1000 to 1000 to 1000 to 1000 to 1000 to	Ben Crowe		nn 5		General Condi	tion of Well:	good			
Well Labeled:		Well Cap:		Well Locked:	NO	Condition of s		a: 900d	Grass/gravel		
Well depth fro	m TOC:					Depth to Water	r from TOC:				
Well Diameter	(in):	2:0 ch			Method of measure: WとM						
Height (Ht) of	water in well (V	Vell depth from	TOC - Static le	vel from TOC):	•						
		(.16 for 2")(.653			Three Well Volumes (gal):						
Purging Methor	od:	down ho	le pump		Time @ Start of Purge: /8/6						
Sample Metho	od:	direc			Sample Parameters: VOCs , BD						
	Volume			Cond.		Turbidity			,		
Time	(gal)	Temp (oC)	pН	(mS/cm)	DO (mg/L)	(NTU)	ORP (mV)	DTW	Comments		
1100	36.0	18.36	7.44	0.349	1.35	86.0	72	13.40	sloved Dump		

Time	Volume (gal)	Temp (oC)	рН	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DT W	Comments
1100	36.0	(7.36	7.44	0.349	1.35	86.0	72	13.40	slowed Dump
1110	43.0	18.18	7.16	0.35)	1.68	38.5	59	10.78	STOPER PETAP
1120	50.0	18.13	7.16	0.351	1.05	20.6	32	10.79	
1130	57.6	18.17	7.17	0.351	0.59	1.64	11	10.80	
			- mboto majoridan	22					
	1,024 (0.400000								
		and the same agreed	1 1 1 1 St						Fe (1): 0.0mg/L
									7/

Sample ID: 12237-MW-3B

Time Collected: 135 Technician Signature 1





## APPENDIX E AST SUBGRADE SAMPLING WORK PLAN

Prepared for:

CEA, LLC 633 Chestnut Street, Suite 1640 Chattanooga, TN 37450

## AST SOIL SAMPLING WORK PLAN CAPITOL USA – DALTON FACILITY Dalton, Georgia

Prepared by:



1050 Crown Pointe Parkway, Suite 550 Atlanta, Georgia 30338 Tel: 404-315-9113

July, 2012



## AST SOIL SAMPLING WORK PLAN CAPITOL USA – DALTON FACILITY Dalton, Georgia

Prepared For:

CEA, LLC

633 Chestnut Street, Suite 1640 Chattanooga, TN 37450

Prepared By:

EPS

1050 Crown Pointe Parkway

Suite 550 Atlanta, GA 30338

Kirk Kessler, P.G. Principal

Timmerly Bullman, P.E. Senior Environmental Engineer

July 2012



## AST SOIL SAMPLING WORK PLAN CAPITOL USA – DALTON FACILITY Dalton, Georgia TABLE OF CONTENTS

1	INTR	ODUCTION	2
2	INVE	STIGATIVE APPROACH	3
	2.1 2.2 2.3	Site Preparation	3 3
	2.4 2.5	2.3.2 Soil Sample Collection	4 4
3	HEAL	_TH AND SAFETY	5
4	QUA	LITY ASSURANCE	6
5	4.1 4.2 4.3 4.4 4.5 4.6 4.7 <b>SAM</b>	Overview	6 6 6 7 7 8 8
	5.1 5.2 5.3 5.4 5.5 5.6	Overview Sample Custody Laboratory Procedures Chain-of-Custody Record Field Custody Transfer of Custody and Shipment	9 9 9 10
6	REFE	RENCES	12

#### **LIST OF FIGURES**

- Figure 1 Approximate Location of Known Spill
- Figure 2 Proposed Soil Sample Locations



#### **LIST OF ATTACHMENTS**

Attachment A Product Data Sheet: Microrester Deepour VE

Attachment B Health and Safety Plan



## PROFESSIONAL GEOLOGIST CERTIFICATION

"I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Kirk Kessler GA000685	7-3-2012
Printed Name and GA PE/PG Number	Date
Such Kernly * WRN. JOSEF	THE SE IS IN THE SECONDAL THE S
Signature and Stamp	es / 15A

DCN: RIVEDASE001 1 July 2012



#### 1 Introduction

This work plan describes the proposed methodology that will be followed in performing a soil investigation under and near the aboveground storage tank (AST) containment area at the Capitol USA - Dalton Adhesives facility (Site) located at 300 Cross Plains Boulevard, Dalton, Georgia. The Site has been accepted into Georgia's Voluntary Remediation Program (VRP) to address environmental concerns at the Site related to a historical spill of reclaimed 1,1,1-trichloroethane (TCA) from a delivery truck. Reclaimed solvents contain a fairly higher proportion of other chemical products; therefore, it is believed that the material spilled from the tanker truck likely also contained tetrachloroethene (PCE) and trichloroethene (TCE). TCA, PCE, TCE and daughter products have been detected in soil and groundwater at the Site. The spill occurred just north of the AST containment area (see Figure 1) and although some soil cleanup was performed following the spill in 1995, this work was poorly documented and it is likely the more current assessment findings represent residual contamination from that spill event.

The site hydrogeologic setting is somewhat unique in that much of the area exhibits artesian conditions during high water table periods, and in other portions of the site the depth to the water table during these periods is quite shallow, on the order of 1 to 2 ft bgs. The term "solid aquifer matrix" is used in describing samples collected at depths below the high water-table mark, since this does not constitute "soil" under the Hazardous Site Response Act (HSRA) definition. Therefore Risk Reduction Standards (RRS) for soil do not apply to this situation, but rather the data are considered in the context of "source." The HSRA rules define the term source as follows:

391-3-19-.02(2)(y) Source material means any material that includes or contains regulated substances that act or may likely act as a reservoir for migration of regulated substances to groundwater, soil, surface water, or air, or acts as a source for direct exposure.

Sampling of solid aquifer matrix soil (at a depth of 1 foot below the ground surface, bgs) in this area has indicated a possible source of tetrachloroethene (PCE) in the soil.

HSRA does not provide a precise definition of source material in terms of a concentration threshold for a given chemical constituent. Some conclude that the term "reservoir" in the definition implies the presence of a free-phase liquid product, and with that the concept of residual saturation condition (i.e., Csat) is applicable as a threshold condition. This concept was discussed with representatives of the Georgia Environmental Protection Division (EPD) in proposing a remedial action plan for source material abatement, where EPD expressed some disagreement with Csat as the basis for source remediation (one of the past sample locations north of the AST exceeds the Csat condition). During these same meetings, the EPD requested characterization of the condition in the soil/aquifer matrix underneath the AST containment area. Accordingly this work plan has been prepared for the purpose of assessing the conditions across the AST footprint. It was decided from these meetings that the results of this investigation will be used in evaluating remedial action extent and measures to address source material at the Site.



#### 2 INVESTIGATIVE APPROACH

#### 2.1 Site Preparation

Prior to sample collection, the plant manager will be consulted to determine the location of any underground utilities in the areas to be sampled. In accordance with Georgia laws (i.e., Call Before You Dig and the Georgia High Voltage Safety Act) the Utilities Protection Center will be called (811 or 1-800-282-7411) to request underground locating service and to request safeguards for overhead electrical lines (if any).

If any liquids have accumulated in the AST containment basins, they will be pumped off prior to sampling. It is anticipated that the owner (QEP) will remove and handle disposal of the liquids.

#### 2.2 Sample Locations

Figure 2 shows the proposed sample locations. Four sample locations are proposed in the area north of the AST containment area surrounding the past sample location that exceeded the Csat condition, and five sample locations are proposed within the AST containment area. The actual locations will be determined on-site to avoid physical obstructions and hazards. The highest chlorinated solvent concentrations at the Site have been observed at 3 feet bgs and less. Thus, two samples will be collected at each location: at 1 ft and 2 ft bgs.

#### 2.3 Sampling Protocol

#### 2.3.1 Concrete Coring

The proposed sample locations are beneath a concrete slab. Thus, a contractor will advance a hand-held concrete corer through the concrete slab using water as a lubricant to minimize friction, dust and potential sparks. The corer will be powered by a generator located on the contractor's truck. The concrete cores will be approximately 4 inches in diameter. A fan is to be run during the concrete coring to disperse any vapors that may be present. A portable gas analyzer (e.g., photoionization detector, PID) will be used to monitor the concentrations of volatile organic compounds (see Section 3).

Some water will accumulate during the concrete coring. The liquids will be pumped out of the containment area (if necessary) and stored in drums. A sample of the collected liquids will be send to the laboratory for analysis. Liquids collected will be disposed of properly based on the results of the laboratory analysis.

DCN: RIVEDASE001 3 July 2012



#### 2.3.2 Soil Sample Collection

Once the concrete core is removed, EPS personnel will advance hand augers through the underlying soil to the specified sample depths (1 ft and 2 ft bgs). EPS personnel will collect soil samples with decontaminated hand augers in accordance with EPA Region 4 Field Branches Quality System and Technical Procedures (Soil Sampling, SESDPROC-300-R2). Specifically, auger holes will be advanced one bucket at a time until the sample depth is achieved. When the sample depth is reached, the bucket used to advance the hole will be removed and a clean bucket will be attached. The clean auger bucket is then placed in the hole and filled with soil to make up the sample and removed. Because of the tendency for the auger bucket to scrape material from the sides of the auger hole while being extracted, samples will not be collected from the top several inches of soil in the auger bucket; the sample will be collected from the central part of the deepest portion of the auger bucket. Once the samples have been collected, the unused soil will be placed back into the open hole from which it came.

EPS personnel will place the samples in appropriate sample containers provided by the analytical laboratory, placed on ice in a cooler, logged under standard chain-of-custody procedures, and delivered to Analytical Environmental Services, Inc. in Norcross, Georgia for analysis.

#### 2.4 Repair of Containment Basins

To maintain the integrity of the containment basin, a contractor (Blackwell) will fill the core holes with a vinyl ester polymer grout (Microrester Deepour VE, see Attachment A). This grout is a tenacious bonding material that very quickly develops a seal that is chemically resistant. This grout will not degrade (unlike a cementitious or epoxy patch) if subject to a chemical spill. The contractor will skim-coat an additional layer of fiberglass embedded with the grout over all plugged boreholes to transfer movement of dissimilar material (grout and concrete) around the hole perimeter to bridge any hairline cracks should one occur after placement.

#### 2.5 Laboratory Analysis

The samples will be analyzed for TCA, PCE and their daughter products. Specifically, the samples will be analyzed using EPA Method 8260B for TCA, dichloroethane, chloroethane, PCE, TCE, cis-1,2-dichloroethene, and vinyl chloride.



#### 3 HEALTH AND SAFETY

A Health and Safety Plan is included in Appendix B. Personal protective equipment will be used to reduce exposure to chemical hazards from collecting the soil samples. Although it is an unlikely occurrence, in order to minimize the possibility of a spark from the concrete coring igniting materials stored in the ASTs, the following safety measures will be utilized during concrete coring:

- Water will be used during the concrete coring to prevent sparks.
- A portable device that measures the level of volatile organic compounds (such as a photoionization detector, PID) will be used to monitor the concentrations of compounds in the air.
- A fan will be used to dilute the presence of any volatile compounds in the AST area.



#### 4 QUALITY ASSURANCE

#### 4.1 Overview

This section discusses the standard practices and procedures utilized during the field operations to ensure the collection of representative samples. The collection of representative samples depends upon:

- Ensuring that the sample is representative of the material or medium being sampled.
- Using proper sampling, sample handling, preservation, and quality control techniques.
- Properly identifying the collected samples and documenting their collection in permanent field records (field log books, chain-of-custody records).
- Maintaining sample chain-of-custody.

#### 4.2 Sample Containers, Preservatives, and Holding Times

Sample containers, preservatives, and holding times will be selected in accordance with USEPA Region 4 FBQSTP. All sample containers (and preservatives, where required) for samples submitted for laboratory analyses will be provided by the laboratory. Containers will be new, pre-cleaned, or pre-baked as appropriate.

#### 4.3 Sample Packing, Shipping and Documentation

#### 4.3.1 Sample Packing

The samples obtained in this sampling event will be placed in shipping coolers with enough ice, freezer packs or dry ice to maintain a temperature of 4°C, and with sufficient bubble pack to prevent breakage during shipping. Temperature blanks provided by the laboratories will be placed in each cooler. All samples in a shipping container will be listed on the chain-of-custody form enclosed in the shipping container.

#### 4.3.2 Sample Shipping

All samples will be shipped via courier service or hand delivered to the laboratory. A shipping document with a tracking number for the courier service will be completed for each shipment. The following day the laboratory will be contacted to verify the shipment was received in sound condition.

#### 4.3.3 Sample Documentation

Documents for recording sampling events will include a daily field activity log, field measurement logs, and photographs as appropriate. Sample information to be included on sample labels, custody seals, and chain-of-custody forms is described below.



After sample collection, all sample containers will be labeled with an identification number that uniquely identifies the sample. The samples will be identified with a unique alpha-numeric identification that follows the format "YYDDD-Z" where:

- YY is the year the sample was taken;
- DDD is the Julian date of sample collection; and
- Z is the location designation.

Each sample container will have a sample label. The sample identification number will be logged in the field log book, along with the following information about the sampling event:

- Sampling personnel
- Date and time of collection
- Field sample location and depth
- Observations on ambient conditions
- Type of sampling (composite or grab)
- Method of sampling
- Sampling matrix or source
- Intended analyses.

Each sample container will be labeled with the following information: date and time of sample collection, unique sample number, project name and/or number, and sampler's initials. Indelible ink will be used to record information on the sample label.

Chain-of-custody forms provide the documentation to trace sample possession from the time of sample collection until receipt by the laboratory. One chain-of-custody form will be filled out for each cooler or shipping container and will list all the samples contained in the cooler or container. One copy of the completed form will be placed in a plastic bag taped to the inside lid of the shipping container and one copy will be kept with the project files.

#### 4.4 Decontamination

Decontamination of sampling equipment will take place at sampling locations or a central location. Equipment used for sampling will be decontaminated prior to each use and in accordance with the following cleaning procedures in accordance with the SESDPROC-205-R2 of the EPA Region 4 FBOSTP.

Clean, disposable gloves will be worn while handling sampling equipment or down-hole tools during the final stages of decontamination. Deionized water will be stored in high-density polyethylene (HDPE) containers and applied via HDPE squeeze bottles or decanted directly from their storage containers.

#### 4.4.1 Soil Sampling Equipment

Hand auger buckets and hand auger rods will be decontaminated between each boring and prior to leaving the site.



- Clean equipment with brush and tap water and Luminox® detergent to remove particulate matter and surface films.
- Rinse thoroughly with tap water.
- Rinse thoroughly with organic-free water and place on a clean foil-wrapped surface to air-dry.
- All equipment must be wrapped with foil. If the equipment is to be stored overnight before it is wrapped in foil, it should be covered and secured with clean, unused plastic sheeting.

#### 4.5 Equipment List

- Stainless steel bowls
- Hand auger rods and buckets

#### 4.6 Supplies and Consumables

- PPE: nitrile gloves, steel toe boots, decon solutions (liquinox, deionized water)
- Consumables: Shipping tape, duct tape, sharpie/permanent markers, custody labels, COC forms, 2-gallon baggies, ice.

#### 4.7 Document Control

The term document control, as it applies to field investigations, refers to the maintenance of project files. The following documents shall be placed in the project file:

- A copy of the approved work plan and supporting plans;
- Original chain-of-custody records, bound field log books, and field forms;
- Pertinent records obtained during the investigation;
- A complete copy of the analytical data and memorandum transmitting analytical data;
- Official correspondence received by or issued by the GaEPD relating to the investigation including records of telephone calls;
- One copy of any reports or memoranda;
- Any other relevant documents related to the investigation or follow-up activities.
   All study records, reports and formal documents will be retained during the lifecycle of the project. After completion of the project all document will be retained for a period of 10 years.



#### 5 SAMPLE CUSTODY PROCEDURES

#### 5.1 Overview

The possession of samples will be traceable from the time that they are collected until they are disposed by the analytical laboratory. The following custody procedures provide this means of sample tracking.

#### 5.2 Sample Custody

A sample or other physical evidence is in custody if:

- It is in the field investigator's, transferee's, or lab technician's actual possession, or
- It is within the field investigator's, transferee's, or lab technician's view, after being in their physical possession, or
- It was in the field investigator's, transferee's, or lab technician's physical possession and then they secured it to prevent tampering, or
- It is placed in a designated secure area.

#### 5.3 Laboratory Procedures

The selected laboratory will have established programs of sample custody that are designed to ensure that each sample is accounted for at all times. The objectives of the laboratory's sample custody program include:

- Unique identification of all samples, as appropriate for the data required;
- Analysis of the correct samples, and traceability to the appropriate records;
- Preservation of sample characteristics;
- Protection of samples from loss or damage;
- Documentation of any sample alteration (e.g., filtration, preservation), and;
- Establishing a record of sample integrity for legal purposes.

Standard Operating Procedures for sample custody protocol are maintained by the laboratory.

#### 5.4 Chain-of-Custody Record

The field chain-of-custody record is used to record the custody of all samples or other physical evidence collected and maintained. This form shall not be used to document the collection of split samples where there is a legal requirement to provide a receipt for samples. The chain-of-custody record also serves as a sample logging mechanism for the analytical laboratory's sample custodian.

The type of information to be supplied on the field chain-of-custody record includes:



- Project number, project name and signatures of all samplers and/or the sampling team leader in the designated signature block.
- The sampling station number, date, and time of sample collection, grab or composite sample designation, and a brief description of the type of sample and the sampling location must be included on each line (each line shall contain only those samples collected at a specific location).
- The sampling team leader's name should be recorded in the right or left margin of the COC Record when samples collected by more than one sampling team are included on the same form.
- The total number of sample containers must be listed in the indicated space for each sample. The total number of individual containers must also be listed for each type of analysis under the indicated media or miscellaneous columns. Note that it is impossible to have more than one media type per sample. The type of container and required analyses should be circled as indicated on the Record.
- The field investigator (geologist) and subsequent transferee(s) must document the transfer of the samples listed on the Record in the spaces provided at the bottom of the Record. Both the person relinquishing the samples and the person receiving them must sign the form; the date and time that this occurred must be documented in the proper space on the Record. Usually, the last person receiving the samples or evidence should be a laboratory sample custodian.
- The remarks column at the bottom of the Record is used to record air bill numbers or registered or certified mail serial numbers.

Once the record is completed, it becomes an accountable document and must be maintained in the project file.

#### 5.5 Field Custody

Field custody procedures are described below. Sample collection procedures concerning sample identification and documentation, field log book, sample containers, sample packing, and sample shipping are described.

The persons responsible for sample custody and a brief description of their duties are as follows:

- Laboratory Sample Custodian or Commercial Supplier verifies that the bottleware is certified clean and arranges for bottleware shipment to field sampling personnel or the contractor's equipment shop.
- Field Team Leader receives and stores bottleware that is shipped from a laboratory or a commercial supplier; relinquishes bottleware to field sampling personnel; and, initiates chain-of-custody from bottleware in storage.
- Field Staff receive sample bottleware from laboratory, inspect bottleware for physical integrity; retain shipping invoice or packing list from shipping courier as documentation of transfer of bottleware; collect samples; retain bottleware and samples under custody until sample shipment; and, relinquish samples to shipping courier or to lab representative.
- Field Team Leader verifies reported laboratory analyses to the sample chain-of-custody form; assures that chain-of-custody documentation is incorporated into the project file.



#### 5.6 Transfer of Custody and Shipment

All samples will be accompanied by the chain-of-custody record. The original record will be placed in a plastic bag inside the secured shipping container if samples are shipped. A copy of the chain-of-custody record will be retained by the Field Team Leader. When transferring the possession of samples, the individual receiving the samples will sign, date, and note the time that they received the samples on the chain-of-custody record. This chain-of-custody record documents transfer of custody of samples from the field investigator to another person or to the laboratory. The original record will be sent to the Field Team Leader after the laboratory analyzes the sample. This copy will become a part of the project file.

Samples will be properly packaged for shipment and delivered to the designated laboratory for analyses. If the containers are not hand delivered to the laboratory, the shipping containers shall be secured by using strapping tape and custody seals. The custody seals shall be placed on the container so that it cannot be opened without breaking the seals. The seal shall be signed and dated by the field investigator.



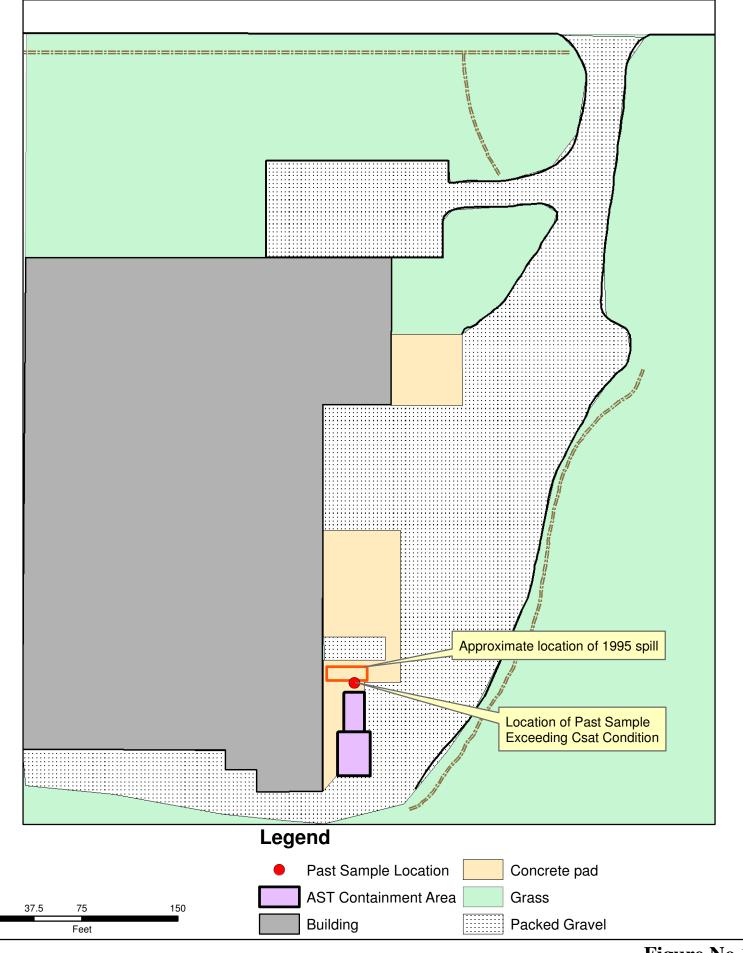
#### 6 REFERENCES

- US EPA Region IV Science and Ecosystem Support Division standard operating procedure for SoilSampling (SESDPROC-300-R2) December 2011.
- US EPA Region IV Science and Ecosystem Support Division standard operating procedure for Field Equipment Cleaning and Decontamination at the FEC (SESDPROC-205-R2) December 2011.

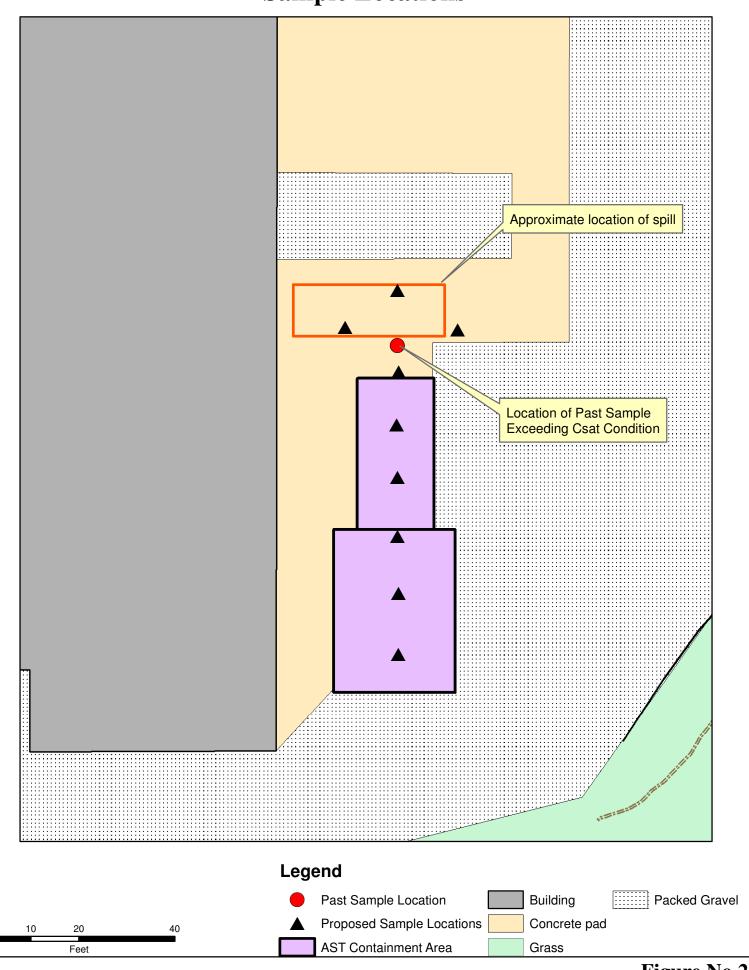


#### **FIGURES**

#### **Site Features**



#### **Sample Locations**





## ATTACHMENT A PRODUCT DATA SHEET MICRORESTER DEEPOUR VE



#### PRODUCT DATA MICORESTER® DEEPOUR VE

Advanced filler technology combined with vinyl ester resins, create a polymer grout with outstanding chemical resistance and physical properties. Available as a trowelable or pourable material MICORESTER® DEEPOUR VE conquers the toughest environments while eliminating many of the problems associated with vinylester materials.

#### **USES:**

- Chemical pump bases
- Secondary Containment
- Curbs and walls
- Slope or pitch floors
- Tank lining
- Floor repairs
- As a base for Micorester<sup>®</sup> HT Flooring

#### **SAFETY NOTICE:**

Read and understand the MSDS sheet before using **Deepour VE**.

**Never use** when food is present. The styrene odor will contaminate food products. **Adequate ventilation** is **imperative** to prevent fumes from contaminating foods in other areas.

#### **IMPORTANT NOTE:**

All Micor Vinyl Ester Systems are provided prepremoted.

Deepour VE liquids are flammable during installation. Keep all potential sources of ignition a safe distance from uncured Deepour VE.

#### PHYSICAL PROPERTIES:

Compr	es	siv	e S	trei	ngt	h	10	,00	0-1	12,000 PSI
Tensile	S	tre	ngt	h			1	,80	0 -	2,500 PSI
HDT	۰									218°F+
Density	y							1.	35	lbs/cubic ft

Chemical Resistance: See Micorester® HT-3 Chemical Resistance sheet for minimum resistance characteristics.

Pot Life . . . varies with promotion level

#### FEATURES:

- Superior chemical and temperature resistance.
- Rapid Set Time (variable)
- Pourable or trowelable.
- Vibration and impact resistant.
- Unequaled physical properties.

#### PACKAGING:

Micorester® Deepour VE is packaged in 1/2 cubic ft. units containing the following materials.

1 cans Deepour VE Resin

1 bags Deepour VE Aggregate

1 bag Specially blended aggregate

1 container MEKP (Catalyst)

2 measuring cups

Deepour VE Sealer sold separately ( Project Specific)

Specify trowelable or pourable when ordering. Use trowelable from 1/4"- 2" thickness. Use pourable from 1" to 8" thickness.

**Deepour VE POURABLE** contains specially blended aggregates.

**Deepour VE** TROWELABLE contains fine aggregates that allow the material to be "feather edged" when patching. When used to resurface entire floors, a minimum thickness of 3/8" should be observed.

#### **APPLICATION INSTRUCTIONS:**

#### ALWAYS READ AND UNDERSTAND THE M.S.D.S. SHEET AND LABEL WARNINGS.

Remove ignition sources from work area and insure proper ventilation.

To apply Micorester® Deepour VE observe the following instructions.

It is imperative that the substrate has been prepared in an adequate fashion. The bonding surface should be clean, dry and free of contamination such as grease, oil and chemicals.

1.) To the prepared substrate apply **PVE Primer** at a rate of 200 S.F. per gallon. Allow PVE Primer to air dry for approximately 1 1/2 hours before application of Deepour VE.

#### USE SUPPLIED MEASURING CUPS TO MEASURE THE MEKP (CATALYST).

- 3.) To one can of **Deepour VE** resin add 1 fl oz. MEKP (Catalyst) and mix again.
- 4.) Add the Deepour VE liquids to one bag of Deepour aggregate and mix until all of the aggregate is wet. Apply and finish with a steel trowel. PLEASE NOTE: Always catalyze the resin prior to the addition of the aggregate.
- 5.) After the placement of several batches, broadcast 3M roofing granules or silica aggregate on to the surface.
- 6.) Continue this procedure until the area being grouted is complete.
- 7.) After 3-4 hours, longer in lower temperature areas, sweep excess roofing granules or aggregate from the surface and apply Deepour VE sealer.

- 8.) To the **Deepour VE sealer** add add 1.5 fl. oz. of MEKP (Catalyst) and 5 to 7 fluid oz of wax solution and mix again.
- 9.) Apply with 3/8" nap roller or squeegee at a rate that leaves the surface texture desired.
- 10.) Allow the **Deepour VE** to cure for 24 hours before returning service to the area.

#### **COMPLIMENTARY INFORMATION:**

Our full service lab and technical engineers are available to assist you. For complete information on all systems, contact your local Dealer or our factory at 1-800-284-4308.

LIMITED WARRANTY: Micor Company Inc. warrants to the original purchaser of its products that they are in conformance to the formulation standards of Micor Company, Inc. and that such products are free from manufacturing defects. Original purchaser's only remedy is replacement of the product. Micor does not warrant or guarantee the workmanship performed by any person or company installing its products. In no event shall Micor be liable for any incidental or consequential damages. This warranty is expressly given in lieu of all other warranties express or implied, including the warranties of merchantability and fitness for use and all other obligations or liabilities on Micor's part. Micor neither assumes nor authorizes any person or persons to assume for us any other liability in connection with the sale of Micor products. This warranty shall not apply to any of Micor's products which have been subject to alteration, abuse or misuse. Micor makes no warranty whatsoever in respect to parts, materials or accessories not supplied by Micor Co. which are used in connection with its products. The term "original purchaser" in this warranty applies to that person, company or corporation to which Micor Company Inc. sold its product or products. The original purchaser accepts these terms and conditions and hereby expressly waives any claim to additional damages.

CAUTION: Always keep out of the reach of children.



### ATTACHMENT B HEALTH AND SAFETY PLAN



## APPENDIX F AST SUBGRADE LABORATORY DATA REPORT

#### ANALYTICAL ENVIRONMENTAL SERVICES, INC.



August 03, 2012

Gregg Henry
Environmental Planning Specialists, Inc.
1050 Crown Pointe Parkway
Atlanta GA 30338

TEL: (404) 315-9113 FAX: (404) 315-8509

RE: Capitol Adhesives

Dear Gregg Henry: Order No: 1207J08

Analytical Environmental Services, Inc. received 20 samples on 7/26/2012 4:30:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- -NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
- -AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

James Forrest

Project Manager

Work Order: 1207 308

CHAIN OF CUSTODY

# ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Presidential Parkway, Atlanta GA 30340-3704

AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

4 oť 2/52 Date:

5 Z No # of Containers ン ≥ Same Day Rush (auth req.) to check on the status of your results, place bottle Tumaround Time Request www.aesatlanta.com Standard 5 Business Days Fax? Y/N Next Business Day Rush SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. 2 Business Day Rush Visit our website Total # of Containers orders, etc. REMARKS STATE PROGRAM (if any): E-mail? Y/N; Other Ø000 0 SEND REPORT TO: 9 heiner General-novalican ANALYSIS REQUESTED PRESERVATION (See codes) PROJECT INFORMATION X Y ¥ X < K K X TF DIFFERENT FROM ABOVE) X X X からして У 21 -517 × 3XI <u>x</u> x <u>x</u> ROJECT NAME: SITE ADDRESS: X INVOICE TO: 300 FOA X (atough P 7/26/12 4:30pm DATE/TIME 8 9 Š 77 N R Ó 2  $\zeta$ 2 S 2 (See codes) S 1950 Coower Psyre Matrix FedEx UPS MAIL COURIER Composite SHIPMENT METHOD VIA: × ¥ × × X × < K ፕ × K × Grab OTHER X AP-, 30338 000 N 1930 1225 1430 J.23-12 1540 1420 1500 TIME 1450 055/17/520 **GNUOHY 34.** 135 E E SSI 016 SAMPLED CLIENT RECEIVED BY 7.23.12 7.52.12 7.23.12 7.23 (1 7.52.1 2.53.12 7.23/2 7.23.12 7.23/2 7-53-12 7.23.12 71. EZ.L DATE OUT 1630 DATE/TIME 7/24/12 4 1 3205- 55-45F-9-4 12205-55- ASF- 9-1 1 2205-55-AST-8-8 W U 1-8-12205 - 55- AST - 5-2 12205-85-AST-7-1 12245-55-AST-7-7 12205-55-138F- 6-3 1-8-754-55-20EC1 4-12205-55-85T- 5-1 SAMPLE ID 12205-55-AST- 6-1 SPECIAL INSTRUCTIONS/COMMENTS HONE: -64-315-9113 12205-55-AST. 12205 - SS- AST 12205-55-AN 12205-55-AX SAMPLED BY OMPANY 10

O = Other (specify) NA = None White Copy - Original; Yellow Copy - Client W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE. GW = Groundwater SE = Sediment SO = Soil SW = Surface WaterH+I = Hydrochloric acid + ice I = Ice onlyPRESERVATIVE CODES:

## CHAIN OF CUSTODY

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Presidential Parkway, Atlanta GA 30340-3704

**AES** TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

Work Order: 1207) 68 (g) Page\_ 725/12

R No # of Containers 7 J Ţ I 2 Same Day Rush (auth req.) your results, place bottle to check on the status of II II III www.aesatlanta.com Tumaround Time Request Standard 5 Business Days Fax? Y/N Next Business Day Rush SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.

SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE. Visit our website 2 Business Day Rush Total # of Containers orders, etc. STATE PROGRAM (if any): REMARKS E-mail? Y/N; **@**0000 SEND REPORT TO: 9 hemry (Devrydunryn) PROJECT INFORMATION ANALYSIS REQUESTED PRESERVATION (See codes) ¥ ť \* + DACTON, CA CAPITOL Chlonde (IF DIFFERENT FROM ABOVE) X 370 27.50 4 X ROJECT NAME: SITE ADDRESS: Κ 4 INVOICE TO: 1 6 ROI 4 DATE/TIME atough P 7/26/12 4:30 (See codes) 000 S Š S 200 Matrix CLIENT DELEX UPS MAIL COURIER Сотроят ADDRESS Crown POINTE SHIPMENT METHOD × Grab X 1650 1615 0/0/ TIME 630 ATC, GA SAMPLE RECEIVED BY 7.23/2 7.25.12 7.25.12 7.2312 7.2312 OUT DATE/TIME 0×9/ 12205-5: -AST- DUP 2/26/2 12205-158-AST-10-1 12205-52-AST-10-2 2205-53-AST-11-2 12205-55-A>T-11.i SAMPLE ID PECIAL INSTRUCTIONS/COMMENTS 315 x113 ELINQUISHED BY PHONE: 484 AMPLED BY OMPANY 13 14 10 #

O = Other (specify) NA = None
White Copy - Original; Yellow Copy - Client GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice H+I = Hydrochloric acid + ice I = Ice onlyMATRIX CODES: A = Air PRESERVATIVE CODES:

Page 3 of 31

Client: Environmental Planning Specialists, Inc.

Project: Capitol Adhesives Case Narrative

Date:

3-Aug-12

**Lab ID:** 1207J08

Sample Receiving Nonconformance:

A Trip Blank was provided but not listed on the Chain of Custody. Trip blank analyzed at no cost to the client.

Volatiles Organic Compounds Analysis by Method 8260B:

Due to sample matrix, samples 1207J08-011A, 012A, 013A & 014A required dilution during preparation and/or analysis resulting in elevated reporting limits.

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-3-1Project Name:Capitol AdhesivesCollection Date:7/23/2012 11:30:00 AM

Date:

3-Aug-12

**Lab ID:** 1207J08-001 **Matrix:** Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst			
TCL VOLATILE ORGANICS SW8260B	(SW5035)										
1,1,1-Trichloroethane	BRL	0.0030		mg/Kg-dry	164588	1	07/31/2012 12:10	JE			
1,1-Dichloroethane	0.050	0.0030		mg/Kg-dry	164588	1	07/31/2012 12:10	JE			
Chloroethane	BRL	0.0061		mg/Kg-dry	164588	1	07/31/2012 12:10	JE			
cis-1,2-Dichloroethene	3.6	0.16		mg/Kg-dry	164601	50	08/01/2012 00:56	NP			
Tetrachloroethene	0.11	0.0030		mg/Kg-dry	164588	1	07/31/2012 12:10	JE			
Trichloroethene	0.058	0.0030		mg/Kg-dry	164588	1	07/31/2012 12:10	JE			
Vinyl chloride	0.042	0.0061		mg/Kg-dry	164588	1	07/31/2012 12:10	JE			
Surr: 4-Bromofluorobenzene	109	56.5-134		%REC	164588	1	07/31/2012 12:10	JE			
Surr: 4-Bromofluorobenzene	102	56.5-134		%REC	164601	50	08/01/2012 00:56	NP			
Surr: Dibromofluoromethane	101	71.8-135		%REC	164588	1	07/31/2012 12:10	JE			
Surr: Dibromofluoromethane	96	71.8-135		%REC	164601	50	08/01/2012 00:56	NP			
Surr: Toluene-d8	112	77.1-117		%REC	164588	1	07/31/2012 12:10	JE			
Surr: Toluene-d8	97.4	77.1-117		%REC	164601	50	08/01/2012 00:56	NP			
PERCENT MOISTURE D2216											
Percent Moisture	15.3	0		wt%	R226185	5 1	08/01/2012 11:00	AS			

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

J Estimated value detected below Reporting Limit

12205-SS-AST-3-2 **Client:** Environmental Planning Specialists, Inc. **Client Sample ID:** 

Project Name: Capitol Adhesives **Collection Date:** 7/23/2012 11:35:00 AM Lab ID: 1207J08-002 Matrix: Soil

Reporting Dilution Analyses Result Qual Units **BatchID** Date Analyzed Analyst

Date:

3-Aug-12

Analyses	Kesuit	Limit	Quai Cints	Datemb	Factor	Date Analyzeu	———					
TCL VOLATILE ORGANICS SW8260	В	(SW5035)										
1,1,1-Trichloroethane	BRL	0.0032	mg/Kg	g-dry 164588	1	07/31/2012 12:35	JE					
1,1-Dichloroethane	0.075	0.0032	mg/Kg	g-dry 164588	1	07/31/2012 12:35	JE					
Chloroethane	BRL	0.0064	mg/Kg	g-dry 164588	1	07/31/2012 12:35	JE					
cis-1,2-Dichloroethene	3.3	0.17	mg/Kg	g-dry 164601	50	08/01/2012 01:25	NP					
Tetrachloroethene	0.35	0.17	mg/Kg	g-dry 164601	50	08/01/2012 01:25	NP					
Trichloroethene	0.18	0.17	mg/Kg	g-dry 164601	50	08/01/2012 01:25	NP					
Vinyl chloride	0.081	0.0064	mg/Kg	g-dry 164588	1	07/31/2012 12:35	JE					
Surr: 4-Bromofluorobenzene	101	56.5-134	%R	EC 164588	1	07/31/2012 12:35	JE					
Surr: 4-Bromofluorobenzene	94.7	56.5-134	%R	EC 164601	50	08/01/2012 01:25	NP					
Surr: Dibromofluoromethane	107	71.8-135	%R	EC 164588	1	07/31/2012 12:35	JE					
Surr: Dibromofluoromethane	95.4	71.8-135	%R	EC 164601	50	08/01/2012 01:25	NP					
Surr: Toluene-d8	108	77.1-117	%R	EC 164588	1	07/31/2012 12:35	JE					
Surr: Toluene-d8	96.2	77.1-117	%R	EC 164601	50	08/01/2012 01:25	NP					
PERCENT MOISTURE D2216												
Percent Moisture	17.3	0	wt	% R22618	5 1	08/01/2012 11:00	AS					

Qualifiers:

Value exceeds maximum contaminant level

BRL Below reporting limit

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

See case narrative Not confirmed

Less than Result value

Estimated value detected below Reporting Limit

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12205-SS-AST-4-1

**Project Name:** Capitol Adhesives Collection Date: 7/23/2012 11:50:00 AM

Date:

3-Aug-12

**Lab ID:** 1207J08-003 **Matrix:** Soil

Analyses	Result	Reporting Limit	Qual U	nits	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW826	0B	(SW5035)						
1,1,1-Trichloroethane	BRL	0.0028	n	ng/Kg-dry	164588	1	07/31/2012 13:00	JE
1,1-Dichloroethane	BRL	0.0028	n	ng/Kg-dry	164588	1	07/31/2012 13:00	JE
Chloroethane	BRL	0.0056	n	ng/Kg-dry	164588	1	07/31/2012 13:00	JE
cis-1,2-Dichloroethene	0.0031	0.0028	n	ng/Kg-dry	164588	1	07/31/2012 13:00	JE
Tetrachloroethene	0.0047	0.0028	n	ng/Kg-dry	164588	1	07/31/2012 13:00	JE
Trichloroethene	BRL	0.0028	n	ng/Kg-dry	164588	1	07/31/2012 13:00	JE
Vinyl chloride	BRL	0.0056	n	ng/Kg-dry	164588	1	07/31/2012 13:00	JE
Surr: 4-Bromofluorobenzene	97.2	56.5-134		%REC	164588	1	07/31/2012 13:00	JE
Surr: Dibromofluoromethane	105	71.8-135		%REC	164588	1	07/31/2012 13:00	JE
Surr: Toluene-d8	95.7	77.1-117		%REC	164588	1	07/31/2012 13:00	JE
PERCENT MOISTURE D2216								
Percent Moisture	11.9	0		wt%	R226185	1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative
NC Not confirmed

< Less than Result value

J Estimated value detected below Reporting Limit

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12205-SS-AST-4-2

Project Name:Capitol AdhesivesCollection Date:7/23/2012 11:55:00 AMLab ID:1207J08-004Matrix:Soil

Date:

3-Aug-12

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW826	60B			(SW	5035)			
1,1,1-Trichloroethane	BRL	0.0033		mg/Kg-dry	164588	1	07/31/2012 13:30	JE
1,1-Dichloroethane	BRL	0.0033		mg/Kg-dry	164588	1	07/31/2012 13:30	JE
Chloroethane	BRL	0.0066		mg/Kg-dry	164588	1	07/31/2012 13:30	JE
cis-1,2-Dichloroethene	BRL	0.0033		mg/Kg-dry	164588	1	07/31/2012 13:30	JE
Tetrachloroethene	0.0042	0.0033		mg/Kg-dry	164588	1	07/31/2012 13:30	JE
Trichloroethene	BRL	0.0033		mg/Kg-dry	164588	1	07/31/2012 13:30	JE
Vinyl chloride	BRL	0.0066		mg/Kg-dry	164588	1	07/31/2012 13:30	JE
Surr: 4-Bromofluorobenzene	96.7	56.5-134		%REC	164588	1	07/31/2012 13:30	JE
Surr: Dibromofluoromethane	102	71.8-135		%REC	164588	1	07/31/2012 13:30	JE
Surr: Toluene-d8	97.7	77.1-117		%REC	164588	1	07/31/2012 13:30	JE
PERCENT MOISTURE D2216								
Percent Moisture	13.2	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative
NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-5-1Project Name:Capitol AdhesivesCollection Date:7/23/2012 12:10:00 PM

Date:

3-Aug-12

**Lab ID:** 1207J08-005 Matrix: Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW82	60B			(SW	5035)			
1,1,1-Trichloroethane	BRL	0.0027		mg/Kg-dry	164588	1	07/31/2012 13:56	JE
1,1-Dichloroethane	BRL	0.0027		mg/Kg-dry	164588	1	07/31/2012 13:56	JE
Chloroethane	BRL	0.0055		mg/Kg-dry	164588	1	07/31/2012 13:56	JE
cis-1,2-Dichloroethene	BRL	0.0027		mg/Kg-dry	164588	1	07/31/2012 13:56	JE
Tetrachloroethene	0.0039	0.0027		mg/Kg-dry	164588	1	07/31/2012 13:56	JE
Trichloroethene	BRL	0.0027		mg/Kg-dry	164588	1	07/31/2012 13:56	JE
Vinyl chloride	BRL	0.0055		mg/Kg-dry	164588	1	07/31/2012 13:56	JE
Surr: 4-Bromofluorobenzene	97.4	56.5-134		%REC	164588	1	07/31/2012 13:56	JE
Surr: Dibromofluoromethane	106	71.8-135		%REC	164588	1	07/31/2012 13:56	JE
Surr: Toluene-d8	97.6	77.1-117		%REC	164588	1	07/31/2012 13:56	JE
PERCENT MOISTURE D2216								
Percent Moisture	11.8	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-5-2Project Name:Capitol AdhesivesCollection Date:7/23/2012 12:15:00 PM

**Lab ID:** 1207J08-006 **Matrix:** Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8	260B			(SW	5035)			
1,1,1-Trichloroethane	BRL	0.0032		mg/Kg-dry	164588	1	07/31/2012 14:24	JE
1,1-Dichloroethane	BRL	0.0032		mg/Kg-dry	164588	1	07/31/2012 14:24	JE
Chloroethane	BRL	0.0064		mg/Kg-dry	164588	1	07/31/2012 14:24	JE
cis-1,2-Dichloroethene	0.0083	0.0032		mg/Kg-dry	164588	1	07/31/2012 14:24	JE
Tetrachloroethene	0.011	0.0032		mg/Kg-dry	164588	1	07/31/2012 14:24	JE
Trichloroethene	BRL	0.0032		mg/Kg-dry	164588	1	07/31/2012 14:24	JE
Vinyl chloride	BRL	0.0064		mg/Kg-dry	164588	1	07/31/2012 14:24	JE
Surr: 4-Bromofluorobenzene	98	56.5-134		%REC	164588	1	07/31/2012 14:24	JE
Surr: Dibromofluoromethane	106	71.8-135		%REC	164588	1	07/31/2012 14:24	JE
Surr: Toluene-d8	99	77.1-117		%REC	164588	1	07/31/2012 14:24	JE
PERCENT MOISTURE D2216								
Percent Moisture	15.0	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

Date:

3-Aug-12

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-6-1Project Name:Capitol AdhesivesCollection Date:7/23/2012 12:30:00

Project Name:Capitol AdhesivesCollection Date:7/23/2012 12:30:00 PMLab ID:1207J08-007Matrix:Soil

Date:

3-Aug-12

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260	В			(SW	5035)			
1,1,1-Trichloroethane	0.0035	0.0028		mg/Kg-dry	164588	1	07/31/2012 14:49	JE
1,1-Dichloroethane	BRL	0.0028		mg/Kg-dry	164588	1	07/31/2012 14:49	JE
Chloroethane	BRL	0.0057		mg/Kg-dry	164588	1	07/31/2012 14:49	JE
cis-1,2-Dichloroethene	0.011	0.0028		mg/Kg-dry	164588	1	07/31/2012 14:49	JE
Tetrachloroethene	0.039	0.0028		mg/Kg-dry	164588	1	07/31/2012 14:49	JE
Trichloroethene	0.0088	0.0028		mg/Kg-dry	164588	1	07/31/2012 14:49	JE
Vinyl chloride	BRL	0.0057		mg/Kg-dry	164588	1	07/31/2012 14:49	JE
Surr: 4-Bromofluorobenzene	97.6	56.5-134		%REC	164588	1	07/31/2012 14:49	JE
Surr: Dibromofluoromethane	105	71.8-135		%REC	164588	1	07/31/2012 14:49	JE
Surr: Toluene-d8	101	77.1-117		%REC	164588	1	07/31/2012 14:49	JE
PERCENT MOISTURE D2216								
Percent Moisture	12.1	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12205-SS-AST-6-2

14.6

Project Name:Capitol AdhesivesCollection Date:7/23/2012 12:35:00 PMLab ID:1207J08-008Matrix:Soil

Date:

3-Aug-12

08/01/2012 11:00

AS

Analyses		Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
TCL VOLATILE ORGANICS S	SW8260B				(SW	5035)			
1,1,1-Trichloroethane		BRL	0.0033		mg/Kg-dry	164588	1	07/31/2012 15:14	JE
1,1-Dichloroethane		BRL	0.0033		mg/Kg-dry	164588	1	07/31/2012 15:14	JE
Chloroethane		BRL	0.0066		mg/Kg-dry	164588	1	07/31/2012 15:14	JE
cis-1,2-Dichloroethene		0.0077	0.0033		mg/Kg-dry	164588	1	07/31/2012 15:14	JE
Tetrachloroethene		0.047	0.0033		mg/Kg-dry	164588	1	07/31/2012 15:14	JE
Trichloroethene		0.011	0.0033		mg/Kg-dry	164588	1	07/31/2012 15:14	JE
Vinyl chloride		BRL	0.0066		mg/Kg-dry	164588	1	07/31/2012 15:14	JE
Surr: 4-Bromofluorobenzene		97.3	56.5-134		%REC	164588	1	07/31/2012 15:14	JE
Surr: Dibromofluoromethane		102	71.8-135		%REC	164588	1	07/31/2012 15:14	JE
Surr: Toluene-d8		99.4	77.1-117		%REC	164588	1	07/31/2012 15:14	JE

Qualifiers:

Percent Moisture

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

wt%

R226185

12205-SS-AST-7-1 **Client:** Environmental Planning Specialists, Inc. **Client Sample ID: Collection Date:** 7/23/2012 2:20:00 PM Project Name: Capitol Adhesives

Lab ID: 1207J08-009 Matrix: Soil

Date:

3-Aug-12

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
TCL VOLATILE ORGANICS SW8260B				(SW	5035)			
1,1,1-Trichloroethane	BRL	0.0030		mg/Kg-dry	164588	1	07/31/2012 15:39	JE
1,1-Dichloroethane	0.62	0.17		mg/Kg-dry	164601	50	08/01/2012 01:54	NP
Chloroethane	0.070	0.0061		mg/Kg-dry	164588	1	07/31/2012 15:39	JE
cis-1,2-Dichloroethene	1.9	0.17		mg/Kg-dry	164601	50	08/01/2012 01:54	NP
Tetrachloroethene	0.013	0.0030		mg/Kg-dry	164588	1	07/31/2012 15:39	JE
Trichloroethene	0.0096	0.0030		mg/Kg-dry	164588	1	07/31/2012 15:39	JE
Vinyl chloride	0.24	0.17		mg/Kg-dry	164601	50	08/01/2012 01:54	NP
Surr: 4-Bromofluorobenzene	98.5	56.5-134		%REC	164588	1	07/31/2012 15:39	JE
Surr: 4-Bromofluorobenzene	93.9	56.5-134		%REC	164601	50	08/01/2012 01:54	NP
Surr: Dibromofluoromethane	105	71.8-135		%REC	164588	1	07/31/2012 15:39	JE
Surr: Dibromofluoromethane	97.5	71.8-135		%REC	164601	50	08/01/2012 01:54	NP
Surr: Toluene-d8	96.3	77.1-117		%REC	164588	1	07/31/2012 15:39	JE
Surr: Toluene-d8	94.3	77.1-117		%REC	164601	50	08/01/2012 01:54	NP
PERCENT MOISTURE D2216								
Percent Moisture	12.5	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

Value exceeds maximum contaminant level

BRL Below reporting limit

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Narr See case narrative Not confirmed

Less than Result value Estimated value detected below Reporting Limit

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-7-2Project Name:Capitol AdhesivesCollection Date:7/23/2012 2:30:00 PM

Date:

3-Aug-12

**Lab ID:** 1207J08-010 **Matrix:** Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				(SW	5035)			
1,1,1-Trichloroethane	BRL	0.0031		mg/Kg-dry	164588	1	07/31/2012 16:04	JE
1,1-Dichloroethane	1.2	0.20		mg/Kg-dry	164601	50	08/01/2012 02:23	NP
Chloroethane	0.037	0.0062		mg/Kg-dry	164588	1	07/31/2012 16:04	JE
cis-1,2-Dichloroethene	2.0	0.20		mg/Kg-dry	164601	50	08/01/2012 02:23	NP
Tetrachloroethene	0.014	0.0031		mg/Kg-dry	164588	1	07/31/2012 16:04	JE
Trichloroethene	0.0086	0.0031		mg/Kg-dry	164588	1	07/31/2012 16:04	JE
Vinyl chloride	0.31	0.20		mg/Kg-dry	164601	50	08/01/2012 02:23	NP
Surr: 4-Bromofluorobenzene	96.7	56.5-134		%REC	164588	1	07/31/2012 16:04	JE
Surr: 4-Bromofluorobenzene	91.4	56.5-134		%REC	164601	50	08/01/2012 02:23	NP
Surr: Dibromofluoromethane	104	71.8-135		%REC	164588	1	07/31/2012 16:04	JE
Surr: Dibromofluoromethane	99.1	71.8-135		%REC	164601	50	08/01/2012 02:23	NP
Surr: Toluene-d8	102	77.1-117		%REC	164588	1	07/31/2012 16:04	JE
Surr: Toluene-d8	92.6	77.1-117		%REC	164601	50	08/01/2012 02:23	NP
PERCENT MOISTURE D2216								
Percent Moisture	15.4	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-8-1Project Name:Capitol AdhesivesCollection Date:7/23/2012 2:50:00 PM

Date:

3-Aug-12

**Lab ID:** 1207J08-011 **Matrix:** Soil

Analyses	Result	Reporting Limit Qu	ual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				(SW:	5035)			
1,1,1-Trichloroethane	66	1.7		mg/Kg-dry	164601	500	08/01/2012 03:50	NP
1,1-Dichloroethane	6.8	1.7		mg/Kg-dry	164601	500	08/01/2012 03:50	NP
Chloroethane	BRL	3.4		mg/Kg-dry	164601	500	08/01/2012 03:50	NP
cis-1,2-Dichloroethene	11	1.7		mg/Kg-dry	164601	500	08/01/2012 03:50	NP
Tetrachloroethene	64	17		mg/Kg-dry	164601	5000	08/01/2012 12:19	NP
Trichloroethene	58	1.7		mg/Kg-dry	164601	500	08/01/2012 03:50	NP
Vinyl chloride	BRL	3.4		mg/Kg-dry	164601	500	08/01/2012 03:50	NP
Surr: 4-Bromofluorobenzene	89.9	56.5-134		%REC	164601	500	08/01/2012 03:50	NP
Surr: 4-Bromofluorobenzene	91.8	56.5-134		%REC	164601	5000	08/01/2012 12:19	NP
Surr: Dibromofluoromethane	102	71.8-135		%REC	164601	500	08/01/2012 03:50	NP
Surr: Dibromofluoromethane	109	71.8-135		%REC	164601	5000	08/01/2012 12:19	NP
Surr: Toluene-d8	94.1	77.1-117		%REC	164601	500	08/01/2012 03:50	NP
Surr: Toluene-d8	95.2	77.1-117		%REC	164601	5000	08/01/2012 12:19	NP
PERCENT MOISTURE D2216								
Percent Moisture	16.5	0		wt%	R226185	1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-8-2Project Name:Capitol AdhesivesCollection Date:7/23/2012 3:00:00 PM

Date:

3-Aug-12

**Lab ID:** 1207J08-012 **Matrix:** Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				(SW	5035)			
1,1,1-Trichloroethane	4.7	1.6		mg/Kg-dry	164601	500	08/01/2012 04:19	NP
1,1-Dichloroethane	8.7	1.6		mg/Kg-dry	164601	500	08/01/2012 04:19	NP
Chloroethane	BRL	3.2		mg/Kg-dry	164601	500	08/01/2012 04:19	NP
cis-1,2-Dichloroethene	6.2	1.6		mg/Kg-dry	164601	500	08/01/2012 04:19	NP
Tetrachloroethene	6.5	1.6		mg/Kg-dry	164601	500	08/01/2012 04:19	NP
Trichloroethene	13	1.6		mg/Kg-dry	164601	500	08/01/2012 04:19	NP
Vinyl chloride	BRL	3.2		mg/Kg-dry	164601	500	08/01/2012 04:19	NP
Surr: 4-Bromofluorobenzene	93.3	56.5-134		%REC	164601	500	08/01/2012 04:19	NP
Surr: Dibromofluoromethane	104	71.8-135		%REC	164601	500	08/01/2012 04:19	NP
Surr: Toluene-d8	94.9	77.1-117		%REC	164601	500	08/01/2012 04:19	NP
PERCENT MOISTURE D2216								
Percent Moisture	17.7	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative
NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-9-1Project Name:Capitol AdhesivesCollection Date:7/23/2012 3:30:00 PM

Date:

3-Aug-12

Reporting Dilution

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				(SW	5035)			
1,1,1-Trichloroethane	2.1	1.5		mg/Kg-dry	164601	500	08/01/2012 04:48	NP
1,1-Dichloroethane	1.5	1.5		mg/Kg-dry	164601	500	08/01/2012 04:48	NP
Chloroethane	BRL	3.0		mg/Kg-dry	164601	500	08/01/2012 04:48	NP
cis-1,2-Dichloroethene	66	30		mg/Kg-dry	164601	10000	08/01/2012 13:17	NP
Tetrachloroethene	380	30		mg/Kg-dry	164601	10000	08/01/2012 13:17	NP
Trichloroethene	34	1.5		mg/Kg-dry	164601	500	08/01/2012 04:48	NP
Vinyl chloride	BRL	3.0		mg/Kg-dry	164601	500	08/01/2012 04:48	NP
Surr: 4-Bromofluorobenzene	94.6	56.5-134		%REC	164601	500	08/01/2012 04:48	NP
Surr: 4-Bromofluorobenzene	90.1	56.5-134		%REC	164601	10000	08/01/2012 13:17	NP
Surr: Dibromofluoromethane	95.6	71.8-135		%REC	164601	500	08/01/2012 04:48	NP
Surr: Dibromofluoromethane	113	71.8-135		%REC	164601	10000	08/01/2012 13:17	NP
Surr: Toluene-d8	96.6	77.1-117		%REC	164601	500	08/01/2012 04:48	NP
Surr: Toluene-d8	97.8	77.1-117		%REC	164601	10000	08/01/2012 13:17	NP
PERCENT MOISTURE D2216								
Percent Moisture	18.6	0		wt%	R226185	1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-9-2Project Name:Capitol AdhesivesCollection Date:7/23/2012 3:40:00 PM

**Lab ID:** 1207J08-014 **Matrix:** Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
TCL VOLATILE ORGANICS SW8260B	}			(SW	5035)			
1,1,1-Trichloroethane	15	1.9		mg/Kg-dry	164601	500	08/01/2012 05:17	NP
1,1-Dichloroethane	2.1	1.9		mg/Kg-dry	164601	500	08/01/2012 05:17	NP
Chloroethane	BRL	3.7		mg/Kg-dry	164601	500	08/01/2012 05:17	NP
cis-1,2-Dichloroethene	55	37		mg/Kg-dry	164601	10000	08/01/2012 12:48	NP
Tetrachloroethene	660	37		mg/Kg-dry	164601	10000	08/01/2012 12:48	NP
Trichloroethene	97	37		mg/Kg-dry	164601	10000	08/01/2012 12:48	NP
Vinyl chloride	BRL	3.7		mg/Kg-dry	164601	500	08/01/2012 05:17	NP
Surr: 4-Bromofluorobenzene	106	56.5-134		%REC	164601	500	08/01/2012 05:17	NP
Surr: 4-Bromofluorobenzene	93.9	56.5-134		%REC	164601	10000	08/01/2012 12:48	NP
Surr: Dibromofluoromethane	96.9	71.8-135		%REC	164601	500	08/01/2012 05:17	NP
Surr: Dibromofluoromethane	109	71.8-135		%REC	164601	10000	08/01/2012 12:48	NP
Surr: Toluene-d8	94.9	77.1-117		%REC	164601	500	08/01/2012 05:17	NP
Surr: Toluene-d8	96.1	77.1-117		%REC	164601	10000	08/01/2012 12:48	NP
PERCENT MOISTURE D2216								
Percent Moisture	19.6	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

Date:

3-Aug-12

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-10-1Project Name:Capitol AdhesivesCollection Date:7/23/2012 4:15:00 PM

Date:

3-Aug-12

**Lab ID:** 1207J08-015 **Matrix:** Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW826	0B			(SW	5035)			
1,1,1-Trichloroethane	BRL	0.0029		mg/Kg-dry	164588	1	08/01/2012 15:40	JE
1,1-Dichloroethane	BRL	0.0029		mg/Kg-dry	164588	1	08/01/2012 15:40	JE
Chloroethane	BRL	0.0057		mg/Kg-dry	164588	1	08/01/2012 15:40	JE
cis-1,2-Dichloroethene	0.0040	0.0029		mg/Kg-dry	164588	1	08/01/2012 15:40	JE
Tetrachloroethene	0.0054	0.0029		mg/Kg-dry	164588	1	08/01/2012 15:40	JE
Trichloroethene	BRL	0.0029		mg/Kg-dry	164588	1	08/01/2012 15:40	JE
Vinyl chloride	BRL	0.0057		mg/Kg-dry	164588	1	08/01/2012 15:40	JE
Surr: 4-Bromofluorobenzene	97.8	56.5-134		%REC	164588	1	08/01/2012 15:40	JE
Surr: Dibromofluoromethane	96.8	71.8-135		%REC	164588	1	08/01/2012 15:40	JE
Surr: Toluene-d8	102	77.1-117		%REC	164588	1	08/01/2012 15:40	JE
PERCENT MOISTURE D2216								
Percent Moisture	16.9	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative
NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-10-2Project Name:Capitol AdhesivesCollection Date:7/23/2012 4:30:00 PM

Date:

3-Aug-12

**Lab ID:** 1207J08-016 **Matrix:** Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				(SW	(5035)			
1,1,1-Trichloroethane	BRL	0.0033		mg/Kg-dry	164588	1	07/31/2012 18:44	JE
1,1-Dichloroethane	BRL	0.0033		mg/Kg-dry	164588	1	07/31/2012 18:44	JE
Chloroethane	BRL	0.0067		mg/Kg-dry	164588	1	07/31/2012 18:44	JE
cis-1,2-Dichloroethene	0.013	0.0033		mg/Kg-dry	164588	1	07/31/2012 18:44	JE
Tetrachloroethene	0.020	0.0033		mg/Kg-dry	164588	1	07/31/2012 18:44	JE
Trichloroethene	0.010	0.0033		mg/Kg-dry	164588	1	07/31/2012 18:44	JE
Vinyl chloride	BRL	0.0067		mg/Kg-dry	164588	1	07/31/2012 18:44	JE
Surr: 4-Bromofluorobenzene	98.9	56.5-134		%REC	164588	1	07/31/2012 18:44	JE
Surr: Dibromofluoromethane	99.7	71.8-135		%REC	164588	1	07/31/2012 18:44	JE
Surr: Toluene-d8	99.5	77.1-117		%REC	164588	1	07/31/2012 18:44	JE
PERCENT MOISTURE D2216								
Percent Moisture	18.4	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-11-1Project Name:Capitol AdhesivesCollection Date:7/23/2012 4:40:00 PM

Date:

3-Aug-12

**Lab ID:** 1207J08-017 **Matrix:** Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW820	60B			(SW	5035)			
1,1,1-Trichloroethane	BRL	0.0028		mg/Kg-dry	164588	1	07/31/2012 19:17	JE
1,1-Dichloroethane	0.0043	0.0028		mg/Kg-dry	164588	1	07/31/2012 19:17	JE
Chloroethane	BRL	0.0057		mg/Kg-dry	164588	1	07/31/2012 19:17	JE
cis-1,2-Dichloroethene	0.0066	0.0028		mg/Kg-dry	164588	1	07/31/2012 19:17	JE
Tetrachloroethene	0.0095	0.0028		mg/Kg-dry	164588	1	07/31/2012 19:17	JE
Trichloroethene	0.0061	0.0028		mg/Kg-dry	164588	1	07/31/2012 19:17	JE
Vinyl chloride	BRL	0.0057		mg/Kg-dry	164588	1	07/31/2012 19:17	JE
Surr: 4-Bromofluorobenzene	96.4	56.5-134		%REC	164588	1	07/31/2012 19:17	JE
Surr: Dibromofluoromethane	102	71.8-135		%REC	164588	1	07/31/2012 19:17	JE
Surr: Toluene-d8	105	77.1-117		%REC	164588	1	07/31/2012 19:17	JE
PERCENT MOISTURE D2216								
Percent Moisture	18.1	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative
NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:12205-SS-AST-11-2Project Name:Capitol AdhesivesCollection Date:7/23/2012 4:50:00 PM

Date:

3-Aug-12

**Lab ID:** 1207J08-018 **Matrix:** Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW82	260B			(SW:	5035)			
1,1,1-Trichloroethane	BRL	0.0034		mg/Kg-dry	164588	1	07/31/2012 20:11	JE
1,1-Dichloroethane	BRL	0.0034		mg/Kg-dry	164588	1	07/31/2012 20:11	JE
Chloroethane	BRL	0.0067		mg/Kg-dry	164588	1	07/31/2012 20:11	JE
cis-1,2-Dichloroethene	0.0091	0.0034		mg/Kg-dry	164588	1	07/31/2012 20:11	JE
Tetrachloroethene	0.013	0.0034		mg/Kg-dry	164588	1	07/31/2012 20:11	JE
Trichloroethene	0.0080	0.0034		mg/Kg-dry	164588	1	07/31/2012 20:11	JE
Vinyl chloride	BRL	0.0067		mg/Kg-dry	164588	1	07/31/2012 20:11	JE
Surr: 4-Bromofluorobenzene	99.2	56.5-134		%REC	164588	1	07/31/2012 20:11	JE
Surr: Dibromofluoromethane	104	71.8-135		%REC	164588	1	07/31/2012 20:11	JE
Surr: Toluene-d8	99.6	77.1-117		%REC	164588	1	07/31/2012 20:11	JE
PERCENT MOISTURE D2216								
Percent Moisture	16.3	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative
NC Not confirmed

< Less than Result value

Client: Environmental Planning Specialists, Inc. Client Sample ID: 12205-SS-AST-DUP

Date:

3-Aug-12

Project Name:Capitol AdhesivesCollection Date:7/23/2012Lab ID:1207J08-019Matrix:Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW82	60B			(SW	5035)			
1,1,1-Trichloroethane	0.0043	0.0037		mg/Kg-dry	164588	1	07/31/2012 20:36	JE
1,1-Dichloroethane	BRL	0.0037		mg/Kg-dry	164588	1	07/31/2012 20:36	JE
Chloroethane	BRL	0.0074		mg/Kg-dry	164588	1	07/31/2012 20:36	JE
cis-1,2-Dichloroethene	0.016	0.0037		mg/Kg-dry	164588	1	07/31/2012 20:36	JE
Tetrachloroethene	0.058	0.0037		mg/Kg-dry	164588	1	07/31/2012 20:36	JE
Trichloroethene	0.018	0.0037		mg/Kg-dry	164588	1	07/31/2012 20:36	JE
Vinyl chloride	BRL	0.0074		mg/Kg-dry	164588	1	07/31/2012 20:36	JE
Surr: 4-Bromofluorobenzene	94.9	56.5-134		%REC	164588	1	07/31/2012 20:36	JE
Surr: Dibromofluoromethane	101	71.8-135		%REC	164588	1	07/31/2012 20:36	JE
Surr: Toluene-d8	98.8	77.1-117		%REC	164588	1	07/31/2012 20:36	JE
PERCENT MOISTURE D2216								
Percent Moisture	12.7	0		wt%	R226185	5 1	08/01/2012 11:00	AS

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative
NC Not confirmed

< Less than Result value

Client:Environmental Planning Specialists, Inc.Client Sample ID:TRIP BLANKProject Name:Capitol AdhesivesCollection Date:7/26/2012

Project Name: Capitol Adhesives Collection Date: 7/26/2012

Lab ID: 1207J08-020 Matrix: Aqueous

Analyses		Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS	SW8260B				(SV	V5030B)			
1,1,1-Trichloroethane		BRL	5.0		ug/L	164520	1	07/31/2012 23:10	NP
1,1-Dichloroethane		BRL	5.0		ug/L	164520	1	07/31/2012 23:10	NP
Chloroethane		BRL	10		ug/L	164520	1	07/31/2012 23:10	NP
cis-1,2-Dichloroethene		BRL	5.0		ug/L	164520	1	07/31/2012 23:10	NP
Tetrachloroethene		BRL	5.0		ug/L	164520	1	07/31/2012 23:10	NP
Trichloroethene		BRL	5.0		ug/L	164520	1	07/31/2012 23:10	NP
Vinyl chloride		BRL	2.0		ug/L	164520	1	07/31/2012 23:10	NP
Surr: 4-Bromofluorobenzene		79.7	67.4-123		%REC	164520	1	07/31/2012 23:10	NP
Surr: Dibromofluoromethane		126	75.5-128		%REC	164520	1	07/31/2012 23:10	NP
Surr: Toluene-d8		85.3	70-120		%REC	164520	1	07/31/2012 23:10	NP

Date:

3-Aug-12

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

## Sample/Cooler Receipt Checklist

Client EPS		Work Orde	r Number _	8010
Checklist completed by Signature Date	27/12	·		
Carrier name: FedEx UPS Courier Client \( \subseteq US	S Mail Othe	r	_	
Shipping container/cooler in good condition?	Yes ·	No	Not Present	
Custody seals intact on shipping container/cooler?	Yes	No	Not Present	/
Custody seals intact on sample bottles?	Yes	No <u>.</u>	Not Present _	
Container/Temp Blank temperature in compliance? (4°C±2)*	Yes _	No		
Cooler #1 24 Cooler #2 Cooler #3	_ Cooler #4 _	Coo	oler#5	Cooler #6
Chain of custody present?	Yes 🗸	No _		
Chain of custody signed when relinquished and received?	Yes 🗸	No		
Chain of custody agrees with sample labels?	Yes 🔽	No _		
Samples in proper container/bottle?	Yes 🗸	No _		
Sample containers intact?	Yes 🗹	No		
Sufficient sample volume for indicated test?	Yes _	No		
All samples received within holding time?	Yes 🗹	No		
Was TAT marked on the COC?	Yes 👱	No		
Proceed with Standard TAT as per project history?	Yes	No	Not Applicable	·
Water - VOA vials have zero headspace? No VOA vials su	ibmitted 🔽	Yes	No	
Water - pH acceptable upon receipt?	Yes	No	Not Applicable	· <u>~</u>
Adjusted?				
Sample Condition: Good Other(Explain)				
(For diffusive samples or AIHA lead) Is a known blank include	led? Yes		No /	

### See Case Narrative for resolution of the Non-Conformance.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample\_Cooler\_Receipt\_Checklist

<sup>\*</sup> Samples do not have to comply with the given range for certain parameters.

Client: Environmental Planning Specialists, Inc.

**Project Name:** Capitol Adhesives

Rpt Lim Reporting Limit

andon 1207100

Workorder: 1207J08

## ANALYTICAL QC SUMMARY REPORT

Date:

3-Aug-12

BatchID: 164520

Sample ID: MB-164520 SampleType: MBLK	Client ID: TestCode: TO	L VOLATILE ORGA	ANICS SW8260	В	Un Bat	its: <b>ug/L</b> tchID: <b>164520</b>		p Date: <b>07/30</b> alysis Date: <b>07/30</b>	/2012 /2012	Run No: <b>225979</b> Seq No: <b>4731609</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	45.82	0	50	0	91.6	67.4	123	0	0	0
Surr: Dibromofluoromethane	56.08	0	50	0	112	75.5	128	0	0	0
Surr: Toluene-d8	47.47	0	50	0	94.9	70	120	0	0	0
Sample ID: LCS-164520 SampleType: LCS	Client ID: TestCode: TO	L VOLATILE ORGA	ANICS SW8260	В	Un Bat	its: <b>ug/L</b> tchID: <b>164520</b>		p Date: <b>07/30</b> alysis Date: <b>07/30</b>	/2012 /2012	Run No: <b>225979</b> Seq No: <b>4731500</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Trichloroethene	54.10	5.0	50	0	108	70	130	0	0	0
Surr: 4-Bromofluorobenzene	59.09	0	50	0	118	67.4	123	0	0	0
Surr: Dibromofluoromethane	55.34	0	50	0	111	75.5	128	0	0	0
Surr: Toluene-d8	49.13	0	50	0	98.3	70	120	0	0	0
Sample ID: 1207H14-007AMS SampleType: MS	Client ID: TestCode: TC	L VOLATILE ORGA	ANICS SW8260	В	Un Bat	its: <b>ug/L</b> tchID: <b>164520</b>		p Date: <b>07/30</b> alysis Date: <b>07/30</b>	/2012 /2012	Run No: <b>225979</b> Seq No: <b>4731502</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Trichloroethene	60.40	5.0	50	0	121	68.3	149	0	0	0
Surr: 4-Bromofluorobenzene	56.84	0	50	0	114	67.4	123	0	0	0
Surr: Dibromofluoromethane	54.29	0	50	0	109	75.5	128	0	0	0
Surr: Toluene-d8	48.67	0	50	0	97.3	70	120	0	0	0
Qualifiers: > Greater than Result val  BRL Below reporting limit  J Estimated value detec	ue ted below Reporting Lim	it	E Estim	than Result value nated (value above quantity te not NELAC certified	e above quantitation range) H Holding times for preparation or analysis					

S Spike Recovery outside limits due to matrix

Client: Environmental Planning Specialists, Inc.

**Project Name:** Capitol Adhesives

**Workorder:** 1207J08 **BatchID:** 164520

Sample ID: 1207H14-007AMSD SampleType: MSD		L VOLATILE ORGA	В	Uni Bat	ts: <b>ug/L</b> chID: <b>164520</b>		Date: 07/30 lysis Date: 07/30		Run No: <b>225979</b> Seq No: <b>4731505</b>		
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual	
Trichloroethene	57.34	5.0	50	0	115	68.3	149	60.40	5.2	17.7	
Surr: 4-Bromofluorobenzene	56.53	0	50	0	113	67.4	123	56.84	0	0	
Surr: Dibromofluoromethane	53.21	0	50	0	106	75.5	128	54.29	0	0	
Surr: Toluene-d8	48.08	0	50	0	96.2	70	120	48.67	0	0	

Qualifiers: >

BRL

Greater than Result value

Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

< Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

Date:

ANALYTICAL QC SUMMARY REPORT

3-Aug-12

**Client:** Environmental Planning Specialists, Inc.

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

**Project Name:** Capitol Adhesives

Workorder: 1207J08

## ANALYTICAL QC SUMMARY REPORT

Date:

3-Aug-12

BatchID: 164588

Sample ID: MB-164588 SampleType: MBLK	Client ID: TestCode: TCI	L VOLATILE ORGA	NICS SW8260	В	Un Ba	its: <b>mg/Kg</b> tchID: <b>164588</b>		Date: 07/31 alysis Date: 07/31		Run No: <b>226152</b> Seq No: <b>4733975</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qua
1,1,1-Trichloroethane	BRL	0.0050	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	0.0050	0	0	0	0	0	0	0	0
Chloroethane	BRL	0.010	0	0	0	0	0	0	0	0
is-1,2-Dichloroethene	BRL	0.0050	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	0.0050	0	0	0	0	0	0	0	0
richloroethene	BRL	0.0050	0	0	0	0	0	0	0	0
inyl chloride	BRL	0.010	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	0.04703	0	0.05	0	94.1	56.5	134	0	0	0
Surr: Dibromofluoromethane	0.04991	0	0.05	0	99.8	71.8	135	0	0	0
Surr: Toluene-d8	0.04787	0	0.05	0	95.7	77.1	117	0	0	0
Sample ID: LCS-164588	Client ID:				Un	its: mg/Kg	Pre	p Date: 07/31	/2012	Run No: 226152
SampleType: LCS	TestCode: TCI	L VOLATILE ORGA	ANICS SW8260	В	Bat	tchID: 164588	Ana	alysis Date: 07/31	/2012	Seq No: 4733977
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qua
Trichloroethene	0.05413	0.0050	0.05	0	108	70	130	0	0	0
Surr: 4-Bromofluorobenzene	0.05432	0	0.05	0	109	56.5	134	0	0	0
Surr: Dibromofluoromethane	0.05132	0	0.05	0	103	71.8	135	0	0	0
Surr: Toluene-d8	0.04885	0	0.05	0	97.7	77.1	117	0	0	0
Sample ID: 1207J21-006AMS SampleType: MS	Client ID: TestCode: TCI	L VOLATILE ORGA	ANICS SW8260	В	Un Ba	its: <b>mg/Kg-</b> tchID: <b>164588</b>		p Date: <b>07/31</b> alysis Date: <b>07/31</b>		Run No: <b>226152</b> Seq No: <b>4733981</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
richloroethene	0.05479	0.0056	0.056	0	97.9	67.6	145	0	0	0
Surr: 4-Bromofluorobenzene	0.05933	0	0.056	0	106	56.5	134	0	0	0
Surr: Dibromofluoromethane	0.05841	0	0.056	0	104	71.8	135	0	0	0
Surr: Toluene-d8	0.05505	0	0.056	0	98.3	77.1	117	0	0	0
Qualifiers: > Greater than Result va	lue		< Less	than Result value			В	Analyte detected in the ass	sociated method	blank
BRL Below reporting limit			E Estim	ated (value above quantit	ation range)			Holding times for preparat		

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

Client: Environmental Planning Specialists, Inc.

**Project Name:** Capitol Adhesives

**Workorder:** 1207J08 **BatchID:** 164588

Sample ID: 1207J21-006AMSD SampleType: MSD	Client ID: TestCode: TC	L VOLATILE ORGA	NICS SW8260	В	Uni Bat	its: mg/Kg- chID: 164588		Date: <b>07/3</b> alysis Date: <b>07/3</b>	1/2012 1/2012	Run No: <b>226152</b> Seq No: <b>4733983</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Trichloroethene	0.06067	0.0056	0.056	0	108	67.6	145	0.05479	10.2	20.7
Surr: 4-Bromofluorobenzene	0.05834	0	0.056	0	104	56.5	134	0.05933	0	0
Surr: Dibromofluoromethane	0.05631	0	0.056	0	101	71.8	135	0.05841	0	0
Surr: Toluene-d8	0.05496	0	0.056	0	98.2	77.1	117	0.05505	0	0

Qualifiers:

Greater than Result value

Below reporting limit

J Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

BRL

< Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

Date:

ANALYTICAL QC SUMMARY REPORT

3-Aug-12

Client: Environmental Planning Specialists, Inc.

**Project Name:** Capitol Adhesives

Rpt Lim Reporting Limit

Workorder: 1207J08

# ANALYTICAL QC SUMMARY REPORT

BatchID: 164601

Date:

3-Aug-12

Sample ID: MB-164601 SampleType: MBLK	Client ID: TestCode: TC	L VOLATILE ORGA	ANICS SW8260	В	Uni Bat	ts: <b>mg/Kg</b> chID: <b>164601</b>		p Date: 07/3 alysis Date: 07/3	1/2012 1/2012	Run No: <b>226144</b> Seq No: <b>4734266</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
1,1,1-Trichloroethane	BRL	0.25	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	0.25	0	0	0	0	0	0	0	0
Chloroethane	BRL	0.50	0	0	0	0	0	0	0	0
cis-1,2-Dichloroethene	BRL	0.25	0	0	0	0	0	0	0	0
Γetrachloroethene	BRL	0.25	0	0	0	0	0	0	0	0
Trichloroethene	BRL	0.25	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	0.50	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	2.284	0	2.5	0	91.3	56.5	134	0	0	0
Surr: Dibromofluoromethane	2.761	0	2.5	0	110	71.8	135	0	0	0
Surr: Toluene-d8	2.396	0	2.5	0	95.8	77.1	117	0	0	0
Sample ID: LCS-164601 SampleType: LCS	Client ID: TestCode: TC	L VOLATILE ORGA	ANICS SW8260	В	Uni Bat	its: <b>mg/Kg</b> chID: <b>164601</b>		p Date: 07/3 alysis Date: 07/3	1/2012 1/2012	Run No: <b>226144</b> Seq No: <b>4734265</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Γrichloroethene	2.779	0.25	2.5	0	111	70	130	0	0	0
Surr: 4-Bromofluorobenzene	2.844	0	2.5	0	114	56.5	134	0	0	0
Surr: Dibromofluoromethane	2.727	0	2.5	0	109	71.8	135	0	0	0
Surr: Toluene-d8	2.530	0	2.5	0	101	77.1	117	0	0	0
Sample ID: 1207J08-010AMS SampleType: MS		205-SS-AST-7-2 L VOLATILE ORGA	ANICS SW8260	В	Uni Bat	its: <b>mg/Kg</b> -chID: <b>164601</b>	-	p Date: 07/3 alysis Date: 08/0	1/2012 1/2012	Run No: <b>226144</b> Seq No: <b>4734273</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Γrichloroethene	1.953	0.20	2.026	0	96.4	67.6	145	0	0	0
Surr: 4-Bromofluorobenzene	2.222	0	2.026	0	110	56.5	134	0	0	0
Surr: Dibromofluoromethane	2.088	0	2.026	0	103	71.8	135	0	0	0
Surr: Toluene-d8	2.035	0	2.026	0	100	77.1	117	0	0	0
Qualifiers: > Greater than Result val  BRL Below reporting limit  J Estimated value detec	ue ted below Reporting Lim	it	E Estim	than Result value rated (value above quantity te not NELAC certified	ation range)		Н	Analyte detected in the as Holding times for prepara RPD outside limits due to	ation or analysis	

S Spike Recovery outside limits due to matrix

Client: Environmental Planning Specialists, Inc.

**Project Name:** Capitol Adhesives

**Workorder:** 1207J08 **BatchID:** 164601

Sample ID: 1207J08-010AMSD SampleType: MSD		2205-SS-AST-7-2 CL VOLATILE ORGA	NICS SW82601	В	Uni Bat	its: <b>mg/Kg</b> -chID: <b>164601</b>		Date: 07/ alysis Date: 08/	/31/2012 /01/2012	Run No: <b>226144</b> Seq No: <b>4734274</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	l %RPD	RPD Limit Qual
Trichloroethene	1.909	0.20	2.026	0	94.3	67.6	145	1.953	2.27	20.7
Surr: 4-Bromofluorobenzene	2.254	0	2.026	0	111	56.5	134	2.222	0	0
Surr: Dibromofluoromethane	2.022	0	2.026	0	99.8	71.8	135	2.088	0	0
Surr: Toluene-d8	1.988	0	2.026	0	98.2	77.1	117	2.035	0	0

Qualifiers: >

BRL

Greater than Result value

Below reporting limit

J Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

< Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

Date:

ANALYTICAL QC SUMMARY REPORT

3-Aug-12