Prepared for:

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

VOLUNTARY REMEDIATION PROGRAM
COMPLIANCE STATUS REPORT
CAPITOL USA – DALTON FACILITY
Dalton, Georgia

Prepared by:

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

August 2015

DCN: RIVEDAPR008

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Kirk Kessler, P.G.
Principal

Timmerly Bullman, P.E.
Associate

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EPS

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

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

Printed Name and GA PE/PG Number

8/24/2015

Date

Signature and Stamp

EPS

CERTIFICATION OF COMPLIANCE

I certify that this CSR report and all attachments were prepared under my direction in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, 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.

Based on my review of the findings of this report with respect to the Risk Reduction Standards under the Rules for Hazardous Site Response, Rule 391-3-19-.07 and the Voluntary Remediation Program Act, O.C.G.A 12-8-108, I have determined that this Property is in compliance with Type 1 RRS for soil and with Type 1 RRS with controls for groundwater.

Certified by: _____ Date: 8/20/15

CEA, LLC
W. Craig Baker
Vice President

1 INTRODUCTION

1.1 VRP Property

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; EPS, 2011) for the Capitol USA – Dalton Facility in May 2011 (HSI Site 10795). 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, semiannual progress reports have been submitted since April 2012, the most recent of which was submitted on April 8, 2015. This CSR includes certification by the Professional Geologist (Kirk Kessler) specified in the VIRP. Appendix A contains a monthly summary of hours invoiced since the last progress report and description of services provided.

The Capitol property is located at 300 Cross Plains Boulevard, Dalton, Georgia (Property). Figure 1 is a topographic map of the surrounding area, and Figure 2 is an aerial photograph of the Property. The Property is located on a total parcel of approximately 15.31 acres. The Property is currently owned by Barrett Properties, who has given CEA express permission to perform remedial action at the Property. QEP Co., Inc. is currently operating on the Property.

1.2 Source of Contamination and Historical Remedial Actions

In January 1995, a documented release of approximately 585 gallons of reclaimed 1,1,1-trichloroethane (1,1,1-TCA) occurred from a delivery truck due to failure of the tanker sidewall. Figure 2 depicts the approximate location of the spill. 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[1]. Groundwater samples were not collected during the post spill response. An Environmental Investigation (Tri-State, 2004a) identified trichloroethene (TCE), tetrachloroethene (PCE), and daughter products in the subsurface and groundwater samples. The spill is the likely source of 1,1,1-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 1,1,1-TCA likely contained PCE/TCE as impurities. The aboveground storage tanks (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.

A Corrective Action Plan (CAP) (WRS, 2006) was approved by EPD in December 2006 and implemented in January 2007 in response to the groundwater contamination. The corrective action included stimulation of subsurface reductive dechlorination by injection of EHC®, which is

[1] There is no documentation of the dimensions or specific locations of the soil excavation.

composed of zero-valent iron and a carbon based biostimulant. However, this treatment was not sufficiently effective at reducing dissolved-phase chlorinated solvents throughout the plume.

1.3 Media of Interest

Georgia's Hazardous Site Response Act (HSRA) regulates soil, groundwater and source material. The HSRA Rules do not expicitly define the interface between soil (vadose zone) and groundwater (zone of saturation) in situations where the water table fluctuates. However, the Rules state that the soil Risk Reduction Standards (RRSs) apply to soils at any point "above the uppermost groundwater zone." As a matter of practice, it has been our experience that the EPD applies this concept of the uppermost groundwater zone (defined as the high water table) as defining the regulatory interface between soil and groundwater. This is important for this Property as the water table elevation fluctuates greatly. At any given location the water table has historically varied from being several feet below ground surface (bgs), to as high as the ground surface or above (i.e. artesian). Source material can occur above or below the water table and is regulated regardless of where it occurs. Thus, it is customary in source area characterizations to collect not only groundwater samples, but also solid media below the high water table mark. The characterization data set for the Property includes soils (in the vadose zone, above the high water table mark), solid matrix samples from below the high water table mark (herein termed "solid aquifer matrix") and groundwater. A Conceptual Site Model (CSM) that gives more details concerning the setting and conditions at the Property is included as Appendix B.

According to the VRP regulations, the Point of Exposure (POE) for groundwater is the nearest of the following: the closest existing down-gradient drinking water well, the likely nearest future down-gradient drinking water well, or at a hypothetical point of exposure 1000 feet down-gradient of the plume edge. The nearest known drinking water well is over a mile from the Property and is cross-gradient instead of down-gradient. The Property is surrounded by undeveloped property and commercial properties, which are serviced by a public water supply. Thus, the POE for this Property is a hypothetical point 1000 feet down-gradient from the plume. A Point of Demonstration (POD) well on the Property is being used to demonstrate compliance for the POE. The POD monitoring well is MW-16, which is located at the property boundary, approximately 520 feet down-gradient from the location of the spill and 230 feet down-gradient from the edge of the plume.

1.4 Constituents of Interest and Applicable Criteria

The primary constituents of interest are the chlorinated solvents 1,1,1-TCA, PCE, and TCE. Chlorinated solvents can degrade biologically through a process called reductive dechlorination, or biological degradation. The parent compound 1,1,1-TCA can be sequentially degraded into daughter products 1,1-dichloroethane (1,1-DCA) and chloroethane (CA). Similarly, the parent compound PCE can be sequentially degraded into daughter products TCE, cis-1,2-dichloroethene (cis-DCE) and vinyl chloride (VC). Accordingly, the primary constituents of interest for the Property include 1,1,1-TCA, 1,1-DCA, CA, PCE, TCE, cis-DCE and VC.

The criteria used for groundwater and vadose zone soil are the Type 1 RRSs. The final Type 1 RRS values were presented in the First Progress Report (EPS, 2012) and approved by the EPD in a letter dated February 3, 2014. Table 1 shows the Type 1 RRSs for the primary constituents of interest.

RRSs are not applicable for solid aquifer matrix material. However, as source material was potentially present in the solid aquifer matrix, criteria were developed to determine the extent of remediation necessary to adequately address source area removal. Accordingly, in the Third Progress Report (EPS, 2013a), CEA put forth the concept of a Remedial Extent Level (REL) to define the area of remediation to address source material. The REL was based on a modified soil screening level calculations (SSL_{mod}). Section 4.1 summarizes the development of the SSL_{mod}. Table 1 shows the SSL_{mod} values that were developed and approved by the EPD in a letter dated February 3, 2014.

1.5 Activities Conducted under the VRP

Since the Property was accepted into the VRP in 2011, CEA has completed the following major activities:

- Submitted seven semi-annual progress reports
- Installed two monitoring wells
  - MW-1R a residuum well placed in the direction of groundwater flow down-gradient from the source area
  - MW-3B a bedrock well placed in the area of highest concentrations in groundwater for vertical delineation
- Conducted five groundwater sampling events (the most recent of which was in November 2014, as described in Section 5.7)
- Verified the groundwater models developed as part of the VRP application
- Collected samples of solid aquifer matrix material during multiple sampling events (the most recent of which was in October 2014) to assess or delineate the source area
- Performed an in-situ chemical oxidation (ISCO) pilot test (see Section 4) to determine the feasibility of ISCO for source area remediation
- Completed source area remediation (see Section 5)
- Performed indoor air sampling (see Section 2)
- Developed an environmental covenant (see Section 5.8)

1.6 Compliance

Soil is in compliance with Type 1 RRSs. With the completion of the source area remediation and implementation of the environmental covenant (which among other things precludes the use of groundwater at the Property), the Property will have met the requirements of the VRP. This is described further in Section 5 and 6.

2 INDOOR AIR SAMPLING FOR VAPOR INTRUSION

In the Fifth Progress Report (EPS, 2014), CEA presented a risk evaluation for the Property, which included evaluating the vapor intrusion pathway. Section 3.2.1.2 contains a summary of this evaluation. The evaluation resulted in the identification of five vapor Constituents of Potential Concern (COPC) and two possible Constituents of Concern (COCs): TCE and PCE.

CEA recently conducted indoor air sampling in order to further evaluate whether vapor intrusion is occurring at the Property. This sampling was conducted on a Saturday (May 16, 2015) to minimize the potential impacts of facility operations. Individually certified summa canisters with flow controllers were used for the sampling. Four canisters were placed at strategic locations (approximately 50 feet part) inside the building over the groundwater plume (see Figure 3). A fifth canister was placed outside as an ambient control. The canisters collected samples for a period of 8 hours, at which time the valves were closed. The samples were shipped to H&P Mobile Geochemistry Inc. in Carlsbad, California for analysis.

The samples were analyzed for volatile organic compounds (VOCs) detected in groundwater under the building (which include the five vapor COPCs). The results are summarized in Table 2 and the laboratory data report is included as Appendix C. The data are compared to target indoor air concentrations, which were obtained from OSWER's Vapor Intrusion Screening Level (VISL) calculator, based on a commercial exposure setting with a target risk of 10^{-5} and target hazard quotient of 1. A copy of the VISL calculator output is included as Appendix D.

The majority of constituents (most notably TCE and PCE) were not detected in any of the indoor air samples. Chloroform was detected in one sample and 1,2-dichloroethane was detected in three samples. However, all the results were below the target indoor air concentrations. Accordingly, the indoor air is not adversely impacted from vapor emissions from the underlying groundwater.

3 CONDITION PRIOR TO REMEDIATION

3.1 Delineation

3.1.1 Groundwater Conditions

As a part of the VRP groundwater monitoring program, which began in 2012, twenty wells have been sampled for VOCs. All wells were sampled annually, and select wells used in the groundwater model were sampled semi-annually. A summary of the analytical results for constituents that were detected is presented in Table 3. This table also shows the results for sampling that was conducted prior to the Property's entrance into the VRP.

The last time that all the monitoring wells were sampled prior to remediation was in February 2013. Figure 4 shows the potentiometric surface map from February 2013 showing that the general groundwater flow direction is to the northeast.

Chlorinated ethenes and ethanes are the constituent groups of interest at the Property, associated with the 1995 spill event. Groundwater concentrations of total chlorinated ethenes (PCE, TCE, cis-DCE and VC) in February 2013 are shown in Figure 5. Similarly, groundwater concentrations of total chlorinated ethanes (1,1,1-TCA, 1,1-DCA and CA) are shown in Figure 6. The highest concentrations at observed at the location of the tanker truck spill. The primarily direction of the groundwater plumes are to north and northeast of the spill area, consistent with the direction of groundwater flow.

The plume has been characterized and delineated horizontally (see Figures 5 and 6 that show total chlorinated ethenes and total chlorinated ethanes, respectively, from 2013) with MW-16 (the POD well) and MW-1R to the north, MW-14 to the east, MW-8 to the south and MW-17 to the west all being non-detect. Table 3 shows groundwater results compared to the delineation criteria (Type 1 RRS). Table 3 and Figures 5 and 6 demonstrate horizontal delineation of groundwater in all directions, most importantly with MW-1R and MW-16 in the direction of groundwater flow.

Two monitoring well clusters are available to evaluate vertical delineation (MW-2/MW-2D and MW-3/MW-3D/MW-3B). 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.

Additionally, there is an upward vertical migration of groundwater as demonstrated in the Fourth Progress Report (EPS, 2013b) using the EPA's online vertical gradient calculator[2]. Therefore, vertical delineation of groundwater has been addressed based on the upward vertical migration of groundwater, the decreasing concentrations with depth, and because source material has been addressed at the Property and the vertical groundwater condition does not affect the BIOCHLOR model predictions. In a letter dated February 3, 2014, the EPD agreed that the concentrations are

[2] http://www.epa.gov/athens/learn2model/part-two/onsite/vgradient.html

decreasing with increasing depth and did not require the installation of an additional deep well for vertical delineation.

3.1.2 Solid Aquifer Matrix and Vadose Zone Soil

Although the solid aquifer matrix and vadose zone soil were considered separately in terms of the need for remedial action, for ease of presentation and delineation both matrices will be discussed together. Several subsurface investigations have been completed to date at the Property. 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 4 and the sample locations are shown on Figure 7.

Figure 7 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 4 indicates whether each sample is in the solid aquifer matrix or vadose zone soil. It is of note that all vadose zone soils are in compliance with Type 1 RRSs.

Delineation is only appropriate for the vadose zone soils. However, because much of the area of interest on the Property 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. Figure 8 and Figure 9 show the extent of total chlorinated ethenes and ethanes, respectively, in the solid matrix samples. Where more than one depth was sampled at a location, the highest result is shown.

Figures 8 and 9 show that the solid matrix has been delineated to background in all directions, except for MW-10 and MW-11 on the west side (where they are below the Type 1 RRS). Table 5 shows the analytical results (for constituents with Type 1 RRSs) for the vadose zone soil samples and the soil aquifer matrix samples that are the furthest laterally in each direction. This table shows all the results are below the delineation criteria, and the majority of the results are non-detect. The only constituents detected at MW-10 or MW-11 are TCE and cis-DCE at concentrations well below their Type 1 RRSs. Thus, the solid matrix material has been delineated to the Type 1 RRS in all directions.

3.2 Risk Evaluation

3.2.1 Human Health

3.2.1.1 Introduction

The nearest residence is greater than 2000 feet northwest of the Property. The Property 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 Property. In addition, as described

in the Release Notification (Tri-State, 2004b): a) groundwater flow at the Property is to the northeast and this well is to the north-northwest, b) the Property 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 Property and the well are cross-gradient, and d) there are multiple groundwater divides between the Property and the well that would prevent groundwater migration from the Property to the well. Thus, the well is not directly down-gradient of the Property and the well is located in an area were public water is available. As the Property 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. The Fifth Progress Report (EPS, 2014) contained a detailed evaluation of the potential risk to these receptors. A summary of these risk evaluation is presented below.

3.2.1.2 Industrial Worker (Vapor Intrusion Pathway)

As the area impacted by the release is covered by concrete and/or gravel, exposure to vadose zone soil and solid aquifer matrix is not a complete exposure pathway for the industrial worker. However, some chlorinated compounds have been detected in wells inside the building. Thus, a vapor intrusion assessment was conducted (as documented in the Fifth Progress Report; EPS, 2014) following the procedures recommended in the OSWER Final Guidance for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Sources to Indoor Air (EPA, 2013a) and the modeling approach in the Vapor Intrusion Screening Level Calculator (VISL; EPA, 2013b). Five constituents (1,2-dichloroethane, chloroform, PCE, TCE, and VC) were identified as vapor intrusion COPCs. These five constituents were further assessed in the VISL calculator to model potential risk to human receptors. The model indicated that two constituents (TCE and PCE) are possible COCs for the Property.

The company operating at the Property (QEP) uses a large number of chemicals and the facility falls under OSHA requirements and associated HAZCOM program. For example, as part of the HAZCOM program the facility periodically has industrial hygiene studies conducted by third parties. In 2011, a hygiene study was conducted that included the evaluation of solvent exposures at the Property. This study included collection of air samples for solvents using 3M passive organic vapor monitors for two workers who work with solvents at the facility (thus, this is the area of highest potential exposure). The air sample monitors collected from these two workers were analyzed for TCE (among other solvents). The results for both workers were non-detect (<0.27 ppm). These results are far below the OSHA permissible exposure limit of 10 ppm and the ACGIH threshold limit value of 100 ppm. OSHA requirements are the appropriate standards for the facility.

As discussed in Section 2, CEA conducted indoor air sampling to evaluate whether vapor intrusion is occurring at the Property above acceptable criteria. The results indicated that indoor air is not impacted at levels that are a risk concern. Thus, the indoor air is not adversely impacted from vapor emissions from the underlying groundwater.

3.2.1.3 Construction and Utility Workers (Direct Contact)

The current and/or potential future human receptors that could have contact with the subsurface are construction and utility workers. No construction or utility activities are currently planned at the Property; however, it is possible that the subsurface may need to be accessed at the Property in the future. Construction or utility workers may be exposed by physical contact with contaminated groundwater, vadose zone soils and/or the solid aquifer matrix. The Seventh Progress Report (EPS, 2015) contains an evaluation of whether there is a potential risk or hazard to receptors at the Property in order to better inform what is needed in a restrictive environmental covenant for the Property. The evaluation determined that exposure to the vadose zone soil and solid aquifer matrix material did not pose a risk or hazard to the workers. However, if the workers are exposed to the groundwater there is a potential risk or hazard to the workers due to the inhalation pathway. The environmental covenant (see Section 5.8) will address the potential exposure to these receptors.

3.2.2 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 Property.

3.3 Basis for Remedial Action

Vadose zone soils were in compliance with Type 1 RRSs, and therefore there was no need to take additional remedial action. Groundwater concentrations on the Property exceed RRSs; however, no active remedial action is required because modeling has shown that the plume is stable and will not move off-site, and an environmental covenant will be recorded that prohibits groundwater use. Source material was to be addressed through removal and the addition of an oxidant into the solid aquifer matrix.

4 DEVELOPMENT OF REMEDIAL ACTION PLAN FOR SOURCE MATERIAL

4.1 Source Material – Remedial Extent Level

In the Third Progress Report (EPS, 2013a), a Remedial Extent Level (REL) was proposed to target areas for remedial action. The REL is a "modified" soil screening level (SSL_{mod}). The EPA's Soil Screening Level guidance equation (EPA, 1996) was used. The basic SSL equation from EPA calculates the threshold concentration in soil from an assigned allowable concentration in groundwater (most typically the maximum contaminant level is used). The "modification" involved using the source area groundwater concentration from the BIOCHLOR model as the allowable groundwater concentration in the SSL equation. The BIOCHLOR model shows that the groundwater plume will remain on the property and not migrate off-site. Therefore, setting the source material concentration to the modeled groundwater source concentration is appropriate and sufficient.

The SSL equation can be simplified to:

SSL = Cw x Ps
where SSL is a concentration in soil,
Cw is a concentration in groundwater,
and Ps are subsurface parameters.

The resulting SSL_{mod} for PCE is 7.5 mg/kg, for TCE is 7 mg/kg, and for 1,1,1-TCA is 16 mg/kg. In a letter dated February 3, 2014, the EPD approved of the SSL_{mod} values and their use to define the extent of remediation. Table 4 shows a comparison of the RELs to the solid aquifer matrix material. Figure 10 shows the locations where the REL was exceeded for PCE (note exceedances of 1,1,1-TCA and TCE RELs are co-located with PCE REL exceedances) prior to remedial action.

4.2 Pilot Test

In order to determine whether ISCO would be effective at the Property, EPS conducted a pilot scale ISCO injection test. Details concerning this pilot test were presented in the Fifth Progress Report (EPS, 2014). A summary is presented herein.

The plan was to apply an oxidant (RegenOx) through one or two injection wells in the AST containment basin. RegenOx is a proprietary oxidant containing sodium percarbonate. The primary injection well (IW-1) was to be located adjacent to the previous sample point AST-9. The second injection well (IW-2) was to be located as close to the first one as possible to determine the radius of influence from the first well and, potentially to also be used as an injection well. EPS

then intended to collect solid aquifer matrix samples from locations near the wells after application of RegenOx to evaluate the effectiveness of the application of RegenOx in terms of mass reduction.

In January 2014, two shallow injection wells were installed. Figure 11 shows the locations of the two wells. IW-1 was located next to former soil boring SS-AST-9, in the southern AST basin. The second well (IW-2) was located just outside the southwest corner of basin's perimeter wall as close as possible to IW-1. Each injection well was comprised of 2 inch Schedule 80 PVC with 2.5 inches of Slot 20 Screen and 5 feet of riser. The annular space was backfilled with clean sand and approximately 3 inches of bentonite chips was placed on top of the sand pack. The bentonite was hydrated prior to sealing.

EPS attempted to apply the oxidant to the subsurface under both gravity flow and under pressurized conditions during multiple events. However, daylighting of the liquids happened under each scenario. This pilot test demonstrated that ISCO injection was not feasible at the Property due to several confounding conditions: 1) the tight clay subsurface matrix, 2) the high water table, and 3) a concrete surface that has cracks and seams that allow for daylighting. Accordingly, ISCO injection was deemed to not be a viable remedial option at this Property.

4.3 Remedial Action Plan

CEA met with the EPD on March 18, 2014 to discuss the results of the ISCO pilot test and to discuss options for a final remediation plan. It was decided that source material would be addressed primarily through excavation of the subsurface material and disposal off-site. The final remediation plan was submitted as part of the Fifth Progress Report (EPS, 2014). The three remedial action areas described in the plan are shown on Figure 12. Area A is to the north of the AST containment area, Area B is to the east of the AST containment area and Area C is within the AST containment area at the location of the highest observed concentrations within the AST containment area. The plan was to excavate in Areas A and B to the nearest historical sample locations (horizontally and vertically) that had results below the REL. In essence, historical sample data was to be used as confirmation samples for remediation. As discussed with the EPD, a limited subsurface excavation was planned in the AST containment area to encompass AST-9, IW-1 and as much of the area around them as feasible given the presence of the ASTs and associated equipment and piping. After excavating as much as feasible in Area C, a sample was to be collected at the bottom of the excavated area and oxidant was to be poured into the open excavation area.

5 SUMMARY OF REMEDIATION ACTIVITIES

5.1 Introduction

Remediation activities were documented in the Seventh Progress Report (EPS, 2015). A summary of the activities are presented in this section.

5.2 Site Preparations

Remediation activities started on September 30, 2014. In preparation for the excavation work, the fencing around the AST unit was removed and the concrete in Areas A and C was saw cut and removed. Additionally, the pilot test wells (IW-1 and IW-2) were decomissioned.

5.3 Area A and B (Outside AST)

As previously mentioned, historical data was used to define the remediation footprint in Areas A and B. As shown on Figure 12, these areas were to be excavated at least to the nearest historical sample locations (horizontally and vertically) that had results below the REL. The remedial action was executed as planned:

- Area A was excavated to a depth of 4 feet (ft); and
- Area B was excavated to a depth of 5 ft.

A summary of the excavation areas is shown below and a photolog is included as Appendix E.

Area	Horizontal Area (sf)	Depth (ft)	Volume (CY)	% Removal of Source Material
Area A	273	4	40	100%
Area B	519	5	96	100%

Immediately after the subsurface was excavated, the excavated areas were backfilled with 3.5 ft of #57 stone, 0.5 ft of clean soil in Area A and 1.5 ft of clean soil in Area B, which was then compacted to surface grade. The backfill soil was tested prior to being brought on-site. A copy of the analytical report is included in the Seventh Progress Report (EPS, 2015). Concrete was replaced to grade in Area A. Concrete was also added to the area east of the AST (which was previously covered with gravel) to cover the entire area east of the AST as shown on Figure 12 and in Appendix E.

5.4 Area C (Inside AST)

A focused excavation was undertaken in the AST containment area to encompass AST-9 and IW-1. A 3 ft by 3 ft section of concrete was removed and the soil was hand excavated as deep as was feasible, which was 3 ft. Once the excavation was complete, a sample was collected at the bottom of the excavated area and analyzed for PCE, TCE and 1,1,1-TCA (sample called AreaC). The results are shown in Table 4 and the laboratory data report was included in the Seventh Progress Report (EPS, 2015). The same oxidant (RegenOx) used in the pilot test was used for the post excavation ISCO treatment. RegenOx is a proprietary oxidant containing sodium percarbonate and sodium carbonate. In order to work the oxidizer complex requires activation with the activator complex, which is a mixture of sodium silicate solution, silica gel and ferrous sulfate. After the soil sample was collected, approximately 40 gallons of an 8% activator complex solution was mixed and poured into the open excavation area. The area was covered and the activator was allowed to infiltrate overnight. The following day approximately 40 gallons of 5% oxidizer complex solution was mixed and poured into the excavation area. After allowing for infiltration, the excavation area was then backfilled with #57 stone. A specialty sealing contractor (Blackwell's Inc) patched and sealed the concrete slab.

5.5 Material Management

After excavations were complete, the soil from the roll-off was sampled and analyzed for TCLP per the landfill's request As the soil tested non-hazardous, it was transported off-site for disposal at the Dalton-Whitfield Regional Solid Waste Management Authority's Old Dixie Highway Subtitle-D landfill. Copies of the manifests are included in Appendix F.

5.6 Post-Remedial Action Condition – Solid Aquifer Matrix Media

The remedial action was focused on addressing source material in the solid aquifer matrix, as vadose zone soils were in compliance with Type 1 RRSs prior to the remedial action. Accordingly, this section focuses on the condition of the solid aquifer matrix material. Figure 13 shows the post-remedial condition for solid aquifer matrix material in and around the spill area and AST containment area. This figure shows the results of data collected prior to the remediation and excludes the laboratory data associated with soil that was excavated or treated with oxidant. The post-remedial action condition is evaluated below by comparing the representative condition (i.e.,

95% upper confidence limit (UCL) on the mean) to the REL (SSL_{mod}) to determine if source material has been adequately addressed. The 95% UCL on the mean is commonly used in risk assessments to represent the condition.

Post-Remediation Condition
(95% UCL on the mean)

	REL (mg/kg)	Post-Remedial Action 95% UCL (mg/kg)
PCE	7.5	5.5
TCE	7.0	5.0
1,1,1-TCA	16	5.2

The 95% UCL concentrations for the constituents of interest (PCE, TCE, 1,1,1-TCA) are below the REL (SSL_{mod}) indicating that source material has been addressed.

5.7 Post-Remedial Action Condition - Groundwater

5.7.1 Final Groundwater Sampling Event

Consistent with the VIRP, semi-annual groundwater sampling was conducted for a period of two years. EPD requested one additional groundwater sampling event to be conducted after the source area remediation, to collect data for a final verification of the groundwater models. Accordingly, the wells used in the groundwater models (MW-3, MW-3D, MW-4, MW-5, MW-15, MW-1R and MW-16) were sampled according to the standard EPA protocols (USEPA Region 4 groundwater sampling operating procedures) used in previous sampling events and analyzed for the constituents used in the models (PCE, TCE, cis-DCE, VC, 1,1,1-TCA, 1,1-DCA, and CA). EPS conducted the event the week of November 10, 2014. Details of this event were presented in the Seventh Progress Report (EPS, 2015).

Results from this sampling event are included in Table 3. Figures 14a, 14b, 14c, and 14d show groundwater concentrations of the chlorinated ethenes (PCE, TCE, cis-DCE, and VC, respectively) from this sampling event. Similarly, Figures 15a, 15b, and 15c show groundwater concentrations of chlorinated ethanes (1,1,1-TCA, 1,1-DCA, and CA). 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). These figures show that the chlorinated solvent plume continues to be bounded within the Property.

5.7.2 Groundwater Model

BIOCHLOR is a computer model that simulates natural attenuation of dissolved chlorinated solvents. The VIRP contained the results of BIOCHLOR modeling for both chlorinated ethenes and ethanes. 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 positive affect from the injections. Model simulations were conducted through the year 2030 to determine estimated concentrations at different wells throughout and beyond the plume (see Figures 16 and 17, with backup documentation in Appendix G). These figures show the location of the monitoring well MW-16. MW-16 is the POD for a hypothetical POE as MW-16 is at the property boundary and is less than 1000 feet from the edge of the plume. (MW-16 is approximately 528 feet down-gradient from the location of the spill and 230 feet down-gradient from the edge of the plume.) Thus, the model predicts that groundwater concentrations at the POD and POE will not exceed Type 1 RRSs. After every sampling event the BIOCHLOR models were rerun using the recently collected data to determine if the models needed to be adjusted. The models were not adjusted after submission of the VIRP.

The BIOCHLOR groundwater models were run for the year 2014 while plotting the results from the November 2014 sampling event. The results for the chlorinated ethene and chlorinated ethane models for 2014 are shown in Figure 18 and 19, respectively. The comparison of the analytical data to the modeling results in 2014 is similar to previous results.

Figure 20 shows a plan view of the 2030 model results showing the predicted extent of each of the chlorinated ethenes. Overall, the model continues to overestimate the concentrations of the constituents, providing a conservative assessment of future conditions. Figures 16 through 20 demonstrate that groundwater concentrations at the POD well (MW-16) does not and will not exceed the Type 1 RRSs in the future.

5.8 Environmental Covenant

CEA has developed an environmental covenant to address potential future issues at the Property. A draft of the covenant is included as Appendix H. The covenant contains the following provisions:

- The Property shall only be used for non-residential purposes
- If the subsurface is accessed (e.g. by construction, utility or repair workers) in the area shown on Figure 21, then proper precautions shall be taken to protect the workers.
- The use or extraction of groundwater at the Property for drinking water or any other non-remedial purposes is prohibited.

5.9 Summary

Source material has been adequately addressed as set forth in the approved Remediation Plan and discussions with EPD through a combination of excavation and oxidant addition. No action was needed to address vadose zone soils as they are in compliance with Type 1 RRSs. Although groundwater on the Property exceeds Type 1 RRSs, the POD well is in compliance with Type 1 RRSs. Modeling indicates that in the future the POD well and the hypothetical POE will not have concentrations in excess of the Type 1 RRSs. Additionally, through a combination of addressing the source material and natural attenuation processes, the groundwater condition will continue to improve over time. Indoor air testing has demonstrated that there is not an adverse risk due to vapor intrusion. The environmental covenant will be protective of receptors based on future uses of the Property.

6 SITE COMPLIANCE AND DELISTING

The Property (HIS ID No 10795) is in compliance with Type 1 RRS for soils and Type 1 RRS with controls (environmental covenant) for groundwater.

Soils: Vadose zone soils are in compliance with Type 1 RRSs.

Source material: Source material has been addressed through remedial action completed in late 2014 and implementation of an environmental covenant that precludes contact with the subsurface in the release area without appropriate health and safety measures.

Groundwater: Groundwater under a portion of the Property has concentrations that exceed Type 1 RRSs. An environmental covenant will be in place prohibiting the extraction of groundwater at the Property for drinking water or any other non-remedial purpose, thus precluding an exposure pathway for groundwater at the Property. The hypothetical POE is 1,000 feet down-gradient of the spill area. A POD well (MW-16) is located at the property boundary, approximately 528 feet down-gradient of the spill area. MW-16 is in compliance with Type 1 RRSs. Fate and transport modeling (BIOCHLOR) indicates that the plume will not move off the Property and demonstrates that groundwater at MW-16 (and, thus, the POE, which is further down-gradient) is not expected to exceed the Type 1 RRS in the future. Accordingly, through the use of controls groundwater is in compliance with Type 1 RRSs.

As the Property is in compliance with Type 1 RRSs with controls and remedial action has been completed, we respectfully request EPD's concurrence and delisting of the Property from the Hazardous Site Inventory.

7 REFERENCES

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TABLES

Capitol Adhesives
Table 1. Applicable Criteria

Constituent	Groundwater Type 1 RRS (mg/L)	Vadose Zone Soil Type 1 RRS (mg/kg)	Source Material Remedial Extent Level (SSLmod) (mg/kg)
1,1,1-Trichloroethane	0.2	20	16
1,1-Dichloroethane	4	400	--
Chloroethane	DL	0.17	--
Tetrachloroethene	0.005	0.5	7.5
Trichloroethene	0.005	0.5	7
cis-1,2-Dichloroethene	0.07	7	--
Vinyl chloride	0.002	0.2	--

DL - detection limit

-- not necessary

Capitol Adhesives
Table 2. Indoor Air Sampling Results

Constituent		VISL Target Indoor Air[1]	Ambient Air Sample VIIA-01	Indoor Air Samples VIIA-02	VIIA-03	VIIA-04	VIIA-05
1,1,1-Trichloroethane	µg/m^3	22000	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55
1,1-Dichloroethane	µg/m^3	77	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41
1,1-Dichloroethene	µg/m^3	880	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
1,2-Dichloroethane	µg/m^3	4.7	< 0.41	< 0.41	**1.4**	**0.83**	**0.97**
Chloroform	µg/m^3	5.3	< 0.25	< 0.25	< 0.25	< 0.25	**0.6**
cis-1,2-Dichloroethene	µg/m^3	NA	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Freon 113	µg/m^3	130000	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77
Tetrachloroethene	µg/m^3	180	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69
trans-1,2,Dichloroethene	µg/m^3	NA	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Trichloroethene	µg/m^3	8.8	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55
Vinyl Chloride	µg/m^3	28	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13

1) Lower of target concentration for commercial receptors based on TCR = 10^{-5} and THQ = 1
NA - no inhalation toxicity values

Capitol Adhesives

Table 3. Analytical Results for Constituents Detected in Groundwater (mg/L)

Well	Date Sampled	Tetrachloroethene (mg/L)	Trichloroethene (mg/L)	cis-1,2-Dichloroethene (mg/L)	Vinyl chloride (mg/L)	Total Chlorinated Ethenes (mg/L)	1,1,1-Trichloroethane (mg/L)	1,1-Dichloroethane (mg/L)	Chloroethane (mg/L)	Total Chlorinated Ethanes (mg/L)	1,1,2-Trichloroethane (mg/L)	1,1-Dichloroethene (mg/L)	1,2-Dichloroethane (mg/L)	Acetone (mg/L)	Benzene (mg/L)	Chloroform (mg/L)	Cyclo hexane (mg/L)	Dichloromethane (mg/L)	Freon-11 (mg/L)	Freon-113 (mg/L)	Methylcyclohexane (mg/L)	o-Xylene (mg/L)	Toluene (mg/L)	trans-1,2-Dichloroethene (mg/L)
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**
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	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-6	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-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	8/23/2012	<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-1R	2/5/2013	<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	11/10/2014	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.01	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	7/15/04	**0.0424**	**0.0089**	ND	ND	0.0513	0.0039	ND	ND	0.0039	<0.005	ND	ND	<0.1	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-2	8/10/05	**0.19**	**0.057**	0.0082	**0.003**	0.2582	0.0017	0.017	<0.001	0.0187	<0.001	0.004	<0.001	<0.1	<0.001	<0.001	NA	<0.001	<0.001	NA	NA	NA	<0.001	<0.001
MW-2	6/28/06	**0.065**	**0.01**	<0.005	<0.002	0.075	<0.005	0.004 J	<0.005	0.004	<0.005	<0.005	<0.005	<0.1	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-2	3/7/07	<0.005	<0.005	0.02	<0.002	0.02	<0.005	<0.005	<0.005	ND	<0.005	<0.005	<0.005	**4.23**	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	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	NA	ND	ND	NA	NA	NA	0.005	ND
MW-2	4/8/08	ND	ND	ND	**0.008**	0.008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	**1.09**	ND
MW-2	10/14/08	**0.083**	**0.061**	0.034	**0.17**	0.348	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	0.71	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	0.41	<0.005
MW-2	6/22/09	<0.005	<0.005	<0.005	**0.0037**	0.0037	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	0.11	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-2	10/8/10	**0.069**	**0.096**	0.033	**0.0075**	0.2055	<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-2	2/8/2012	<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-2	2/5/2013	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	0.2	<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	NA	ND	ND	NA	NA	NA	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	NA	<0.001	<0.001	NA	NA	NA	<0.001	<0.001
MW-2D	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	<0.1	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-2D	3/7/07	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.005	ND	<0.005	<0.005	<0.005	0.138	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-2D	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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-2D	9/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	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	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-2D	2/8/2012	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	0.071	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-2D	2/5/2013	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	0.31	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-3	7/15/04	**1.86**	**6.15**	**0.123**	**0.0204**	8.1534	**3.26**	0.725	ND	3.985	**0.0217**	**2.19**	**0.86**	<0.1	**0.0073**	**1.2**	NA	**0.435**	ND	NA	NA	NA	0.0038	**0.116**
MW-3	8/10/05	**2.6**	**5.2**	**0.14**	<0.005	7.94	**2.6**	0.41	<0.005	3.01	<0.005	**1.7**	**0.45**	<0.1	<0.05	**0.64**	NA	**0.45**	<0.05	NA	NA	NA	<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**	NA	**0.494**	0.01	NA	NA	NA	<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**	NA	**0.438**	0.014	NA	NA	NA	<0.005	**0.104**
MW-3	6/25/07	**2.62**	**5.53**	**0.59**	**0.005**	8.745	**1.72**	0.433	<0.01	2.153	**0.024**	**3.06**	**0.771**	<0.1	**0.008**	**1.14**	NA	**0.725**	0.019	NA	NA	NA	<0.005	**0.185**
MW-3	9/14/07	**2.88**	**5.87**	**0.58**	**0.003**	9.333	**1.43**	0.38	ND	1.81	**0.023**	**2.55**	**0.781**	ND	**0.007**	**0.964**	NA	**0.183**	ND	NA	NA	NA	ND	**0.139**
MW-3	4/9/08	**2.41**	**4.1**	**0.636**	**0.011**	7.157	**0.759**	0.333	ND	1.09	**0.021**	**1.78**	**0.781**	ND	**0.006**	**0.758**	NA	**0.172**	ND	NA	NA	NA	ND	**0.113**
MW-3	10/16/08	**3.9**	**5.9**	**1.1**	**0.032**	10.93	**0.93**	0.46	<0.01	1.39	**0.021**	**3.1**	**0.76**	<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	2/9/12	**3 E**	**4.2 E**	**1.9 E**	**0.24 E**	9.34	**0.59 E**	0.49 E	<0.01	1.08	**0.024**	**2.6 E**	**1 E**	<0.05	**0.0076**	**1.1 E**	**0.024**	**0.066**	0.0096	0.24 E	**0.012**	<0.005	0.0052	**0.17**
MW-3	8/24/2012	**3.4**	**6.1**	**2.9**	**0.23**	12.63	**0.52**	0.54	<0.01	1.06	**0.047**	**3**	**1.3**	<0.05	**0.013**	**1.8**	**<0.005**	**0.045**	<0.005	<0.01	**0.0068**	0.0052	0.0072	**0.18**
MW-3	2/6/13	**3.5**	**5**	**2.6**	**0.3**	11.4	**0.56**	0.6	<0.01	1.16	<0.005	**2.9**	**1.3**	3.7	**0.0098**	**1.80**	**0.023**	**0.011**	0.0078	0.3	**0.016**	<0.005	<0.005	**0.24**
MW-3	8/6/2013	**2.9**	**4.8**	**2.3**	**0.23**	10.23	**0.47**	0.32	<0.01	11.02	**0.025**	**1.6**	**0.66**	0.39	**0.007**	**0.70**	**<0.005**	**0.0063**	<0.005	0.18	**0.022**	0.007	0.12	<0.005
MW-3 (Dup)	8/6/2013	**2.9**	**4.9**	**2.3**	**0.23**	10.33	**0.45**	0.32	<0.01	11.1	**0.021**	**1.6**	**0.67**	0.29	**0.0066**	**0.72**	**<0.005**	**0.0056**	<0.005	0.15	**0.017**	0.0065	0.11	<0.005
MW-3	11/11/2014	**2.7**	**5**	**2.8**	**0.39**	10.89	**0.45**	0.45	<0.01	0.905	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**NA**	**NA**	NA	NA	**NA**	NA	NA	NA
MW-3 (Dup)	11/11/2014	**2.8**	**5.1**	**2.7**	**0.31**	10.91	**0.4**	0.41	<0.01	0.815	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**NA**	**NA**	NA	NA	**NA**	NA	NA	NA

Capitol Adhesives

Table 3. Analytical Results for Constituents Detected in Groundwater (mg/L)

Well	Date Sampled	Tetrachloroethene (mg/L)	Trichloroethene (mg/L)	cis-1,2-Dichloroethene (mg/L)	Vinyl chloride (mg/L)	Total Chlorinated Ethenes (mg/L)	1,1,1-Trichloroethane (mg/L)	1,1-Dichloroethane (mg/L)	Chloroethane (mg/L)	Total Chlorinated Ethanes (mg/L)	1,1,2-Trichloroethane (mg/L)	1,1-Dichloroethene (mg/L)	1,2-Dichloroethane (mg/L)	Acetone (mg/L)	Benzene (mg/L)	Chloroform (mg/L)	Cyclo hexane (mg/L)	Dichloromethane (mg/L)	Freon-11 (mg/L)	Freon-113 (mg/L)	Methylcyclohexane (mg/L)	o-Xylene (mg/L)	Toluene (mg/L)	trans-1,2-Dichloroethene (mg/L)
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-3D	7/19/04	**3.32**	**4.72**	0.0404	**0.0036**	8.084	**5.4**	0.868	**0.0022**	6.2702	**0.0071**	**0.628**	**0.128**	<0.1	0.0042	**0.206**	NA	**0.038**	0.0094	NA	NA	NA	0.0829	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**	NA	<0.02	<0.02	NA	NA	NA	<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**	NA	<0.005	<0.005	NA	NA	NA	<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**	NA	<0.005	<0.005	NA	NA	NA	<0.005	0.012
MW-3D	6/26/07	**0.694**	**1.04**	0.099	**0.006**	1.84	**1.16**	0.151	<0.01	1.311	<0.005	**0.256**	**0.065**	<0.1	<0.005	**0.095**	NA	<0.005	<0.005	NA	NA	NA	<0.005	0.02
MW-3D	9/14/07	**0.675**	**0.939**	0.304	**0.005**	1.92	**1.12**	0.161	ND	1.281	ND	**0.292**	**0.087**	ND	ND	**0.086**	NA	ND	ND	NA	NA	NA	ND	0.02
MW-3D	4/9/08	**0.751**	**0.886**	**0.175**	**0.029**	1.841	**0.762**	0.161	ND	0.923	ND	**0.239**	**0.123**	ND	ND	**0.095**	NA	ND	ND	NA	NA	NA	ND	0.018
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**	**0.94**	**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	0.084	<0.005	<0.005	<0.005	0.022
MW-3D (Dup)	6/23/09	**0.86**	**0.86**	**0.19**	**0.058**	1.97	**0.53**	0.13	<0.01	0.66	<0.005	**0.29**	**0.13**	<0.05	<0.005	**0.13**	<0.005	<0.005	<0.005	0.098	<0.005	<0.005	<0.005	0.023
MW-3D	10/7/10	**1.1**	**1.3**	**0.3**	**0.077**	2.78	**0.53**	0.15	<0.01	0.68	**0.0065**	**0.52**	**0.2**	<0.05	<0.005	**0.21**	<0.005	<0.005	<0.005	0.07	<0.005	<0.005	<0.005	0.031
MW-3D	2/8/12	**0.93**	**1**	**0.41**	**0.12**	2.46	**0.46**	0.19	<0.01	0.65	<0.005	**0.55**	**0.16**	<0.05	<0.005	**0.15**	<0.005	<0.005	<0.005	0.082	**0.005**	<0.005	<0.005	0.034
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	0.080	**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)	8/24/2012	**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-3D	2/6/2013	**2.00**	**1.7**	**0.97**	**0.15**	4.82	**0.45**	0.14	<0.01	0.59	<0.005	**0.57**	**0.19**	0.62	<0.005	**0.15**	**0.0061**	**0.017**	<0.005	0.04	**0.013**	<0.005	<0.005	0.028
MW-3D	8/6/2013	**2.9**	**4.8**	**2.9**	**0.28**	10.88	**0.53**	0.28	**0.011**	0.8	**0.017**	**0.87**	**0.41**	0.1	<0.005	**0.36**	<0.005	**0.027**	<0.005	0.13	**0.051**	0.02	0.063	0.0073
MW-3D	11/11/2014	**1.80**	**3.4**	**2.8**	**0.4**	8.40	**0.38**	0.29	<0.01	0.675	**NA**	**NA**	**NA**	NA	NA	**NA**	NA	**NA**	NA	NA	**NA**	NA	NA	NA
MW-3B	8/24/2012	**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
MW-3B	2/6/2013	**0.82**	**0.36**	**0.17**	**0.071**	1.42	0.052	0.064	<0.01	0.116	<0.005	**0.2**	**0.032**	<0.05	<0.005	0.031	<0.005	<0.005	<0.005	0.03	<0.005	<0.005	<0.005	0.0086
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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	ND	ND	NA	NA	NA	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	NA	ND	ND	NA	NA	NA	ND	ND
MW-4	10/15/08	**0.013**	**0.034**	**0.76**	**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-4	2/5/13	<0.005	**0.0066**	<0.005	<0.002	0.0066	<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	8/5/13	<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-4	11/11/2014	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.01	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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**	<0.01	<0.005	**0.34**	NA	<0.005	<0.005	NA	NA	NA	<0.005	0.051
MW-5	6/27/06	**0.077**	**1.37**	**0.141**	**0.008**	1.596	**0.511**	0.485	<0.005	0.996	**0.012**	**1.3**	**0.388**	<0.01	0.005	**0.361**	NA	<0.005	<0.005	NA	NA	NA	<0.005	0.086
MW-5	3/6/07	**0.085**	**1.07**	**1**	**0.004**	2.159	<0.005	0.58	<0.01	0.58	**0.012**	**1.87**	**0.781**	<0.01	0.005	**0.527**	NA	<0.005	<0.005	NA	NA	NA	<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**	NA	<0.005	<0.005	NA	NA	NA	<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**	NA	**0.009**	ND	NA	NA	NA	ND	0.097
MW-5	4/8/08	**0.008**	**0.079**	**2.69**	**0.93**	3.708	0.043	0.182	**0.358**	0.583	ND	**0.84**	**0.495**	ND	0.005	**0.252**	NA	**0.048**	ND	NA	NA	NA	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	0.076	<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	**0.0095**	<0.005	<0.01	<0.005	<0.005	<0.005	0.024
MW-5	8/23/2012	<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-5	2/6/2013	<0.005	<0.005	<0.005	**0.0064**	0.0064	<0.005	0.029	**0.18**	0.209	<0.005	<0.005	**0.013**	<0.05	<0.005	<0.005	<0.005	**0.0082**	<0.005	<0.01	<0.005	<0.005	<0.005	0.024
MW-5	8/6/2013	<0.005	**0.0052**	**0.11**	**0.14**	0.2552	0.0068	0.081	**0.062**	0.405	<0.005	**0.013**	**0.047**	<0.05	<0.005	0.006	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	0.018	<0.005
MW-5	11/11/2014	**0.0064**	**0.04**	**0.3**	**0.33**	0.6764	<0.005	0.14	**0.032**	0.175	NA	**NA**	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Capitol Adhesives

Table 3. Analytical Results for Constituents Detected in Groundwater (mg/L)

Well	Date Sampled	Tetrachloroethene (mg/L)	Trichloroethene (mg/L)	cis-1,2-Dichloroethene (mg/L)	Vinyl chloride (mg/L)	Total Chlorinated Ethenes (mg/L)	1,1,1-Trichloroethane (mg/L)	1,1-Dichloroethane (mg/L)	Chloroethane (mg/L)	Total Chlorinated Ethanes (mg/L)	1,1,2-Trichloroethane (mg/L)	1,1-Dichloroethene (mg/L)	1,2-Dichloroethane (mg/L)	Acetone (mg/L)	Benzene (mg/L)	Chloroform (mg/L)	Cyclo hexane (mg/L)	Dichloromethane (mg/L)	Freon-11 (mg/L)	Freon-113 (mg/L)	Methylcyclohexane (mg/L)	o-Xylene (mg/L)	Toluene (mg/L)	trans-1,2-Dichloroethene (mg/L)
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-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	NA	0.0017	0.0012	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<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**	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<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**	NA	ND	ND	NA	NA	NA	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	2/8/2012	<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-6	2/6/2013	<0.005	**0.048**	<0.005	<0.002	0.048	0.022	0.014	<0.01	0.036	<0.005	**0.1**	**0.012**	<0.05	<0.005	0.021	<0.005	<0.005	<0.005	0.02	<0.005	<0.005	<0.005	0.0056
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	NA	<0.005	<0.005	NA	NA	NA	<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**	**0.01**	<0.01	<0.005	0.018	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-7	6/26/07	**0.678**	**0.129**	**0.137**	**0.026**	0.97	0.04	0.022	<0.01	0.062	<0.005	**0.062**	**0.009**	<0.01	<0.005	0.018	NA	<0.005	<0.005	NA	NA	NA	0.004 J	<0.005
MW-7	9/14/07	**1.13**	**0.786**	**0.348**	**0.014**	2.278	**0.272**	0.082	ND	0.354	ND	**0.354**	**0.067**	ND	ND	**0.119**	NA	ND	ND	NA	NA	NA	0.004	0.019
MW-7	4/8/08	**1.06**	**0.226**	**0.335**	**0.104**	1.725	0.039	0.024	ND	0.063	ND	**0.108**	**0.034**	ND	ND	0.067	NA	**0.007**	ND	NA	NA	NA	ND	0.009
MW-7	10/15/08	**2**	**0.67**	**0.52**	**0.27**	3.46	0.18	0.095	<0.01	0.275	<0.005	**0.47**	**0.078**	<0.05	<0.005	**0.17**	<0.005	**0.026**	<0.005	0.13	<0.005	<0.005	<0.005	0.02
MW-7	6/23/09	**1.3**	**0.19**	**0.28**	**0.21**	1.98	0.01	0.019	<0.01	0.029	<0.005	**0.048**	**0.0091**	0.15	<0.005	0.021	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-7	10/8/10	**1.9**	**0.26**	**0.24**	**0.083**	2.483	0.016	0.032	<0.01	0.048	<0.005	**0.042**	**0.016**	<0.05	<0.005	0.025	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-7 (Dup)	10/8/10	**2.2**	**0.19**	**0.22**	**0.13**	2.74	<0.005	0.02	<0.01	0.02	<0.005	**0.014**	<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	2/9/2012	**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-7	2/6/2013	**2**	**0.27**	**0.22**	**0.15**	2.64	<0.005	0.017	<0.01	0.017	<0.005	**0.031**	<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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-8	9/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-8	4/8/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	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	2/8/2012	<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	2/5/2013	<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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-9	6/29/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-9	9/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-9	4/8/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	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	2/8/2012	<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	2/5/2013	<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-10	7/8/06	<0.005	**0.025**	0.008	<0.002	0.033	0.004 J	<0.005	<0.01	0.004	<0.005	<0.005	0.004 J	<0.1	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-10	3/6/07	<0.005	**0.031**	0.008	<0.002	0.039	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	<0.1	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-10	6/26/07	<0.005	**0.058**	0.015	<0.002	0.073	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	<0.1	<0.005	<0.005	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-10	9/14/07	ND	**0.064**	0.015	ND	0.079	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-10	4/9/08	ND	**0.039**	0.013	ND	0.052	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-10	10/16/08	<0.005	**0.06**	0.021	**0.0024**	0.0834	<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-10	6/23/09	<0.005	**0.05**	0.013	<0.002	0.063	<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-10	10/8/10	<0.005	**0.093**	0.016	<0.002	0.109	<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-10	2/7/2012	<0.005	**0.049**	0.016	<0.002	0.065	<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-10	2/6/2013	<0.005	**0.051**	0.012	<0.002	0.063	<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

Capitol Adhesives

Table 3. Analytical Results for Constituents Detected in Groundwater (mg/L)

Well	Date Sampled	Tetrachloroethene (mg/L)	Trichloroethene (mg/L)	cis-1,2-Dichloroethene (mg/L)	Vinyl chloride (mg/L)	Total Chlorinated Ethenes (mg/L)	1,1,1-Trichloroethane (mg/L)	1,1-Dichloroethane (mg/L)	Chloroethane (mg/L)	Total Chlorinated Ethanes (mg/L)	1,1,2-Trichloroethane (mg/L)	1,1-Dichloroethene (mg/L)	1,2-Dichloroethane (mg/L)	Acetone (mg/L)	Benzene (mg/L)	Chloroform (mg/L)	Cyclo hexane (mg/L)	Dichloromethane (mg/L)	Freon-11 (mg/L)	Freon-113 (mg/L)	Methylcyclohexane (mg/L)	o-Xylene (mg/L)	Toluene (mg/L)	trans-1,2-Dichloroethene (mg/L)
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-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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	ND	ND	NA	NA	NA	ND	ND
MW-11	4/9/08	ND	ND	0.006	ND	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-11	10/16/08	<0.005	**0.0054**	0.0083	<0.002	0.014	<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-11 (Dup)	10/16/08	<0.005	**0.0056**	0.0077	<0.002	0.013	<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-11	6/23/09	<0.005	**0.006**	0.0095	<0.002	0.016	<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-11	10/8/10	<0.005	<0.005	0.0062	<0.002	0.0062	<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-11	2/7/2012	<0.005	<0.005	0.0088	<0.002	0.009	<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-11	2/5/2013	<0.005	<0.005	0.0052	<0.002	0.0052	<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-11 Dup)	2/5/2013	<0.005	<0.005	0.0089	<0.002	0.0089	<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-12	7/8/06	<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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-12	3/7/07	<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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-12	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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-12	9/14/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-12	4/9/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-12	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-12	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-12	10/8/10	<0.005	**0.0068**	0.0076	<0.002	0.0144	<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-12	2/7/2012	<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
MW-12	2/5/2013	<0.005	**0.011**	0.011	<0.002	0.022	<0.005	0.0054	<0.01	0.0054	<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-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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-13	9/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-13	4/8/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-13	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-13	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-13	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
MW-13 (Dup)	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
MW-13 (Dup)	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-13	2/8/2012	<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-13	2/5/2013	<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	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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-14	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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-14	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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-14	9/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-14	4/8/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-14	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-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
MW-14	2/8/2012	<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	2/5/2013	<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	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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-15	3/6/07	<0.005	<0.005	<0.005	<0.002	ND	0.007	<0.005	<0.01	0.007	<0.005	0.005	<0.005	<0.1	<0.005	0.005	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-15	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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-15	9/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	NA	NA	NA	ND	ND
MW-15	4/9/08	ND	0.005	ND	ND	0.005	0.006	ND	ND	0.006	ND	**0.008**	ND	ND	ND	0.006	NA	ND	ND	NA	NA	NA	ND	ND
MW-15	10/15/08	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.01	ND	<0.005	**0.0092**	<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	6/22/09	<0.005	**0.011**	0.015	<0.002	0.026	0.0084	<0.005	<0.01	0.0084	<0.005	**0.016**	<0.005	<0.05	<0.005	0.0064	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-15	10/12/10	<0.005	**0.0089**	0.022	**0.0059**	0.0368	0.0089	<0.005	<0.01	0.0089	<0.005	**0.023**	<0.005	<0.05	<0.005	0.0079	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-15	2/8/12	<0.005	**0.021**	0.037	**0.0082**	0.0662	0.0053	0.0057	<0.01	0.011	<0.005	**0.019**	<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	8/23/2012	<0.005	**0.017**	0.027	**0.0054**	0.0494	<0.005	<0.005	<0.01	ND	<0.005	**0.016**	<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	2/6/2013	<0.005	**0.02**	0.029	**0.008**	0.057	<0.005	<0.005	<0.01	ND	<0.005	**0.022**	<0.005	<0.05	<0.005	0.0057	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-15	8/6/2013	<0.005	**0.02**	0.029	**0.0058**	0.0548	<0.005	0.0057	<0.01	0.0605	<0.005	**0.014**	<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	11/10/2014	<0.005	**0.017**	0.022	**0.0048**	0.0438	<0.005	<0.005	<0.01	ND	NA	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Capitol Adhesives

Table 3. Analytical Results for Constituents Detected in Groundwater (mg/L)

Well	Date Sampled	Tetrachloroethene (mg/L)	Trichloroethene (mg/L)	cis-1,2-Dichloroethene (mg/L)	Vinyl chloride (mg/L)	Total Chlorinated Ethenes (mg/L)	1,1,1-Trichloroethane (mg/L)	1,1-Dichloroethane (mg/L)	Chloroethane (mg/L)	Total Chlorinated Ethanes (mg/L)	1,1,2-Trichloroethane (mg/L)	1,1-Dichloroethene (mg/L)	1,2-Dichloroethane (mg/L)	Acetone (mg/L)	Benzene (mg/L)	Chloroform (mg/L)	Cyclo hexane (mg/L)	Dichloromethane (mg/L)	Freon-11 (mg/L)	Freon-113 (mg/L)	Methylcyclohexane (mg/L)	o-Xylene (mg/L)	Toluene (mg/L)	trans-1,2-Dichloroethene (mg/L)
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-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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-16	9/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-16	4/9/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	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	8/23/2012	<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	2/5/2013	<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	8/5/2013	<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	11/10/2014	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.01	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	NA	<0.005	<0.005	NA	NA	NA	<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	NA	<0.005	<0.005	NA	NA	NA	<0.005	<0.005
MW-17	9/14/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND
MW-17	4/9/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA	NA	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	2/7/2012	<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	2/5/2013	<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
NA: Not analyzed
DL: Detection limit

Note: Detection Limits from September 2007 and April 2008 are not available.
Bold: Result greater than RRS, or DL if no RRS

Capitol Adhesives

Table 4. Analytical Results for Constituents Detected in Subsurface Solids (mg/kg)

Sample ID	Depth (ft bgs)	Date Sampled	Tetrachloroethene (mg/kg)	Trichloroethene (mg/kg)	cis-1,2-Dichloroethene (mg/kg)	Vinyl chloride (mg/kg)	Total Chlorinated Ethenes (mg/kg)	1,1,1-Trichloroethane (mg/kg)	1,1-Dichloroethane (mg/kg)	Chloroethane (mg/kg)	Total Chlorinated Ethanes (mg/kg)	1,1,2-Trichloroethane (mg/kg)	1,1-Dichloroethene (mg/kg)	1,2,4-Trimethylbenzene (mg/kg)	1,2-Dichlorobenzene (mg/kg)	1,2-Dichloroethane (mg/kg)	1,2-Dichloropropane (mg/kg)	1,3,5-Trimethylbenzene (mg/kg)	1,4-Dioxane (mg/kg)	2-Butanone (MEK) (mg/kg)	4-Methyl-2-pentanone (mg/kg)	Acetone (mg/kg)
Solid Aquifer Matrix																						
		REL (mg/kg)	**7.5**	**7**				**16**														
GP001	6-8	8/9/05	<0.0054	<0.0054	<0.0054	NA	ND	<0.0054	NA	NA	ND	NA	<0.0054	<0.0054	NA	<0.0054	<5.4	<0.0054	NA	NA	NA	NA
GP002	4-6	8/9/05	<0.0049	<0.0049	<0.0049	NA	ND	<0.0049	NA	NA	ND	NA	<0.0049	<0.0049	NA	<0.0049	<4.9	<0.0049	NA	NA	NA	NA
GP003	2-4	8/9/05	<0.0048	<0.0048	<0.0048	NA	ND	<0.0048	NA	NA	ND	NA	<0.0048	<0.0048	NA	<0.0048	<4.8	<0.0048	NA	NA	NA	NA
GP004	4-6	8/9/05	<0.004	<0.004	<0.004	NA	ND	<0.004	NA	NA	ND	NA	<0.004	<0.004	NA	<0.004	<4	<0.004	NA	NA	NA	NA
GP005	4-6	8/9/05	<0.0045	<0.0045	<0.0045	NA	ND	<0.0045	NA	NA	ND	NA	<0.0045	<0.0045	NA	<0.0045	<4.5	<0.0045	NA	NA	NA	NA
GP006	2-4	8/9/05	<0.0046	<0.0046	<0.0046	NA	ND	<0.0046	NA	NA	ND	NA	<0.0046	<0.0046	NA	<0.0046	<4.6	<0.0046	NA	NA	NA	NA
GP009	2-4	8/10/05	<0.0043	<0.0043	<0.0043	NA	ND	<0.0043	NA	NA	ND	NA	<0.0043	<0.0043	NA	<0.0043	<4.3	<0.0043	NA	NA	NA	NA
GP010	4-6	8/10/05	0.13	0.33	<0.067	NA	0.46	0.15	NA	NA	0.15	NA	0.093	<0.067	NA	<0.067	<67	<0.067	NA	NA	NA	NA
GP011	2-4	8/10/05	0.13	0.63	<0.061	NA	0.76	<0.061	NA	NA	ND	NA	0.099	<0.061	NA	<0.061	<61	<0.061	NA	NA	NA	NA
GP012	4-6	8/10/05	1.5	1.8	0.56	NA	3.86	0.41	NA	NA	0.41	NA	0.72	<0.063	NA	0.15	150	<0.063	NA	NA	NA	NA
GP013	4-6	8/10/05	<0.0052	<0.0052	<0.0052	NA	ND	<0.0052	NA	NA	ND	NA	<0.0052	<0.0052	NA	<0.0052	<5.2	<0.0052	NA	NA	NA	NA
IW2	1	1/20/14	65	9.6	NA	NA	74.6	12	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IW2	2	1/20/14	42	6.2	NA	NA	48.2	1.7	NA	NA	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IW2	3	1/20/14	48	19	NA	NA	67	2.4	NA	NA	2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MIP-1	2	10/16/08	15	12	2.2	0.025	29.225	0.2	0.18	<0.012	0.38	0.029	0.35	NA	<0.006	0.36	<0.006	NA	<8.40E-02	<0.06	<0.012	<0.12
MIP-1	5	10/16/08	0.036	0.02	<0.0067	<0.013	0.056	<0.0067	<0.0067	<0.013	ND	<0.0067	<0.0067	NA	<0.0067	<0.0067	<0.0067	NA	<0.2	<0.067	<0.013	<0.13
MIP-1	9	10/16/08	0.024	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	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	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	NA	<0.24	<0.08	<0.016	<0.16
MIP-8	2	10/16/08	0.37	2.4	0.068	0.04	2.878	0.014	0.031	<0.0026	0.045	0.0048	0.21	NA	<0.0013	0.14	<0.0013	NA	<0.039	<0.013	<0.0026	0.54
MIP-8	4	10/16/08	0.091	0.2	<0.007	<0.014	0.291	<0.007	<0.007	<0.014	ND	<0.007	<0.007	NA	<0.007	<0.007	<0.007	NA	<0.21	<0.07	<0.014	<0.14
MIP-12	12	10/16/08	0.73	0.38	<0.11	0.0056	1.1156	0.13	0.018	<0.0038	0.148	0.0022	0.21	NA	<0.0019	0.038	<0.0019	NA	<0.056	<0.019	<0.0038	<0.038
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	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	0.026	<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	0.052	<0.0038	NA	1.4	0.12	0.0098	<0.076
MIP-13	3	10/16/08	0.0069	0.0093	0.058	0.79	0.8642	0.0034	0.22	0.14	0.3634	<0.0027	0.047	NA	<0.0027	0.046	<0.0027	NA	0.510	<0.027	<0.0053	<0.053
MIP-13	6	10/16/08	1.5	2.6	2	0.66	6.76	0.42	0.44	0.03	0.89	0.017	1.8	NA	<0.0027	0.78	<0.0027	NA	0.64	<0.027	<0.0054	<0.054
MIP-19	1	10/16/08	<0.0059	<0.0059	<0.0059	<0.012	ND	<0.0059	<0.0059	<0.012	ND	<0.0059	<0.0059	NA	<0.0059	<0.0059	<0.0059	NA	<0.18	<0.059	<0.012	<0.12
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	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	<0.0019	<0.0019	NA	<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	NA	<0.0017	NA	<0.0428	<0.00856	<0.0428
MW-3	8-10	7/14/04	0.0191	0.0138	<0.0018	<0.0018	0.0329	0.0312	<0.0018	<0.0018	0.0312	<0.0018	0.0025	<0.0018	<0.0018	0.0067	NA	<0.0018	NA	<0.0448	<0.00895	<0.0448
MW-3D	13-15	7/14/04	2.44	1.31	<0.134	<0.134	3.75	0.416	<0.134	<0.134	0.416	<0.134	<0.134	<0.134	<0.134	<0.134	NA	<0.134	NA	<3.36	<0.67	<3.36
MW-8	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	NA	<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	NA	<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	NA	<0.005	NA	<0.1	<0.05	<0.1
MW-11	5-10	7/6/06	<0.005	0.008	0.005	<0.01	0.013	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	NA	<0.1	<0.05	<0.1
MW-12	5-10	7/6/06	<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	NA	<0.005	NA	<0.1	<0.05	<0.1
MW-13	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	NA	<0.005	NA	<0.1	<0.05	<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	NA	<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	NA	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	NA	<0.005	NA	<0.1	<0.05	<0.1
SB-1	1	2/20/13	1.3	0.02	NA	NA	1.32	<0.0033	NA	NA	ND	0.011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1 (Dup)	1	2/20/13	5	0.016	NA	NA	5.016	<0.0038	NA	NA	ND	0.0098	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1	2	2/20/13	0.053	<0.006	NA	NA	0.053	<0.006	NA	NA	ND	0.0073	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1	4	2/20/13	0.079	0.012	NA	NA	0.091	<0.0062	NA	NA	ND	0.014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-2	1	2/20/13	0.05	<0.0029	NA	NA	0.05	<0.0029	NA	NA	ND	<0.0029	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-2	2	2/20/13	<0.0029	0.011	NA	NA	0.011	<0.0029	NA	NA	ND	<0.0029	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-2	4	2/20/13	<0.0029	<0.0029	NA	NA	ND	<0.0029	NA	NA	ND	<0.0029	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-3	1	2/20/13	0.0042	<0.0039	NA	NA	0.0042	<0.0039	NA	NA	ND	<0.0039	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-3	2	2/20/13	0.0077	<0.0031	NA	NA	0.0077	<0.0031	NA	NA	ND	<0.0031	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-3	4	2/20/13	0.0065	<0.004	NA	NA	0.0065	<0.004	NA	NA	ND	<0.004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4	1	2/20/13	1.3	0.053	NA	NA	1.353	0.023	NA	NA	0.023	0.0093	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4	2	2/20/13	0.0085	<0.0034	NA	NA	0.0085	<0.0034	NA	NA	ND	<0.0034	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4	4	2/20/13	<0.0036	<0.0036	NA	NA	ND	<0.0036	NA	NA	ND	<0.0036	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Capitol Adhesives

Table 4. Analytical Results for Constituents Detected in Subsurface Solids (mg/kg)

Sample ID	Depth (ft bgs)	Date Sampled	Benzene (mg/kg)	Carbon disulfide (mg/kg)	Carbon tetra chloride (mg/kg)	Chlorobenzene (mg/kg)	Chloroform (mg/kg)	cis/trans 1,2-Dichloroethene (mg/kg)	Cyclohexane (mg/kg)	Dichloro methane (Methylene chloride) (mg/kg)	Ethyl benzene (mg/kg)	Freon-11 (mg/kg)	Freon-113 (mg/kg)	Isopropyl benzene (mg/kg)	m&p-Xylene (mg/kg)	Methyl acetate (mg/kg)	Methyl cyclohexane (mg/kg)	Naphthalene (mg/kg)	n-Propyl benzene (mg/kg)	o-Xylene (mg/kg)	sec-Butyl benzene (mg/kg)	Toluene (mg/kg)	trans-1,2-Dichloroethene (mg/kg)
Solid Aquifer Matrix																							
REL (mg/kg)																							
GP001	6-8	8/9/05	NA	NA	NA	NA	<0.0054	<0.0054	NA	<0.0054	<0.0054	NA	NA	<0.0054	NA	NA	NA	<0.0054	<0.0054	NA	<0.0054	<0.0054	NA
GP002	4-6	8/9/05	NA	NA	NA	NA	<0.0049	<0.0049	NA	<0.0049	<0.0049	NA	NA	<0.0049	NA	NA	NA	<0.0049	<0.0049	NA	<0.0049	<0.0049	NA
GP003	2-4	8/9/05	NA	NA	NA	NA	<0.0048	<0.0048	NA	<0.0048	<0.0048	NA	NA	<0.0048	NA	NA	NA	<0.0048	<0.0048	NA	<0.0048	<0.0048	NA
GP004	4-6	8/9/05	NA	NA	NA	NA	<0.004	<0.004	NA	<0.004	<0.004	NA	NA	<0.004	NA	NA	NA	<0.004	<0.004	NA	<0.004	<0.004	NA
GP005	4-6	8/9/05	NA	NA	NA	NA	<0.0045	<0.0045	NA	<0.0045	<0.0045	NA	NA	<0.0045	NA	NA	NA	<0.0045	<0.0045	NA	<0.0045	<0.0045	NA
GP006	2-4	8/9/05	NA	NA	NA	NA	<0.0046	<0.0046	NA	<0.0046	<0.0046	NA	NA	<0.0046	NA	NA	NA	<0.0046	<0.0046	NA	<0.0046	<0.0046	NA
GP009	2-4	8/10/05	NA	NA	NA	NA	<0.0043	<0.0043	NA	<0.0043	<0.0043	NA	NA	<0.0043	NA	NA	NA	<0.0043	<0.0043	NA	<0.0043	<0.0043	NA
GP010	4-6	8/10/05	NA	NA	NA	NA	<0.067	0.093	NA	<0.067	<0.067	NA	NA	<0.067	NA	NA	NA	<0.067	<0.067	NA	<0.067	<0.067	NA
GP011	2-4	8/10/05	NA	NA	NA	NA	0.064	0.099	NA	<0.061	<0.061	NA	NA	<0.061	NA	NA	NA	<0.061	<0.061	NA	<0.061	<0.061	NA
GP012	4-6	8/10/05	NA	NA	NA	NA	0.29	0.72	NA	0.29	<0.063	NA	NA	<0.063	NA	NA	NA	<0.063	<0.063	NA	<0.063	<0.063	NA
GP013	4-6	8/10/05	NA	NA	NA	NA	<0.0052	<0.0052	NA	<0.0052	<0.0052	NA	NA	<0.0052	NA	NA	NA	<0.0052	<0.0052	NA	<0.0052	<0.0052	NA
IW2	1	1/20/14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IW2	2	1/20/14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IW2	3	1/20/14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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
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
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
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
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
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
SB-1	1	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1 (Dup)	1	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1	2	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1	4	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-2	1	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-2	2	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-2	4	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-3	1	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-3	2	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-3	4	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4	1	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4	2	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-4	4	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

EPS

Capitol Adhesives

Table 4. Analytical Results for Constituents Detected in Subsurface Solids (mg/kg)

Sample ID	Depth (ft bgs)	Date Sampled	Tetrachloroethene (mg/kg)	Trichloroethene (mg/kg)	cis-1,2-Dichloroethene (mg/kg)	Vinyl chloride (mg/kg)	Total Chlorinated Ethenes (mg/kg)	1,1,1-Trichloroethane (mg/kg)	1,1-Dichloroethane (mg/kg)	Chloroethane (mg/kg)	Total Chlorinated Ethanes (mg/kg)	1,1,2-Trichloroethane (mg/kg)	1,1-Dichloroethene (mg/kg)	1,2,4-Trimethylbenzene (mg/kg)	1,2-Dichlorobenzene (mg/kg)	1,2-Dichloroethane (mg/kg)	1,2-Dichloropropane (mg/kg)	1,3,5-Trimethylbenzene (mg/kg)	1,4-Dioxane (mg/kg)	2-Butanone (MEK) (mg/kg)	4-Methyl-2-pentanone (mg/kg)	Acetone (mg/kg)
Solid Aquifer Matrix Continued																						
REL (mg/kg)			**7.5**	**7**				**16**														
SB-5	1	2/20/13	0.84	0.63	NA	NA	1.47	0.0046	NA	NA	0.0046	<0.0026	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-5	2	2/20/13	1.1	0.6	NA	NA	1.7	0.009	NA	NA	0.009	<0.0026	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-5	4	2/20/13	0.99	0.63	NA	NA	1.62	0.024	NA	NA	0.024	<0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-6	1	2/20/13	<0.0031	<0.0031	NA	NA	ND	<0.0031	NA	NA	ND	<0.0031	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-6	2	2/20/13	<0.0038	<0.0038	NA	NA	ND	<0.0038	NA	NA	ND	<0.0038	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-6	4	2/20/13	<0.004	<0.004	NA	NA	ND	<0.004	NA	NA	ND	<0.004	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-7	1	2/20/13	0.009	<0.0037	NA	NA	0.009	<0.0037	NA	NA	ND	<0.0037	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-7	2	2/20/13	<0.0065	<0.0065	NA	NA	ND	<0.0065	NA	NA	ND	<0.0065	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-7	4	2/20/13	<0.0036	<0.0036	NA	NA	ND	<0.0036	NA	NA	ND	<0.0036	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-8	1	2/20/13	0.021	0.071	NA	NA	0.092	<0.0025	NA	NA	ND	<0.0025	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-8	2	2/20/13	0.023	0.18	NA	NA	0.203	<0.0028	NA	NA	ND	<0.0028	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-8	4	2/20/13	<0.18	0.51	NA	NA	0.51	<0.18	NA	NA	ND	<0.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-9	1	2/20/13	0.0051	0.016	NA	NA	0.0211	<0.0036	NA	NA	ND	<0.0036	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-9	2	2/20/13	0.017	0.065	NA	NA	0.092	<0.0048	NA	NA	ND	<0.0048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-9	4	2/20/13	0.0074	0.03	NA	NA	0.092	<0.0043	NA	NA	ND	<0.0043	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SO-2	1	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	<0.0029	0.0069	<0.0029	NA	NA	<0.029	<0.0059	<0.059
SO-2	3	3/10/09	0.098	0.11	1.1	0.57	1.878	0.0064	0.78	<0.0059	0.7864	<0.0029	0.23	NA	<0.0029	0.18	<0.0029	NA	NA	<0.029	<0.0059	<0.059
SO-3	1	3/10/09	2700	62	7.6	<5.7	2769.6	5.3	<2.8	<5.7	5.3	<2.8	<2.8	NA	<2.8	<2.8	<2.8	NA	NA	<28	<5.7	<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	NA	NA	<24	<4.8	<48
SO-3R	1	3/25/14	6.5	3	NA	NA	9.5	0.0056	NA	NA	0.0056	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SO-3R	4	3/25/14	2.3	1.4	NA	NA	3.7	0.0051	NA	NA	0.0051	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SO-3R	5	3/25/14	4.1	3.2	NA	NA	7.3	0.014	NA	NA	0.014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	0.042	<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	<0.11	0.63	NA	<0.11	<0.11	<0.11	NA	NA	<1.1	<0.23	<2.3
SO-5	5	3/10/09	0.39	0.35	0.035	<0.006	0.775	0.07	0.02	<0.006	0.09	<0.003	0.21	NA	<0.003	0.053	<0.003	NA	NA	<0.03	<0.006	<0.06
SO-5	9	3/10/09	<0.0062	<0.0062	<0.0062	<0.012	ND	<0.0062	<0.0062	<0.012	ND	<0.0062	<0.0062	NA	<0.0062	<0.0062	<0.0062	NA	NA	<0.062	<0.012	<0.12
SO-6	5	3/10/09	0.066	0.089	0.48	0.16	0.795	0.01	0.087	<0.0052	0.097	<0.0026	0.19	NA	<0.0026	0.077	<0.0026	NA	NA	<0.026	<0.0052	<0.052
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	0.13	<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	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	0.0407	<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	0.00713	1.69	<0.00266	NA	NA	<0.0266	0.0476	0.739
SS-AST-3	1	7/23/12	0.11	0.058	3.6	0.042	3.81	<0.003	0.05	<0.0061	0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-3	2	7/23/12	0.35	0.18	3.3	0.081	3.911	<0.0032	0.075	<0.0064	0.075	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-4	1	7/23/12	0.0047	<0.0028	0.0031	<0.0056	0.0078	<0.0028	<0.0028	<0.0056	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-4	2	7/23/12	0.0042	<0.0033	<0.0033	<0.0066	0.0042	<0.0033	<0.0033	<0.0066	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-5	1	7/23/12	0.0039	<0.0027	<0.0027	<0.0055	0.0039	<0.0027	<0.0027	<0.0055	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-5	2	7/23/12	0.011	<0.0032	0.0083	<0.0064	0.0193	<0.0032	<0.0032	<0.0064	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-6	2	7/23/12	0.047	0.011	0.0077	<0.0066	0.0657	<0.0033	<0.0033	<0.0066	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-7	1	7/23/12	0.013	0.0096	1.9	0.24	2.1626	<0.003	0.62	0.07	0.69	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-7	2	7/23/12	0.014	0.0086	2	0.31	2.3326	<0.0031	1.2	0.037	1.237	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-8	1	7/23/12	64	58	11	<3.4	133	66	6.8	<3.4	72.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-8	2	7/23/12	6.5	13	6.2	<3.2	25.7	4.7	8.7	<3.2	13.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-9	1	7/23/12	380	34	66	<3	480	2.1	1.5	<3	3.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-9	2	7/23/12	660	97	55	<3.7	812	15	2.1	<3.7	17.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Area C	3	10/4/14	1800	230	NA	NA	2030	43	NA	NA	43	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-10	1	7/23/12	0.0054	<0.0029	0.004	<0.0057	0.0094	<0.0029	<0.0029	<0.0057	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-10	2	7/23/12	0.02	0.01	0.013	<0.0067	0.043	<0.0033	<0.0033	<0.0067	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-11	2	7/23/12	0.013	0.008	0.0091	<0.0067	0.0301	<0.0034	<0.0034	<0.0067	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	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	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	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	NA	NA	<0.0247	<0.00495	<0.0495

Capitol Adhesives

Table 4. Analytical Results for Constituents Detected in Subsurface Solids (mg/kg)

Sample ID	Depth (ft bgs)	Date Sampled	Benzene (mg/kg)	Carbon disulfide (mg/kg)	Carbon tetra chloride (mg/kg)	Chlorobenzene (mg/kg)	Chloroform (mg/kg)	cis/trans 1,2-Dichloroethene (mg/kg)	Cyclohexane (mg/kg)	Dichloro methane (Methylene chloride) (mg/kg)	Ethyl benzene (mg/kg)	Freon-11 (mg/kg)	Freon-113 (mg/kg)	Isopropyl benzene (mg/kg)	m&p-Xylene (mg/kg)	Methyl acetate (mg/kg)	Methyl cyclohexane (mg/kg)	Naphthalene (mg/kg)	n-Propyl benzene (mg/kg)	o-Xylene (mg/kg)	sec-Butyl benzene (mg/kg)	Toluene (mg/kg)	trans-1,2-Dichloroethene (mg/kg)
Solid Aquifer Matrix Continued																							
REL (mg/kg)																							
SB-5	1	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-5	2	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-5	4	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-6	1	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-6	2	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-6	4	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-7	1	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-7	2	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-7	4	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-8	1	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-8	2	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-8	4	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-9	1	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-9	2	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-9	4	2/20/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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
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-3R	1	3/25/14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SO-3R	4	3/25/14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SO-3R	5	3/25/14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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
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	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
SS-AST-3	1	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-3	2	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-4	1	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-4	2	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-5	1	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-5	2	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-6	1	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-6	2	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-7	1	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-7	2	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-8	1	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-8	2	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-9	1	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-9	2	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Area C	3	10/4/14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-10	1	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-10	2	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-10 (Dup)	1	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-11	1	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-AST-11	2	7/23/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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

EPS

Capitol Adhesives

Table 4. Analytical Results for Constituents Detected in Subsurface Solids (mg/kg)

Sample ID	Depth (ft bgs)	Date Sampled	Tetrachloroethene (mg/kg)	Trichloroethene (mg/kg)	cis-1,2-Dichloroethene (mg/kg)	Vinyl chloride (mg/kg)	Total Chlorinated Ethenes (mg/kg)	1,1,1-Trichloroethane (mg/kg)	1,1-Dichloroethane (mg/kg)	Chloroethane (mg/kg)	Total Chlorinated Ethanes (mg/kg)	1,1,2-Trichloroethane (mg/kg)	1,1-Dichloroethene (mg/kg)	1,2,4-Trimethylbenzene (mg/kg)	1,2-Dichlorobenzene (mg/kg)	1,2-Dichloroethane (mg/kg)	1,2-Dichloropropane (mg/kg)	1,3,5-Trimethylbenzene (mg/kg)	1,4-Dioxane (mg/kg)	2-Butanone (MEK) (mg/kg)	4-Methyl-2-pentanone (mg/kg)	Acetone (mg/kg)
Solid Aquifer Matrix Continued																						
REL (mg/kg)			**7.5**	**7**				**16**														
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	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	0.00369	<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	0.00702	<0.00325	NA	NA	<0.0325	<0.0065	0.2
Vadose Zone Soil																						
Type 1 RRS (mg/kg)			**0.5**	**200**	**0.53**	**0.2**	**--**	**20**	**0.7**	**0.17**	**--**	**0.5**	**400**	**NC**	**NC**	**NC**	**0.5**	**NC**	**7**	**200**	**NC**	**400**
GP007	2-4	8/9/05	<0.0045	<0.0045	<0.0045	NA	ND	<0.0045	NA	NA	ND	NA	<0.0045	<0.0045	NA	<0.0045	<4.5	<0.0045	NA	NA	NA	NA
GP008	2-4	8/9/05	<0.0054	<0.0054	<0.0054	NA	ND	<0.0054	NA	NA	ND	NA	<0.0054	<0.0054	NA	<0.0054	<5.4	<0.0054	NA	NA	NA	NA
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	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	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	NA	NA	<0.0299	<0.00598	<0.0598
Other (sediment)																						
South Ditch	0-2	6/19/04	<0.0064	0.012	0.016	NA	0.028	<0.0064	NA	NA	ND	NA	<0.0064	NA	NA	<0.0064	<6.4	NA	NA	NA	NA	NA

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

--: Not applicable NC: Not calculated, non-detect in soil

REL: Remedial Extent Level (a.k.a. SSLmod)

RRS: Risk Reduction Standard

Not representative of current condition (i.e., excavated or collected prior to oxidant addition)

EPS

Capitol Adhesives

Table 4. Analytical Results for Constituents Detected in Subsurface Solids (mg/kg)

Sample ID	Depth (ft bgs)	Date Sampled	Benzene (mg/kg)	Carbon disulfide (mg/kg)	Carbon tetra chloride (mg/kg)	Chlorobenzene (mg/kg)	Chloroform (mg/kg)	cis/trans 1,2-Dichloroethene (mg/kg)	Cyclohexane (mg/kg)	Dichloro methane (Methylene chloride) (mg/kg)	Ethyl benzene (mg/kg)	Freon-11 (mg/kg)	Freon-113 (mg/kg)	Isopropyl benzene (mg/kg)	m&p-Xylene (mg/kg)	Methyl acetate (mg/kg)	Methyl cyclohexane (mg/kg)	Naphthalene (mg/kg)	n-Propyl benzene (mg/kg)	o-Xylene (mg/kg)	sec-Butyl benzene (mg/kg)	Toluene (mg/kg)	trans-1,2-Dichloroethene (mg/kg)
Solid Aquifer Matrix Continued																							
REL (mg/kg)																							
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																							
Type 1 RRS (mg/kg)			**0.5**	**NC**	**NC**	**NC**	**3.9**	**NC**	**6466**	**0.5**	**70**	**200**	**24,039**	**NC**	**NC**	**NC**	**NC**	**NC**	**NC**	**NC**	**NC**	**100**	**10**
GP007	2-4	8/9/05	NA	NA	NA	NA	<0.0045	<0.0045	NA	<0.0045	<0.0045	NA	NA	<0.0045	NA	NA	NA	<0.0045	<0.0045	NA	<0.0045	<0.0045	NA
GP008	2-4	8/9/05	NA	NA	NA	NA	<0.0054	<0.0054	NA	<0.0054	<0.0054	NA	NA	<0.0054	NA	NA	NA	<0.0054	<0.0054	NA	<0.0054	<0.0054	NA
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	NA	NA	NA	NA	<0.0064	<0.0064	NA	0.0082	<0.0064	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

--: Not applicable NC: Not calculated, non-detect in soil

REL: Remedial Extent Level (a.k.a. SSLmod)

RRS: Risk Reduction Standard

Not representative of current condition (i.e., excavated or collected prior to oxidant addition)

Capitol Adhesives

Table 5. Vadose Zone Soil Delineation

Sample ID	Depth (ft bgs)	Date Sampled	Tetrachloroethene (mg/kg)	Trichloroethene (mg/kg)	cis-1,2-Dichloroethene (mg/kg)	Vinyl chloride (mg/kg)	1,1,1-Trichloroethane (mg/kg)	1,1-Dichloroethane (mg/kg)	Chloroethane (mg/kg)	1,1,2-Trichloroethane (mg/kg)	1,1-Dichloroethene (mg/kg)	1,2-Dichloroethane (mg/kg)	1,2-Dichloropropane (mg/kg)	1,4-Dioxane (mg/kg)
Delineation Criteria (Type 1 RRS)			**0.5**	**0.5**	**7**	**0.2**	**20**	**0.7**	**0.17**	**0.5**	**400**	**0.5**	**0.5**	**7**
Maximum Detected Conc			**ND**	**0.161**	**0.005**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Vadose Zone Soil														
GP007	2-4	8/9/05	<0.0045	<0.0045	<0.0045		<0.0045				<0.0045	<0.0045	<4.5	
GP008	2-4	8/9/05	<0.0054	<0.0054	<0.0054		<0.0054				<0.0054	<0.0054	<5.4	
SS-BLDG-2	1	1/12/09	<0.00268	<0.00268	<0.00268	<0.00536	<0.00268	<0.00268	<0.00536	<0.00268	<0.00268	<0.00268	<0.00268	NA
SS-BLDG-3	1	1/12/09	<0.00301	<0.00301	<0.00301	<0.00602	<0.00301	<0.00301	<0.00602	<0.00301	<0.00301	<0.00301	<0.00301	NA
SS-BLDG-4	1	1/12/09	<0.00299	**0.161**	<0.00299	<0.00598	<0.00299	<0.00299	<0.00598	<0.00299	<0.00299	<0.00299	<0.00299	NA
Solid Aquifer Matrix														
GP001	6-8	8/9/05	<0.0054	<0.0054	<0.0054		<0.0054				<0.0054	<0.0054	<5.4	
GP002	4-6	8/9/05	<0.0049	<0.0049	<0.0049		<0.0049				<0.0049	<0.0049	<4.9	
GP003	2-4	8/9/05	<0.0048	<0.0048	<0.0048		<0.0048				<0.0048	<0.0048	<4.8	
GP004	4-6	8/9/05	<0.004	<0.004	<0.004		<0.004				<0.004	<0.004	<4	
GP005	4-6	8/9/05	<0.0045	<0.0045	<0.0045		<0.0045				<0.0045	<0.0045	<4.5	
GP006	2-4	8/9/05	<0.0046	<0.0046	<0.0046		<0.0046				<0.0046	<0.0046	<4.6	
GP013	4-6	8/10/05	<0.0052	<0.0052	<0.0052		<0.0052				<0.0052	<0.0052	<5.2	
MIP-5	3	10/16/08	<0.0022	<0.0022	<0.0022	<0.0045	<0.0022	<0.0022	<0.0045	<0.0022	<0.0022	<0.0022	<0.0022	<0.067
MW-10	5-10	7/7/06	<0.005	**0.006**	<0.005	<0.01	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<5	NA
MW-11	5-10	7/6/06	<0.005	**0.008**	**0.005**	<0.01	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<5	NA
MW-12	5-10	7/6/06	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<5	NA
MW-13	13-15	6/27/06	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<5	NA
MW-16	8-10	6/27/06	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<5	NA
MW-8	8-10	6/27/06	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<5	NA
MW-9	8-10	6/27/06	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<5	NA

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

EPS

Capitol Adhesives

Table 5. Vadose Zone Soil Delineation

Sample ID	Depth (ft bgs)	Date Sampled	2-Butanone (MEK) (mg/kg)	Acetone (mg/kg)	Benzene (mg/kg)	Chloroform (mg/kg)	Cyclo hexane (mg/kg)	Dichloro methane (Methylene chloride) (mg/kg)	Ethyl benzene (mg/kg)	Freon-11 (Trichlorof luorometha ne (mg/kg)	Freon-113 (mg/kg)	Toluene (mg/kg)	trans-1,2-Dichloro ethene (mg/kg)
Delineation Criteria (Type 1 RRS)			**200**	**400**	**0.5**	**3.9**	**20**	**0.5**	**70**	**200**	**24,039**	**100**	**10**
Maximum Detected Conc			**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
Vadose Zone Soil													
GP007	2-4	8/9/05				<0.0045		<0.0045	<0.0045			<0.0045	
GP008	2-4	8/9/05				<0.0054		<0.0054	<0.0054			<0.0054	
SS-BLDG-2	1	1/12/09	<0.0268	<0.0536	<0.00268	<0.00268	<0.00268	<0.00268	<0.00268	<0.00268	<0.00536	<0.00268	<0.00268
SS-BLDG-3	1	1/12/09	<0.0301	<0.0602	<0.00301	<0.00301	<0.00301	<0.00301	<0.00301	<0.00301	<0.00602	<0.00301	<0.00301
SS-BLDG-4	1	1/12/09	<0.0299	<0.0598	<0.00299	<0.00299	<0.00299	<0.00299	<0.00299	<0.00299	<0.00598	<0.00299	<0.00299
Solid Aquifer Matrix													
GP001	6-8	8/9/05				<0.0054		<0.0054	<0.0054			<0.0054	
GP002	4-6	8/9/05				<0.0049		<0.0049	<0.0049			<0.0049	
GP003	2-4	8/9/05				<0.0048		<0.0048	<0.0048			<0.0048	
GP004	4-6	8/9/05				<0.004		<0.004	<0.004			<0.004	
GP005	4-6	8/9/05				<0.0045		<0.0045	<0.0045			<0.0045	
GP006	2-4	8/9/05				<0.0046		<0.0046	<0.0046			<0.0046	
GP013	4-6	8/10/05				<0.0052		<0.0052	<0.0052			<0.0052	
MIP-5	3	10/16/08	<0.022	<0.045	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0045	<0.0022	<0.0022
MW-10	5-10	7/7/06	<0.1	<0.1	<0.005	<0.005	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005
MW-11	5-10	7/6/06	<0.1	<0.1	<0.005	<0.005	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005
MW-12	5-10	7/6/06	<0.1	<0.1	<0.005	<0.005	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005
MW-13	13-15	6/27/06	<0.1	<0.1	<0.005	<0.005	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005
MW-16	8-10	6/27/06	<0.1	<0.1	<0.005	<0.005	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005
MW-8	8-10	6/27/06	<0.1	<0.1	<0.005	<0.005	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005
MW-9	8-10	6/27/06	<0.1	<0.1	<0.005	<0.005	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005

NA: Not analyzed

ND: Not detected

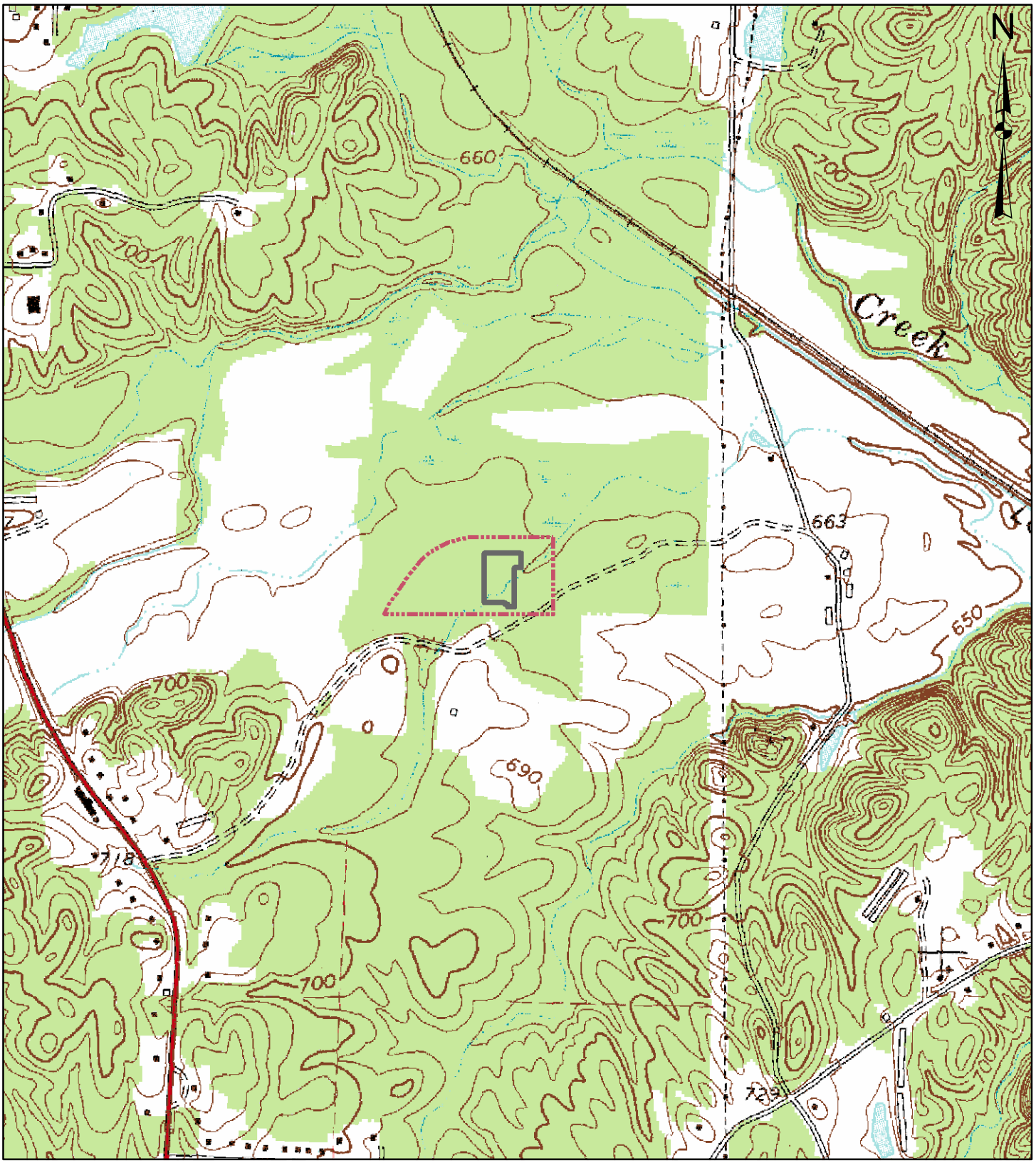
Matrix: Vadose Zone Soil - sample collected above or at the high water table mark

Solid Aquifer Matrix - sample collected below the high water table mark

EPS

FIGURES

Capitol Adhesives
Topographic Map



0 500 1,000
Feet

Source: USGS Quadrangle Dalton South, Georgia 1982

Legend

Building

Property Boundary

EPS
G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig1_Topo.mxd

Figure No. 1

Capitol Adhesives
Aerial of Property and Site Features

Feet

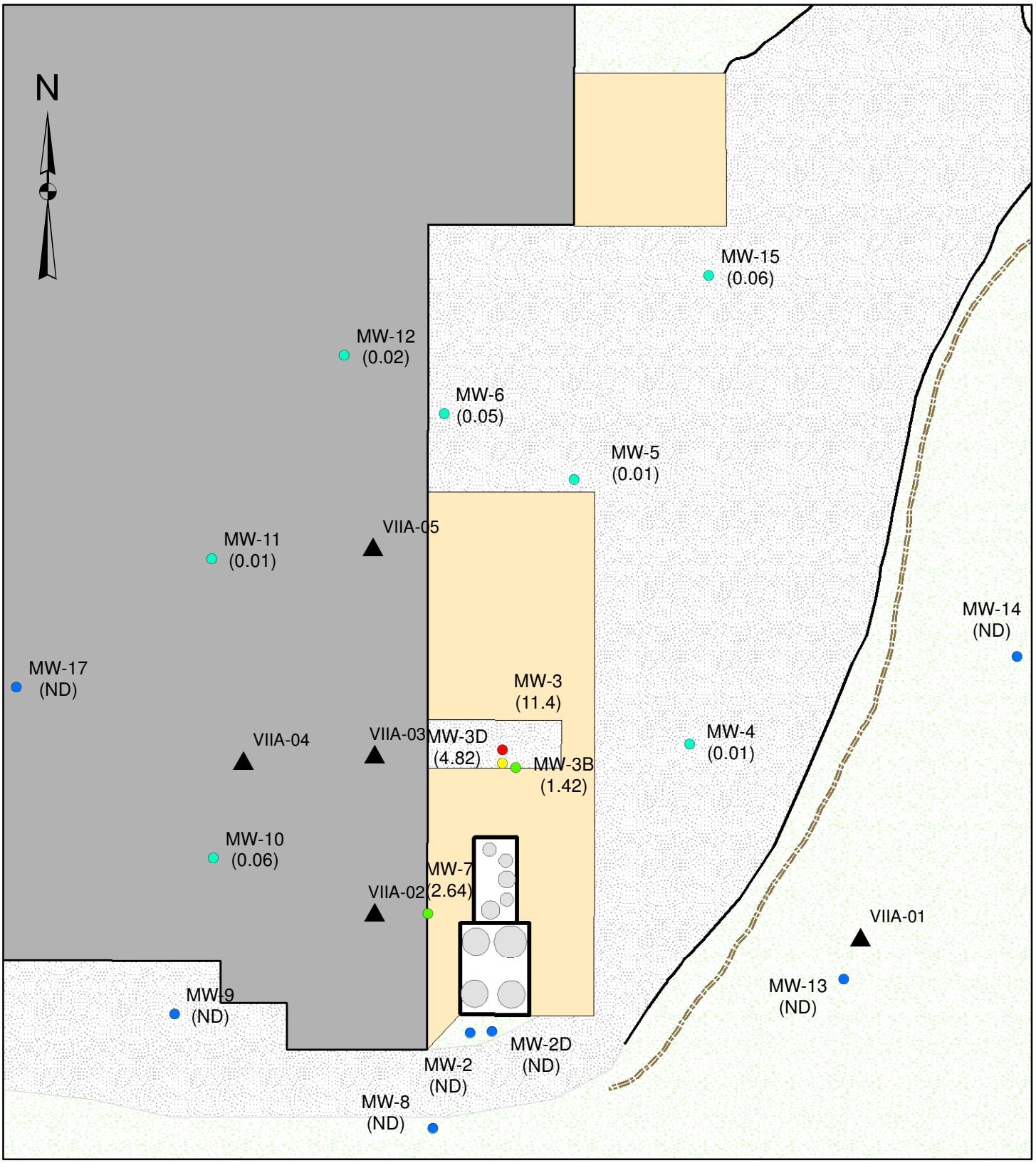
Legend

- AST Containment Area
- Location of Spill (approx)
- Storm Water Outfall
- Open Drains
- Subgrade Storm/Drain Lines
- Drainage Ditch
- Approximate Property Boundary

EPS
G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig2_Aerial.mxd

Figure No. 2

Capitol Adhesives
Indoor Air Sample Locations



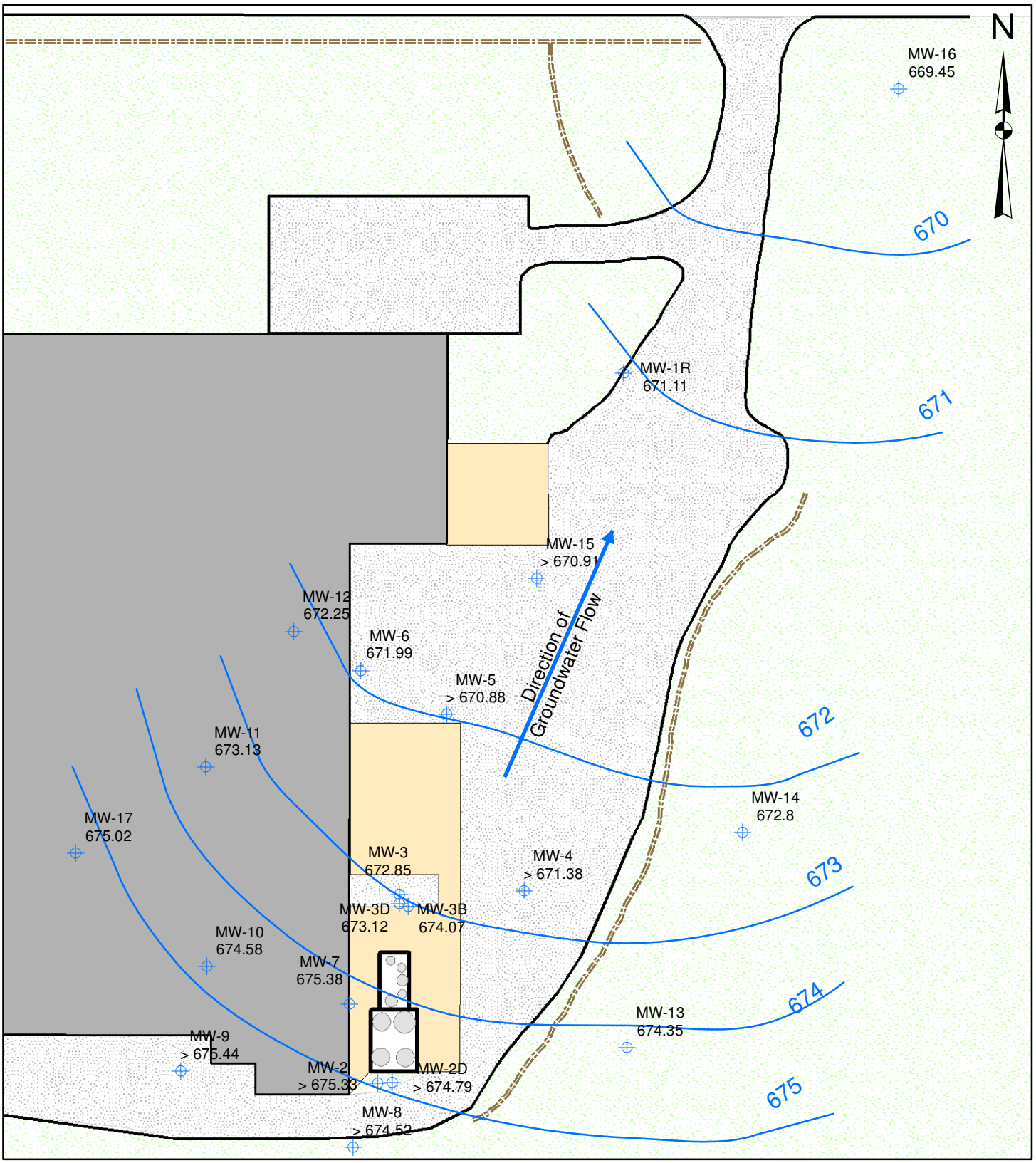
* Sum of four chlorinated ethenes = PCE, TCE, cis-DCE, and VC

EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig3_Vapor_samp.mxd

Figure No. 3

Capitol Adhesives
Potentiometric Surface Map of Surficial Aquifer (February 2013)

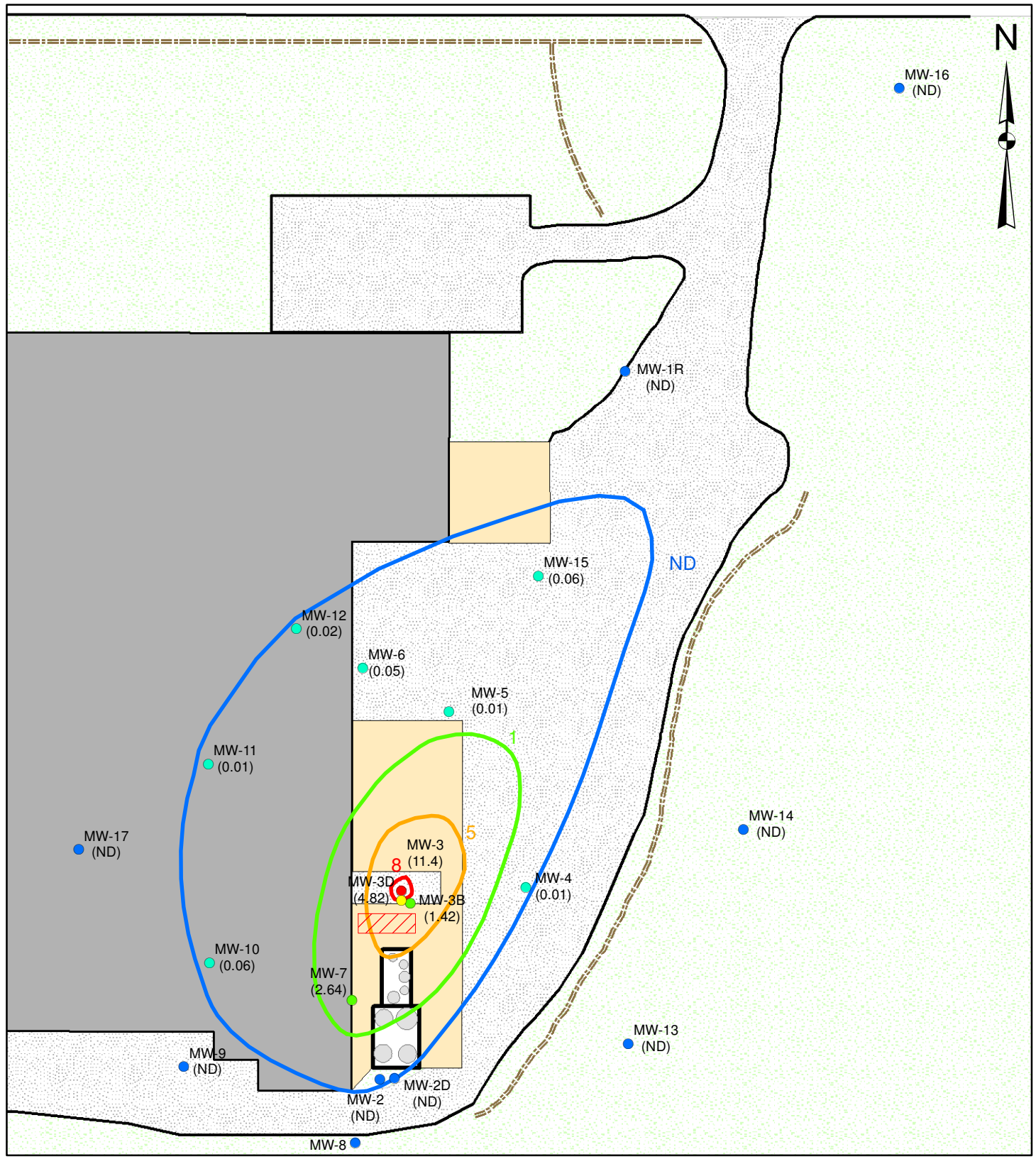


EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig4_PotMap.mxd

Figure No.4

Capitol Adhesives
Groundwater Total Chlorinated Ethenes* (February 2013)



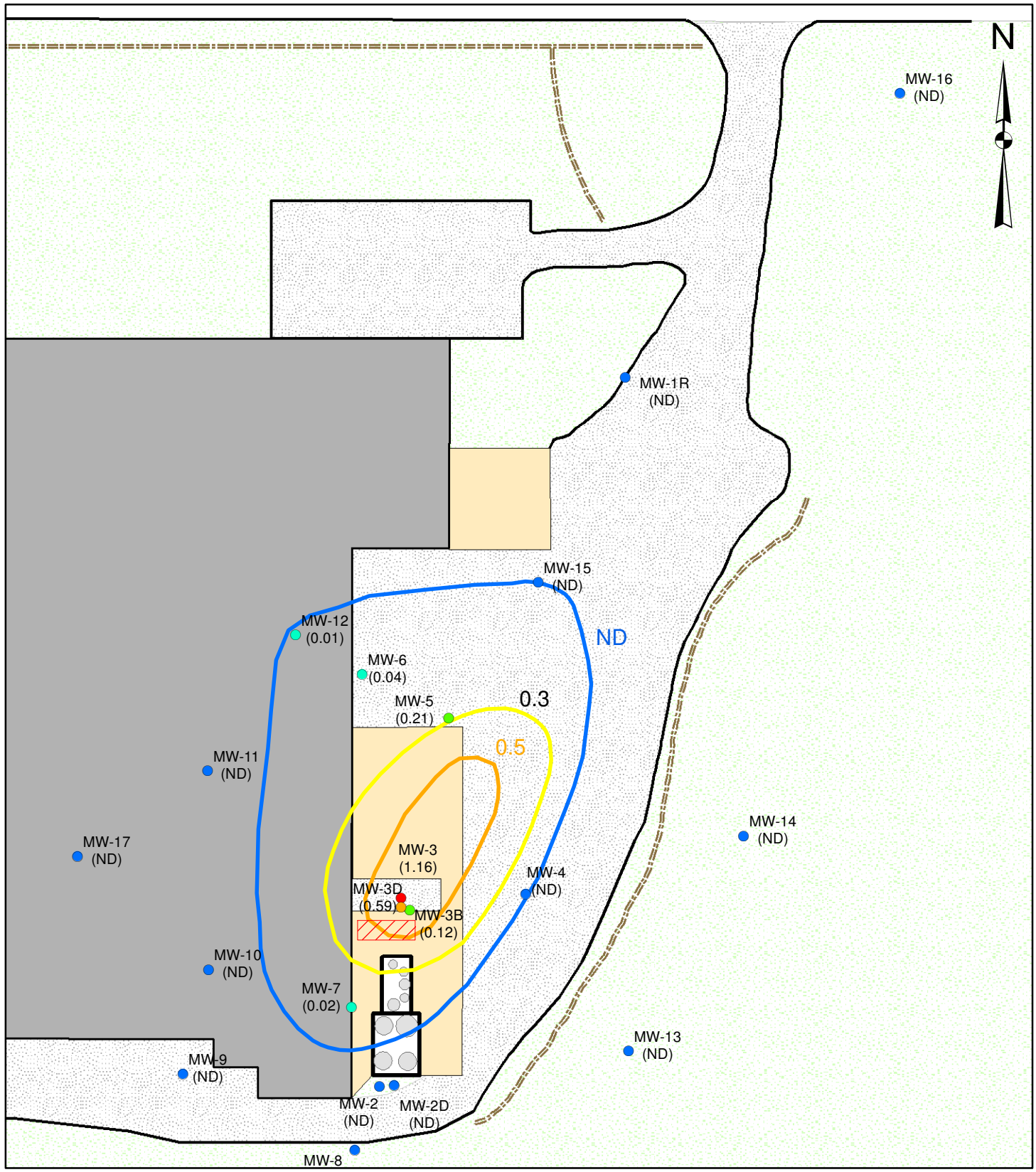
* Chlorinated ethenes = PCE, TCE, cis-DCE, and VC

EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig5_GWPCE.mxd

Figure No. 5

Capitol Adhesives
Groundwater Total Chlorinated Ethanes* (February 2013)



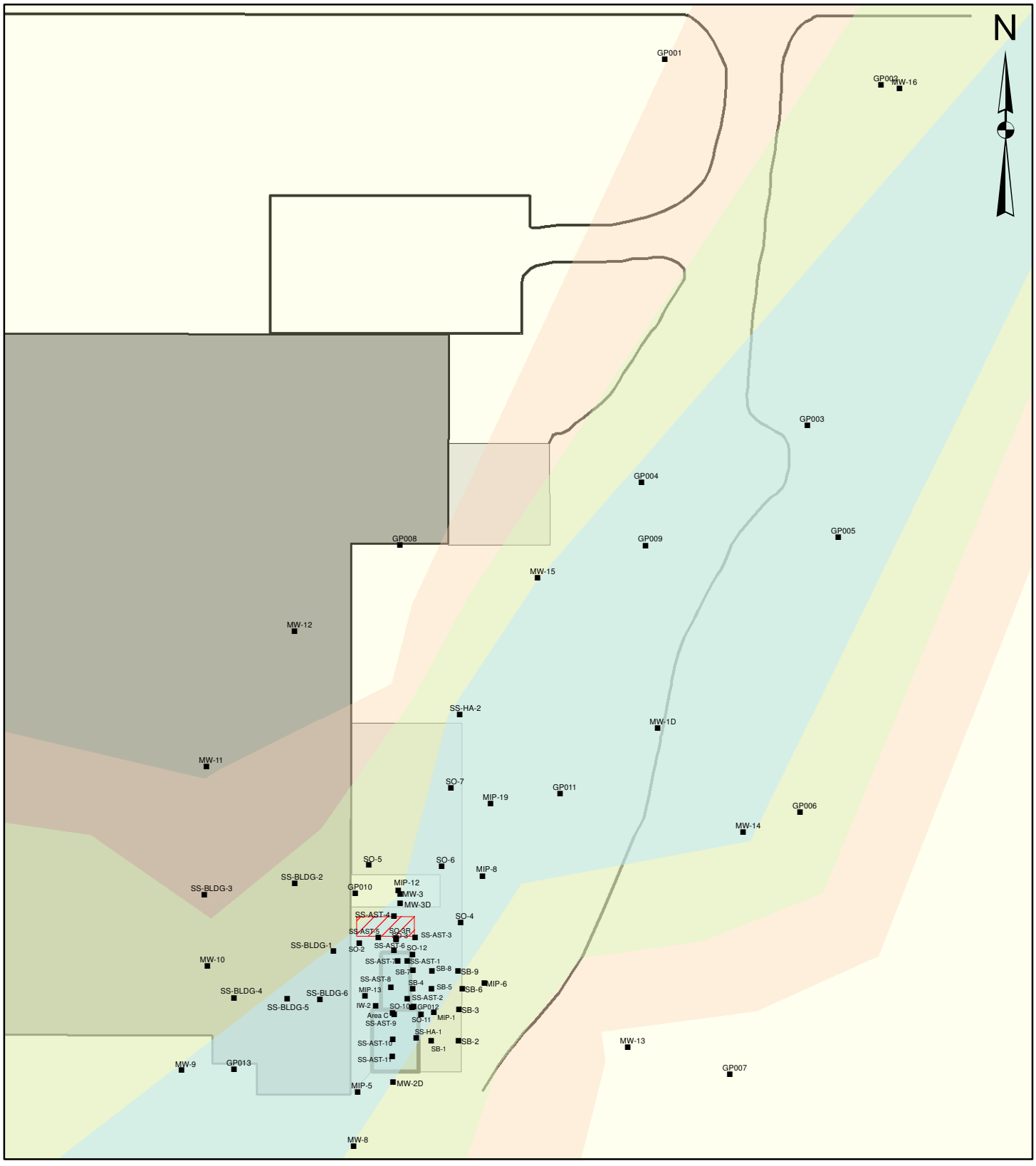
* Chlorinated ethanes = 1,1,1-TCA, 1,1-DCA, and CA

EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig6_GWTCA.mxd

Figure No. 6

Capitol Adhesives
Location of Solid Matrix Samples and Water Table Zones



0 50 100
Feet

Soil Zone

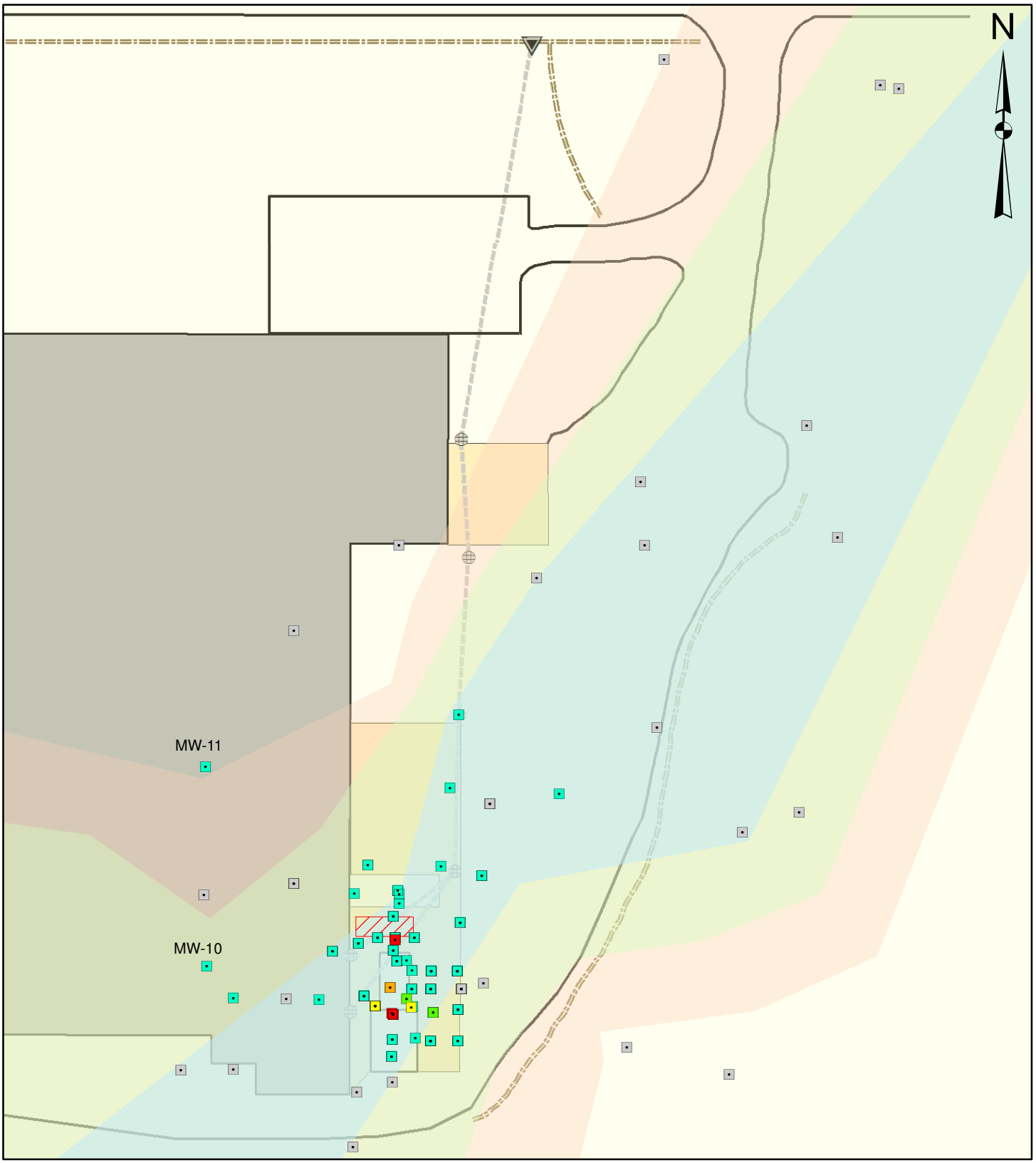
- Fully Saturated Zone
- 0-1' Vadose Zone
- 1-2' Vadose Zone
- >2' Vadose Zone

- Location of Spill (approx)
- AST Containment
- Building
- Concrete Pad

EPS
G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig7_Solid_WT.mxd

Figure No. 7

Capitol Adhesives
Total Chlorinated Ethenes* in Subsurface Solids Prior to Remediation



0 50 100
Feet

Total VOCs* (mg/kg)

- ND
- < 15
- 15 - 30
- 30 - 75
- 75 - 150
- > 150
- Location of 1995 Spill (approx)

Soil Zones

- Fully Saturated Zone
- 0-1' Vadose Zone
- 1-2' Vadose Zone
- >2' Vadose Zone

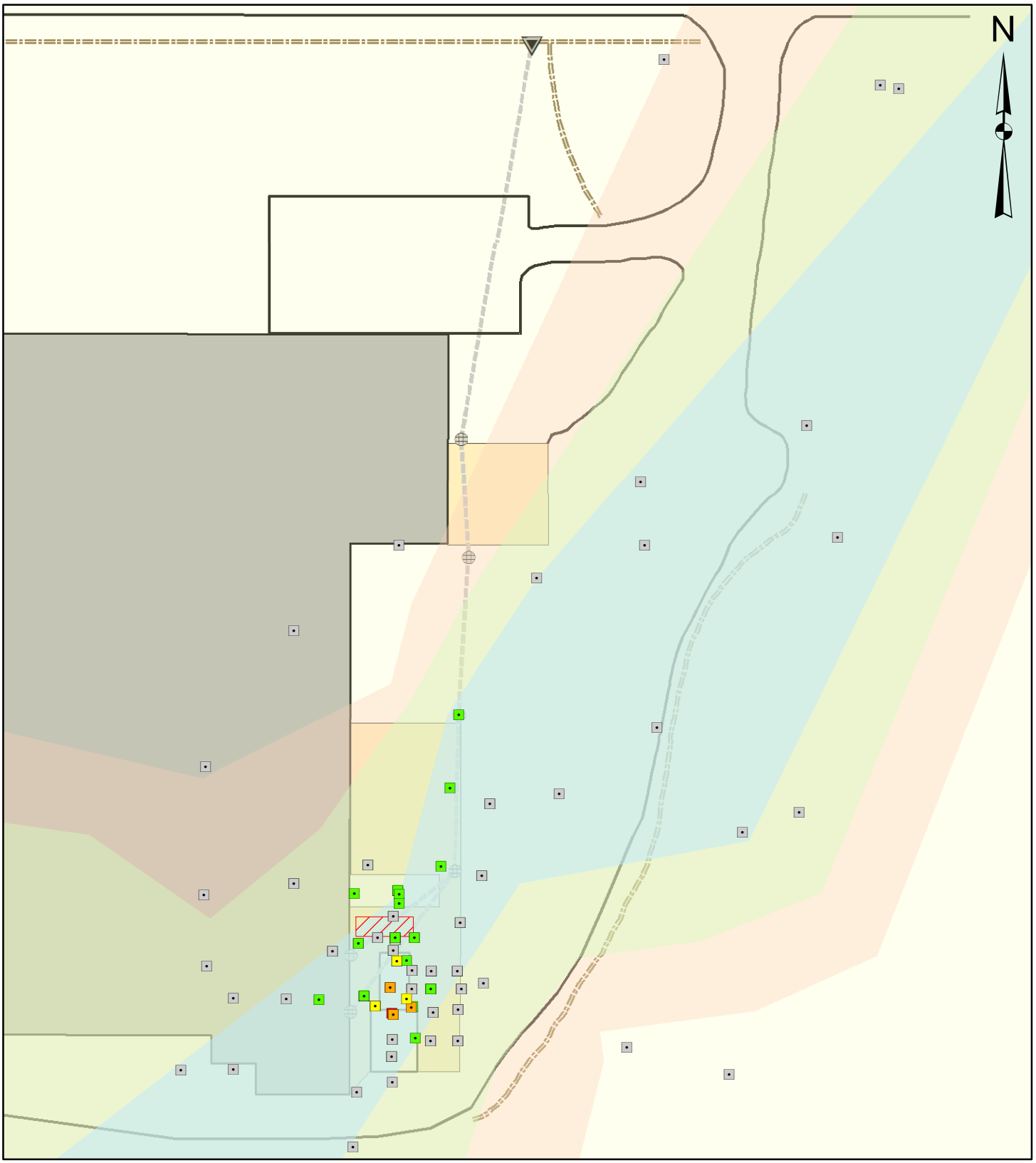
* Where multiple samples were collected, the maximum total VOC value is shown. Chlorinated ethenes = PCE, TCE, cis-DCE, and VC

EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\CSMFig8_SolidPCE.mxd

Figure No. 8

Capitol Adhesives
Total Chlorinated Ethanes* in Subsurface Solids Prior to Remediation



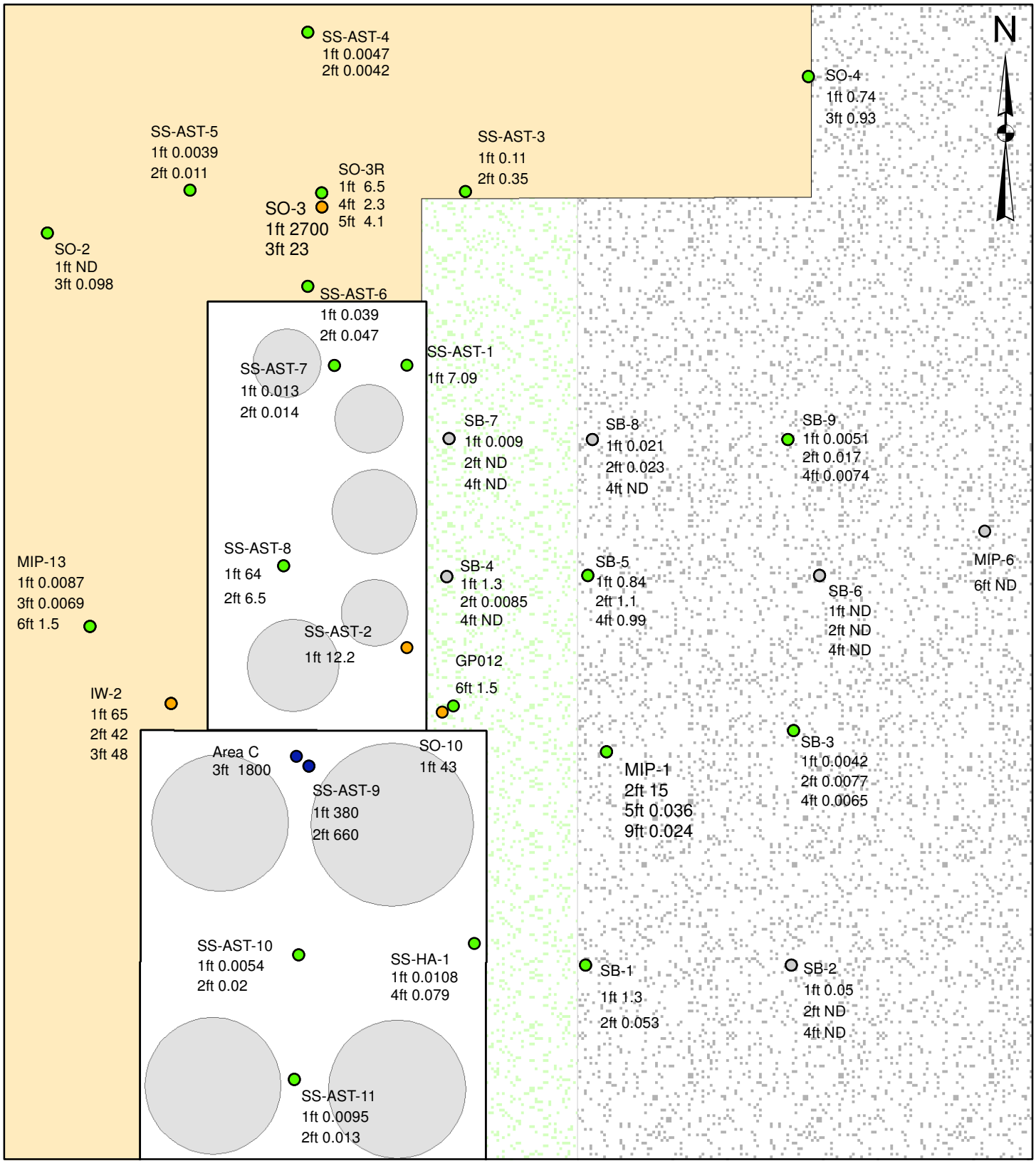
* Where multiple samples were collected, the maximum total VOC value is shown. Chlorinated ethanes = 1,1,1-TCA, 1.1-DCA and CA

EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig9_SolidTCA.mxd

Figure No. 9

Capitol Adhesives
Solid Aquifer Matrix PCE Results and Remedial Extent Level Prior to Remediation

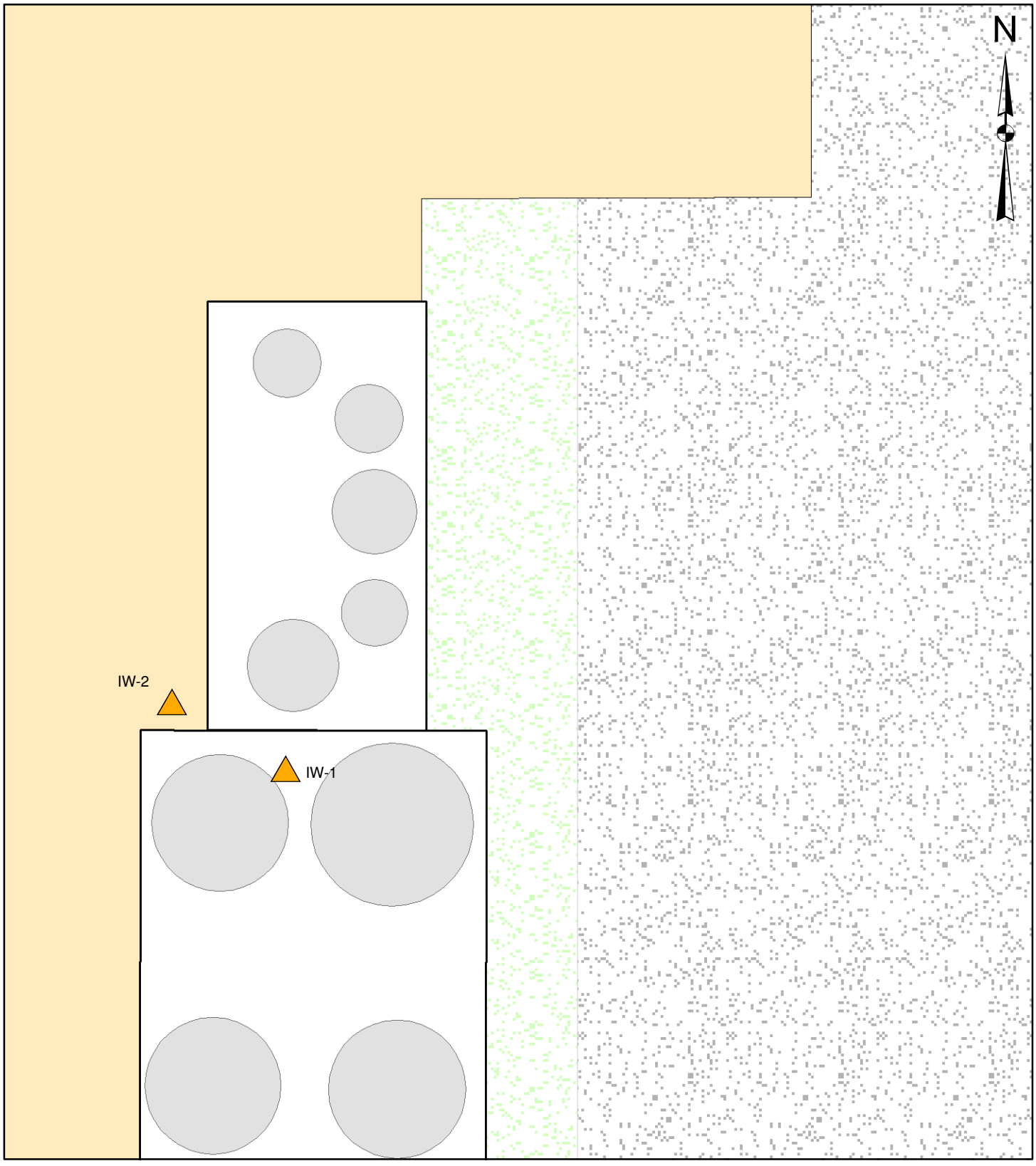


EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig10_REL.mxd

Figure No. 10

Capitol Adhesives
ISCO Pilot Test

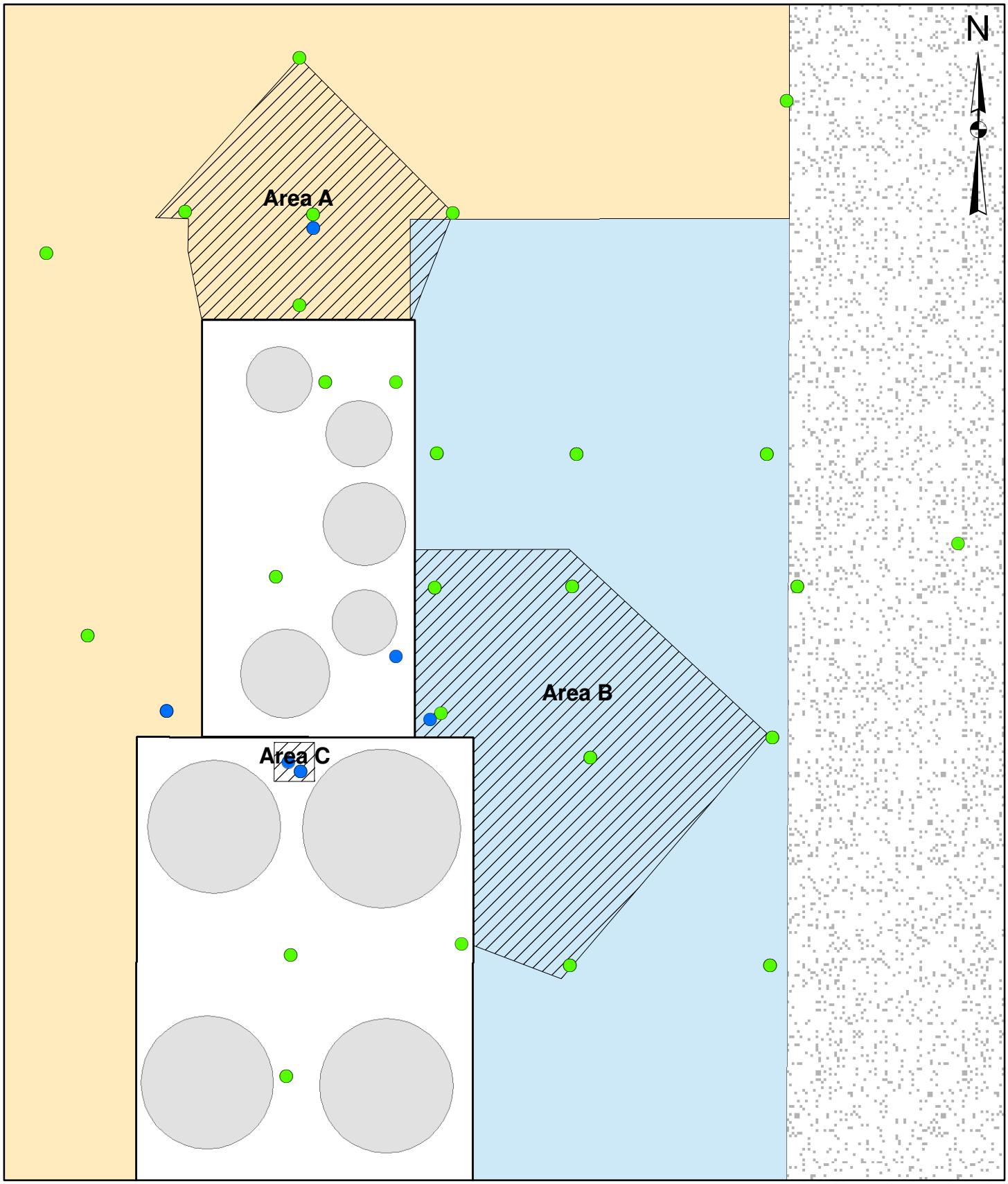


EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig11_Pilot.mxd

Figure No. 11

Capitol Adhesives
Remediation Areas

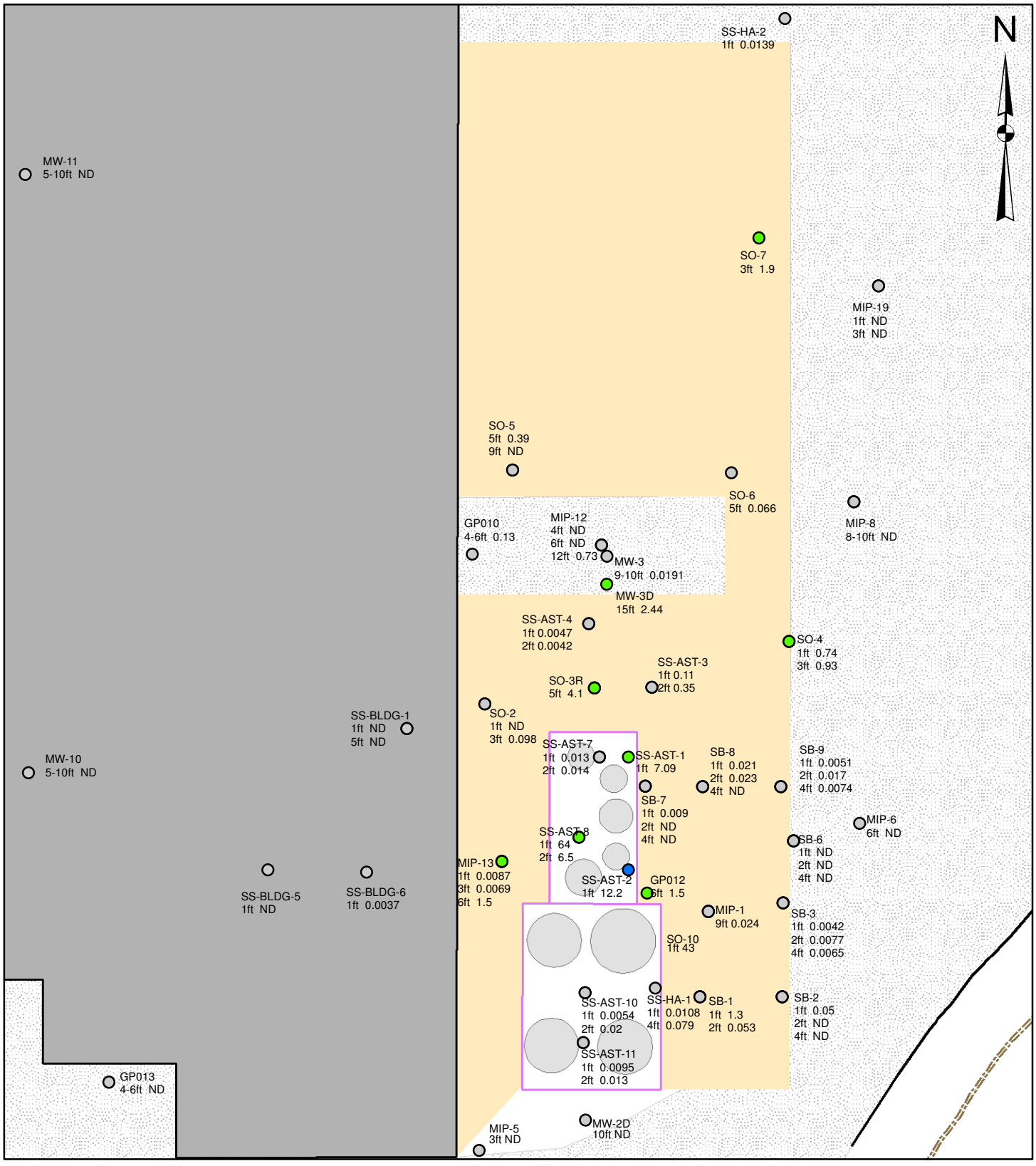


EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig12_Remediation.mxd

Figure No. 12

Capitol Adhesives
Post-Remedial Action Solid Matrix Condition



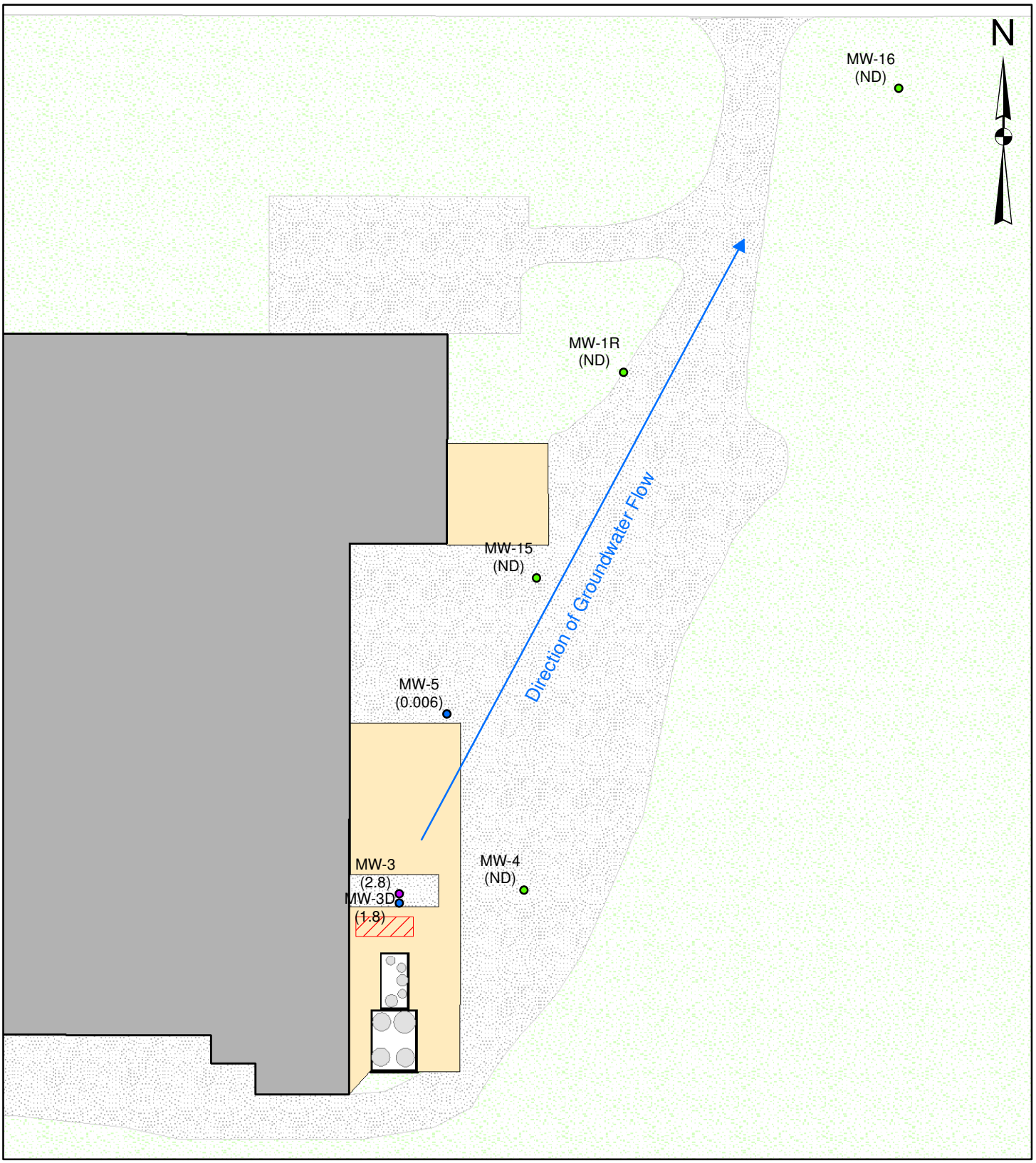
Note: These samples were all collected prior to the excavation activities.

EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig13_PostSoil.mxd

Figure No. 13

Capitol Adhesives
Groundwater PCE (November 2014)



0 50 100
Feet

PCE (mg/L)

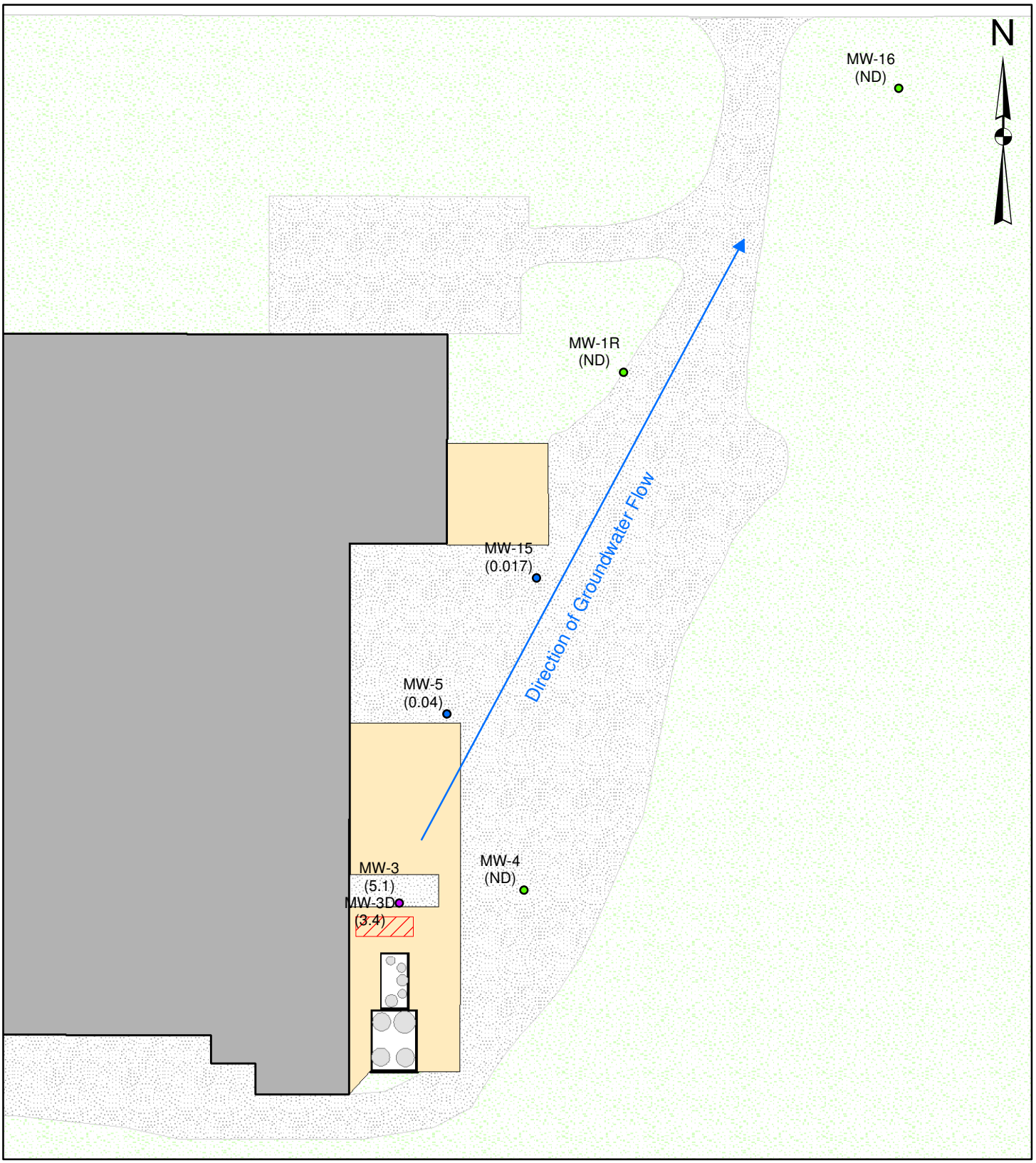
- Non-detect
- < 0.005 (Type 1 RRS)
- 0.005 - 2
- > 2

- Location of 1995 Spill (approx)
- Building
- Concrete Pad
- AST Containment Area
- Packed Gravel Drive/Parking
- Grass

EPS
G:\River Associates\Capitol Adhesives\VRP Program\Progress Reports\CSR\Fig14a_GWPCE.mxd

Figure No. 14a

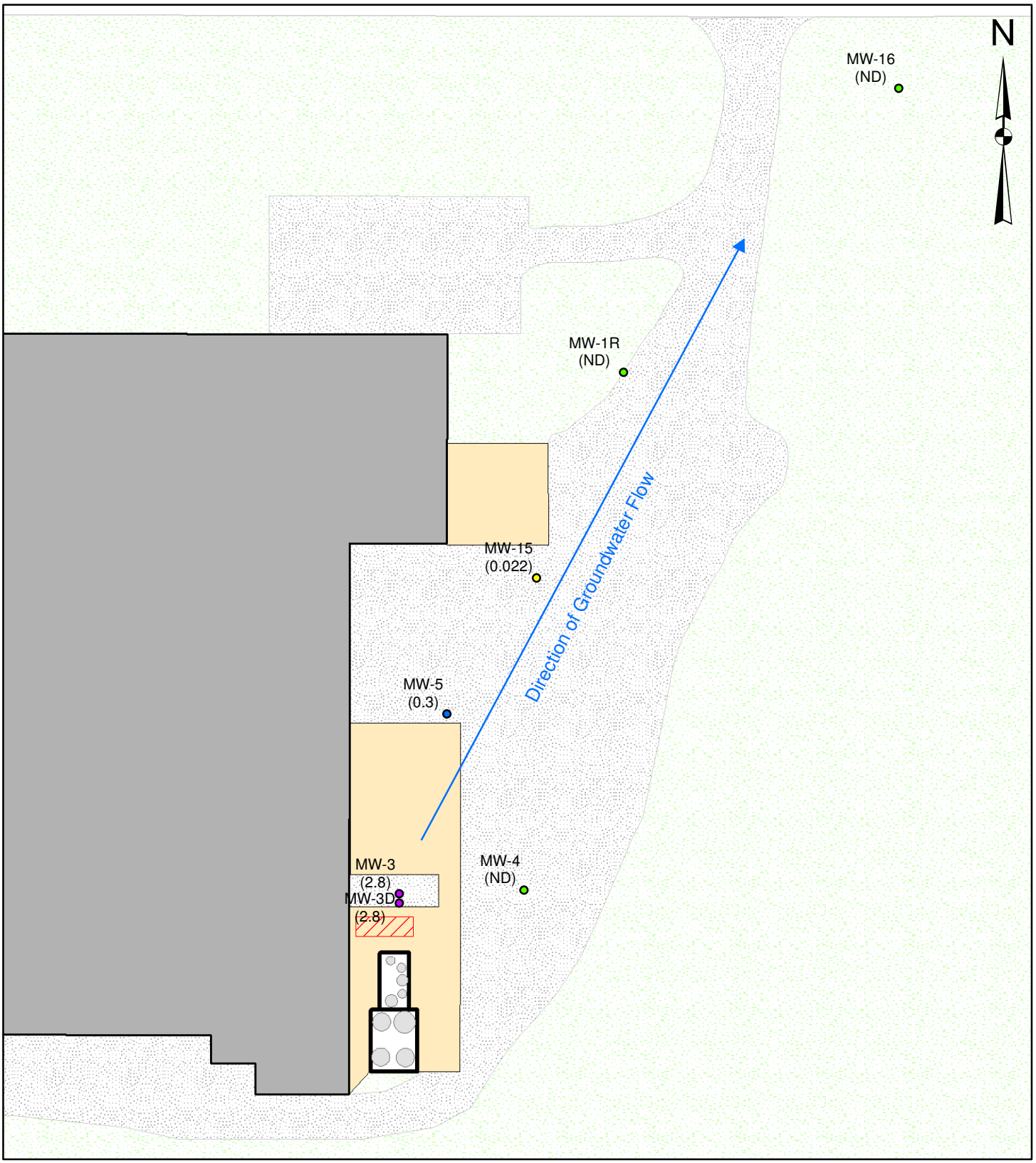
Capitol Adhesives
Groundwater TCE (November 2014)



EPS
G:\River Associates\Capitol Adhesives\VRP Program\Progress Reports\CSR\Fig14b_GWTCE.mxd

Figure No. 14b

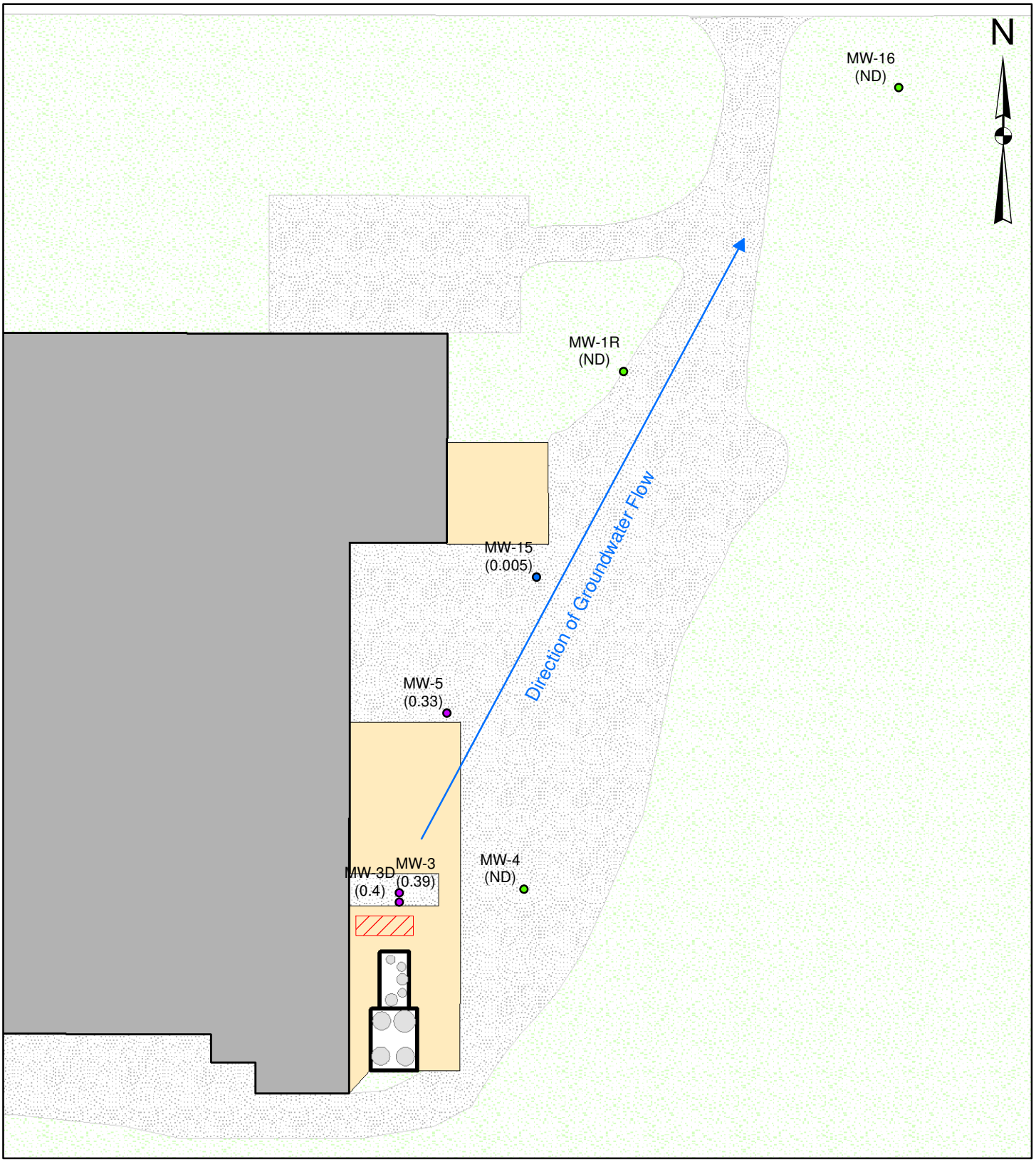
Capitol Adhesives
Groundwater cis-DCE (November 2014)



EPS
G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig14c_GWDCE.mxd

Figure No. 14c

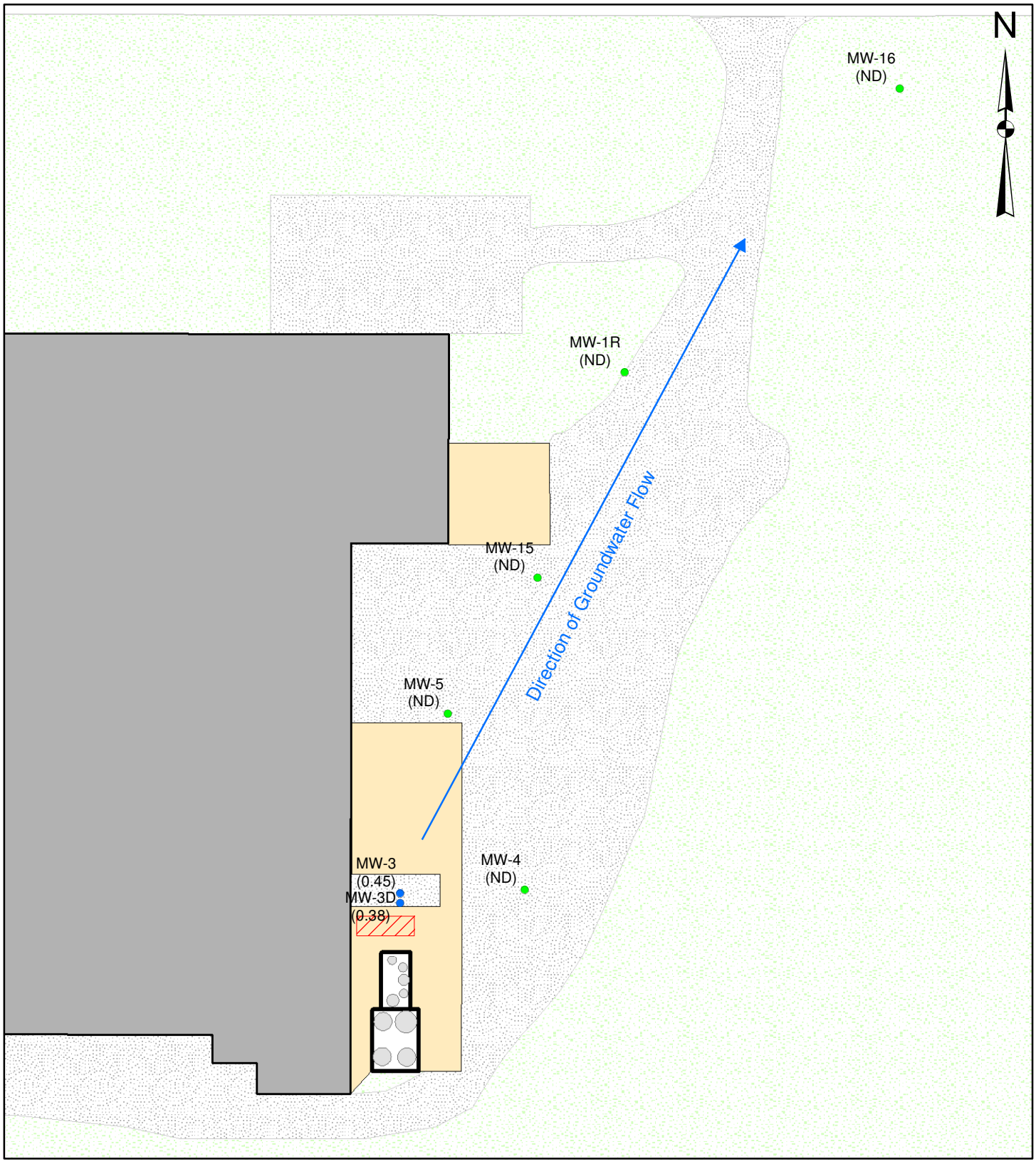
Capitol Adhesives
Groundwater Vinyl Chloride (November 2014)



EPS
G:\River Associates\Capitol Adhesives\VRP ProgramGIS\CSR\Fig14d_GWVC.mxd

Figure No. 14d

Capitol Adhesives
Groundwater 1,1,1-TCA (November 2014)



0 50 100
Feet

1,1,1-TCA (mg/L)

- Non-detect
- < 0.2 (Type 1 RRS)
- 0.2 - 0.5
- > 0.5

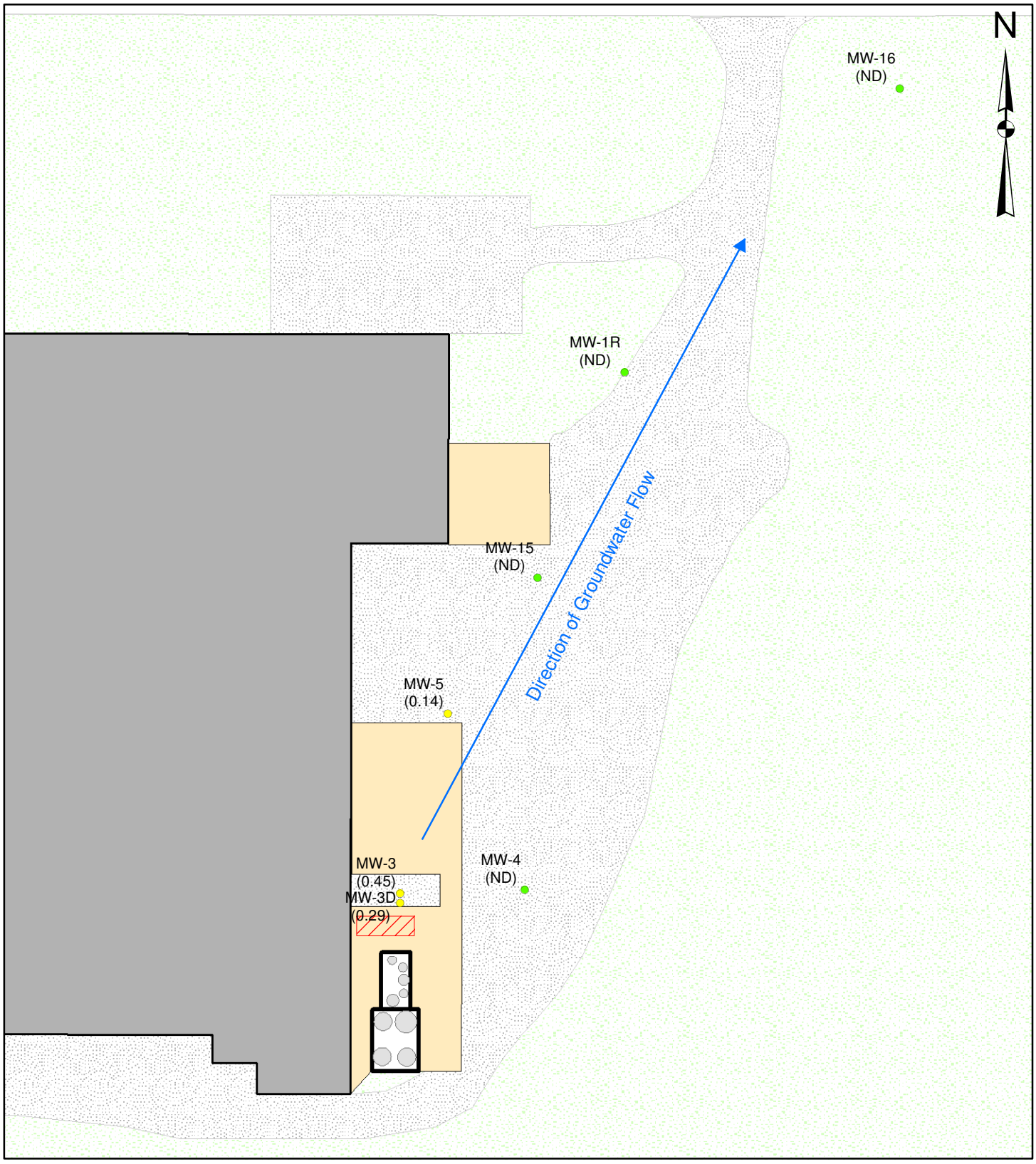
- Location of 1995 Spill (approx)
- AST Containment Area
- Building
- Concrete Pad
- Packed Gravel Drive/Parking
- Grass

EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\\Fig15a_GWTCA.mxd

Figure No. 15a

Capitol Adhesives
Groundwater 1,1-DCA (November 2014)

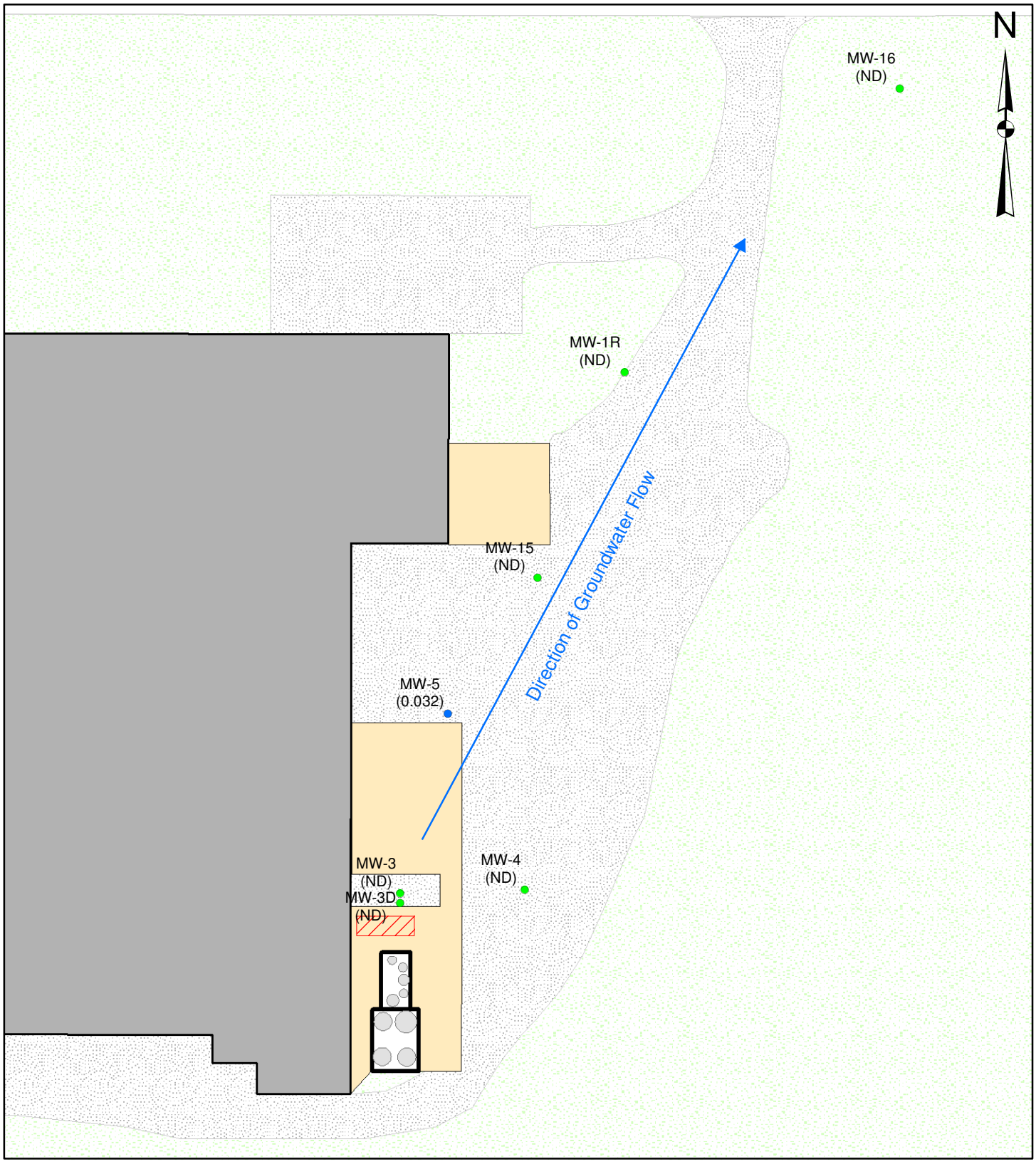


EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig15b_GWDCA.mxd

Figure No. 15b

Capitol Adhesives
Groundwater CA (November 2014)



0 50 100
Feet

CA (mg/L)

- Non-detect (Type 1 RRS)
- Detect

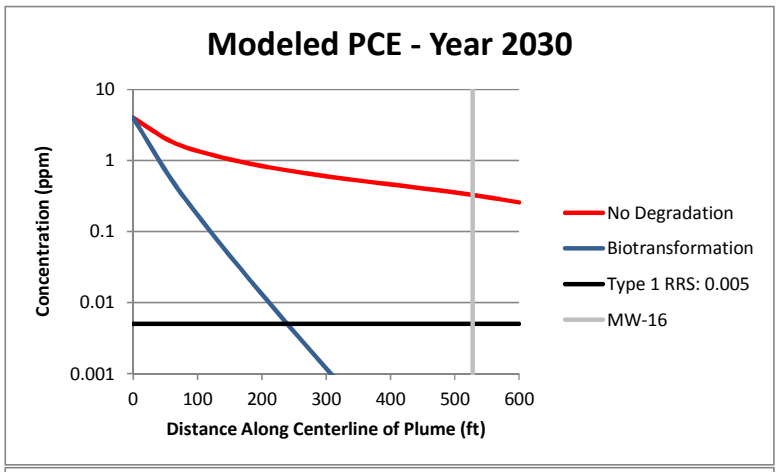
- Location of 1995 Spill (approx)
- AST Containment Area
- Building
- Concrete Pad
- Packed Gravel Drive/Parking
- Grass

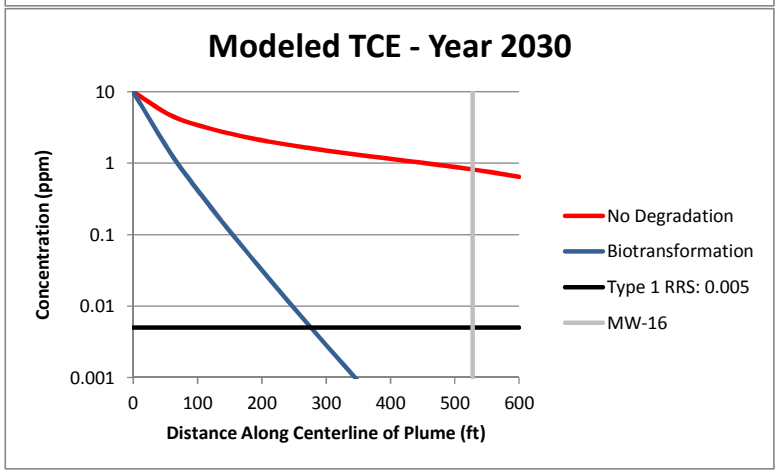
EPS

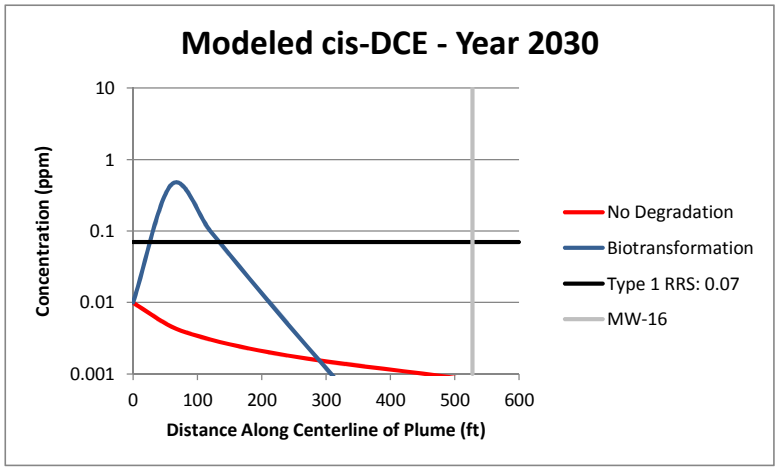
G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig15c_GWCA.mxd

Figure No. 15c

Figure 16
Future Modeled Chlorinated Ethene Degradation







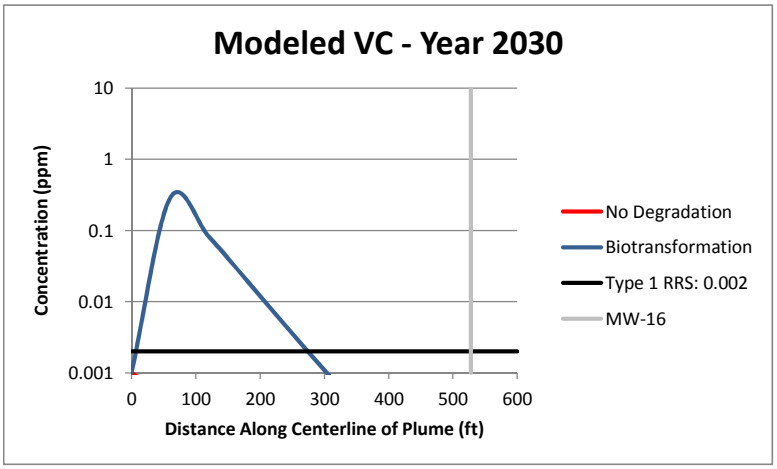


Figure 17
Future Modeled Chlorinated Ethane Degradation

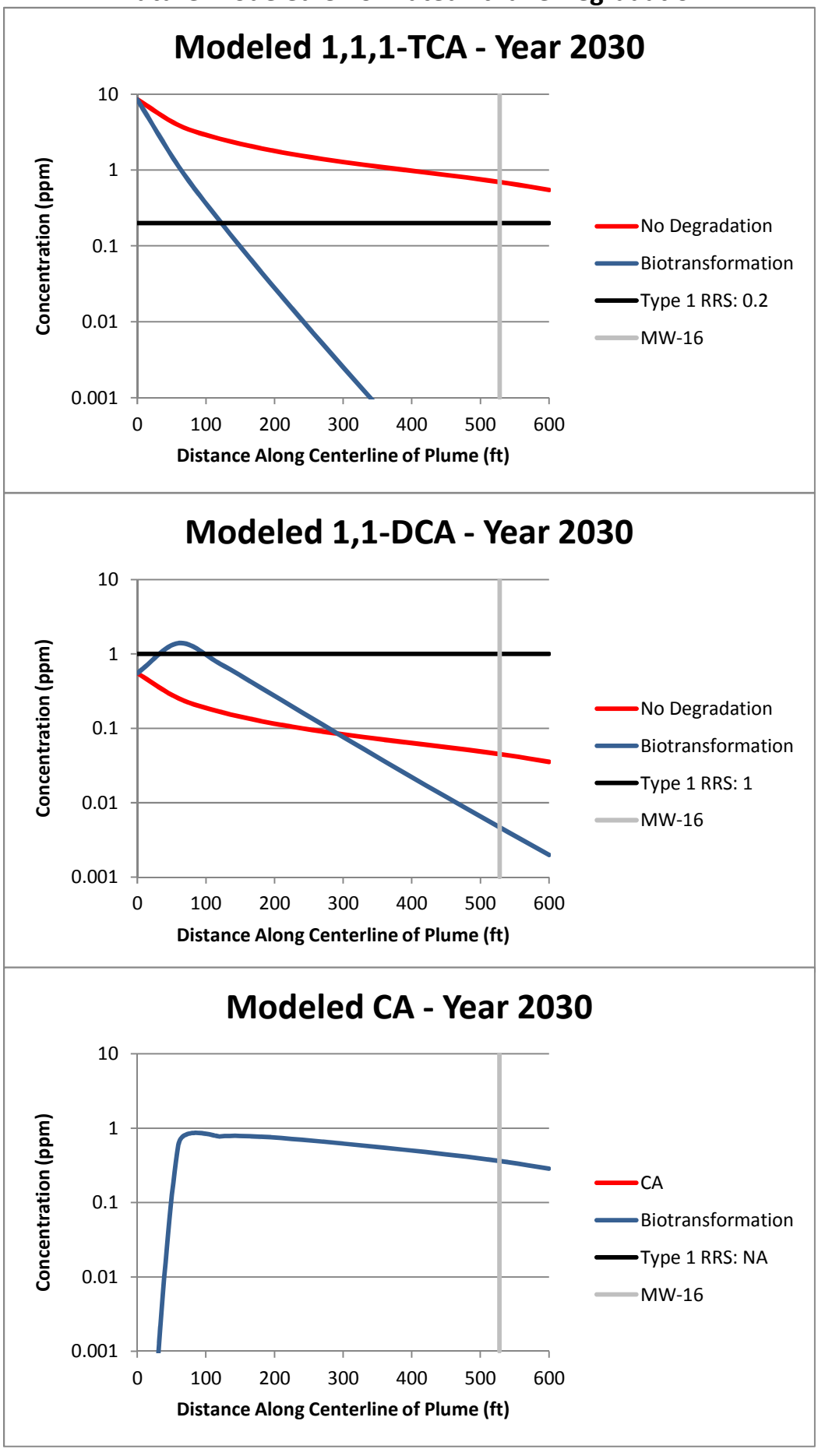
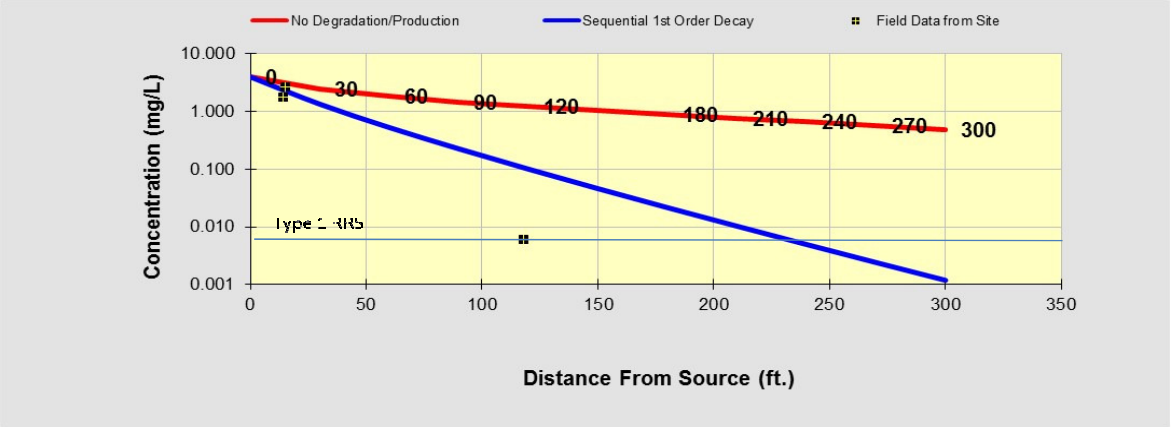
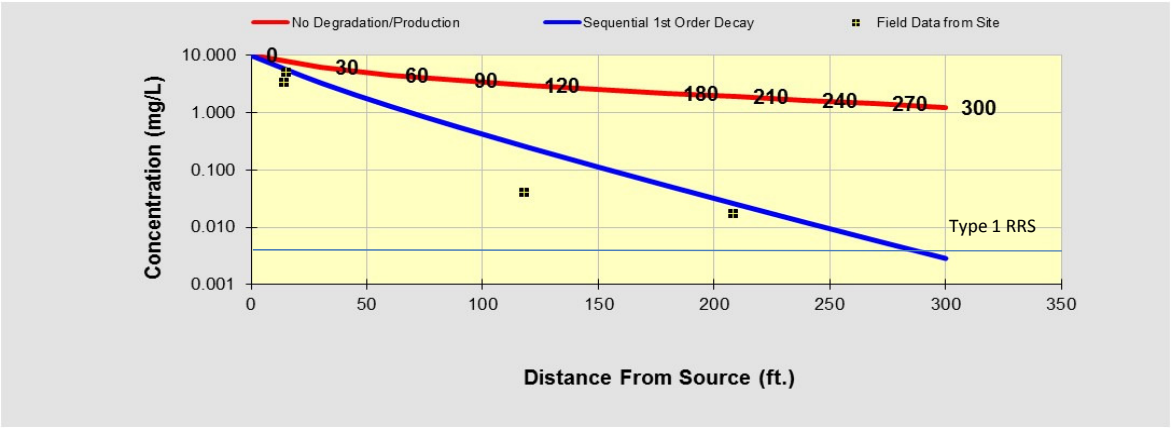


Figure 18. Chlorinated Ethene Modeling Results (November 2014)
Modeled Dissolved Chlorinated Ethene Concentrations Along Plume Centerline

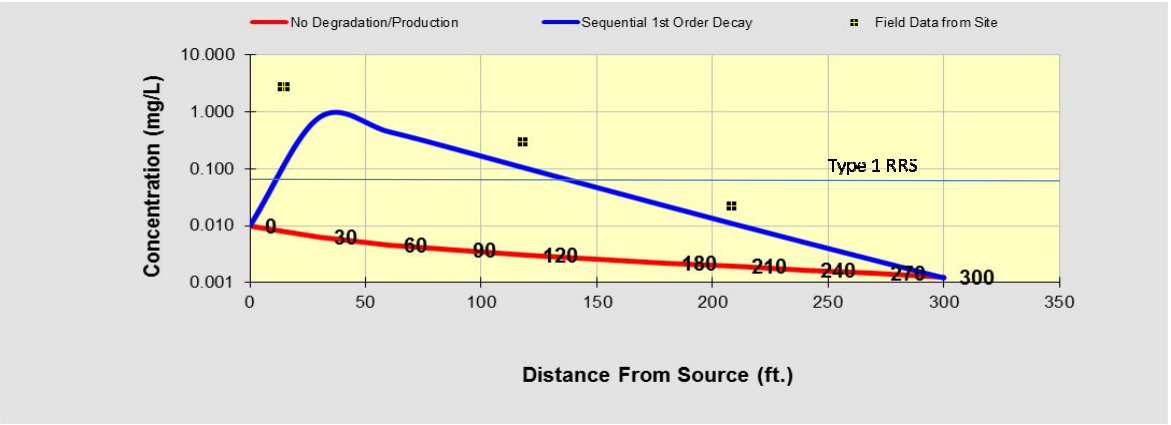
Tetrachloroethene



Trichloroethene



cis-1,2-Dichloroethene



Vinyl chloride

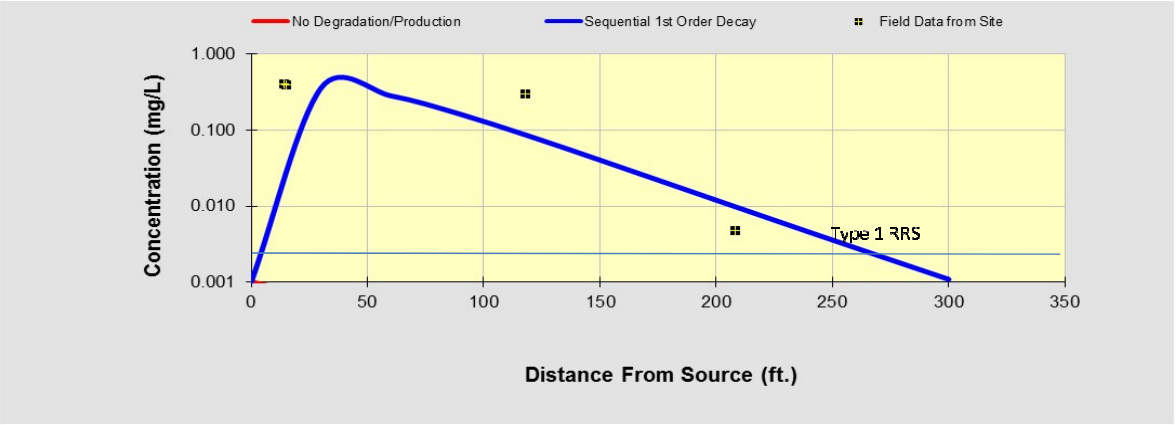
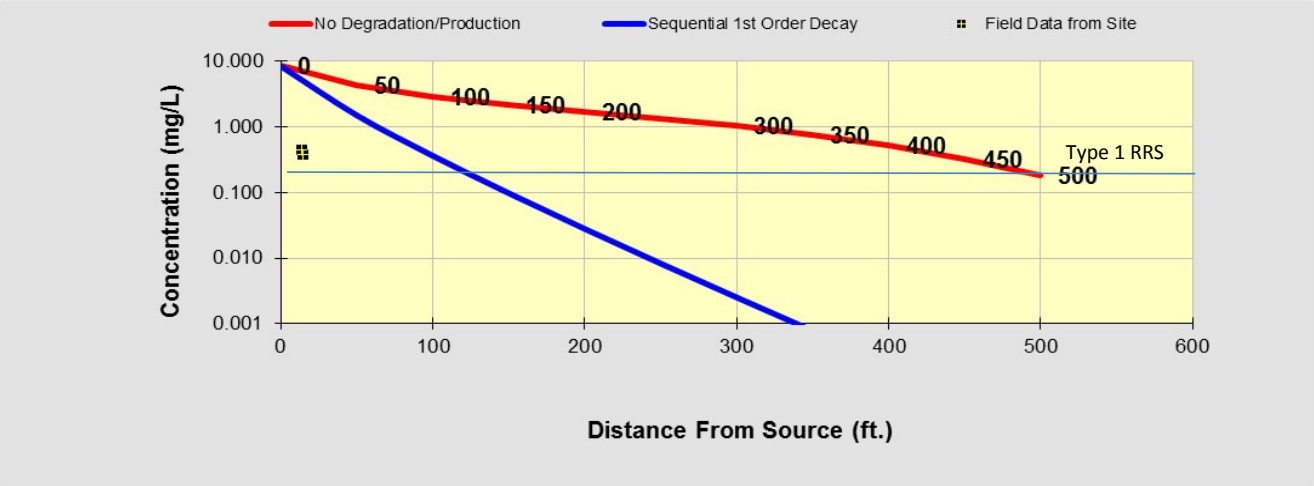
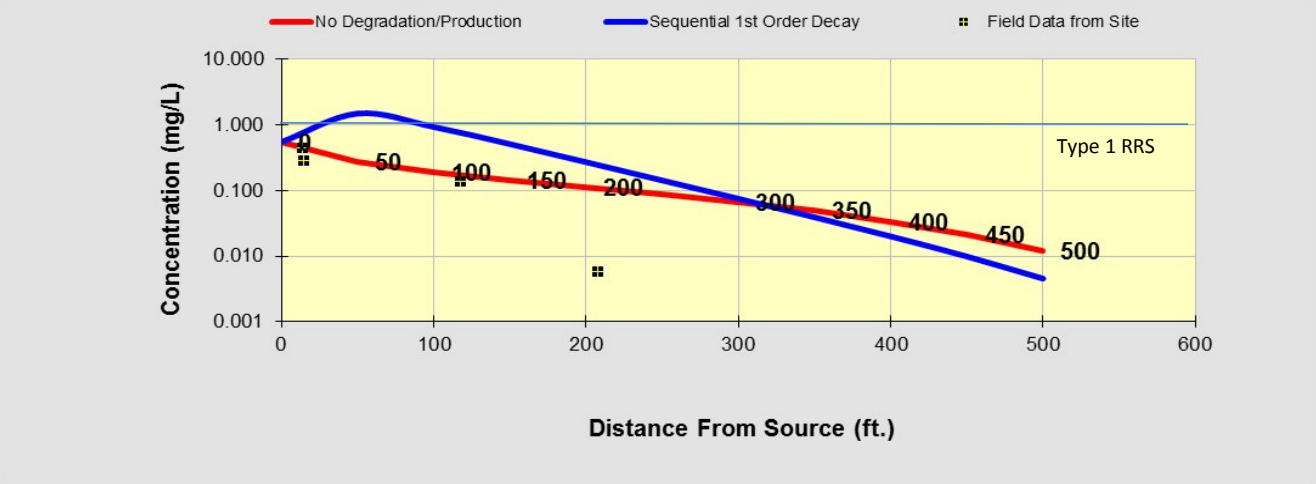


Figure 19. Chlorinated Ethane Modeling Results (November 2014)
Modeled Dissolved Chlorinated Ethane Concentrations Along Plume Centerline

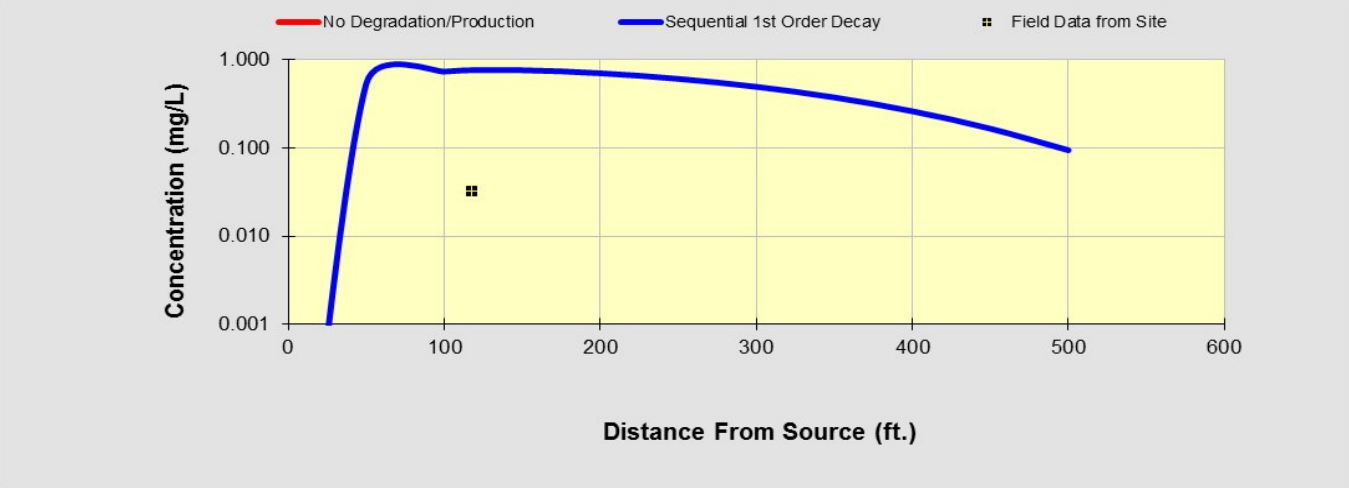
1,1,1-Trichloroethane



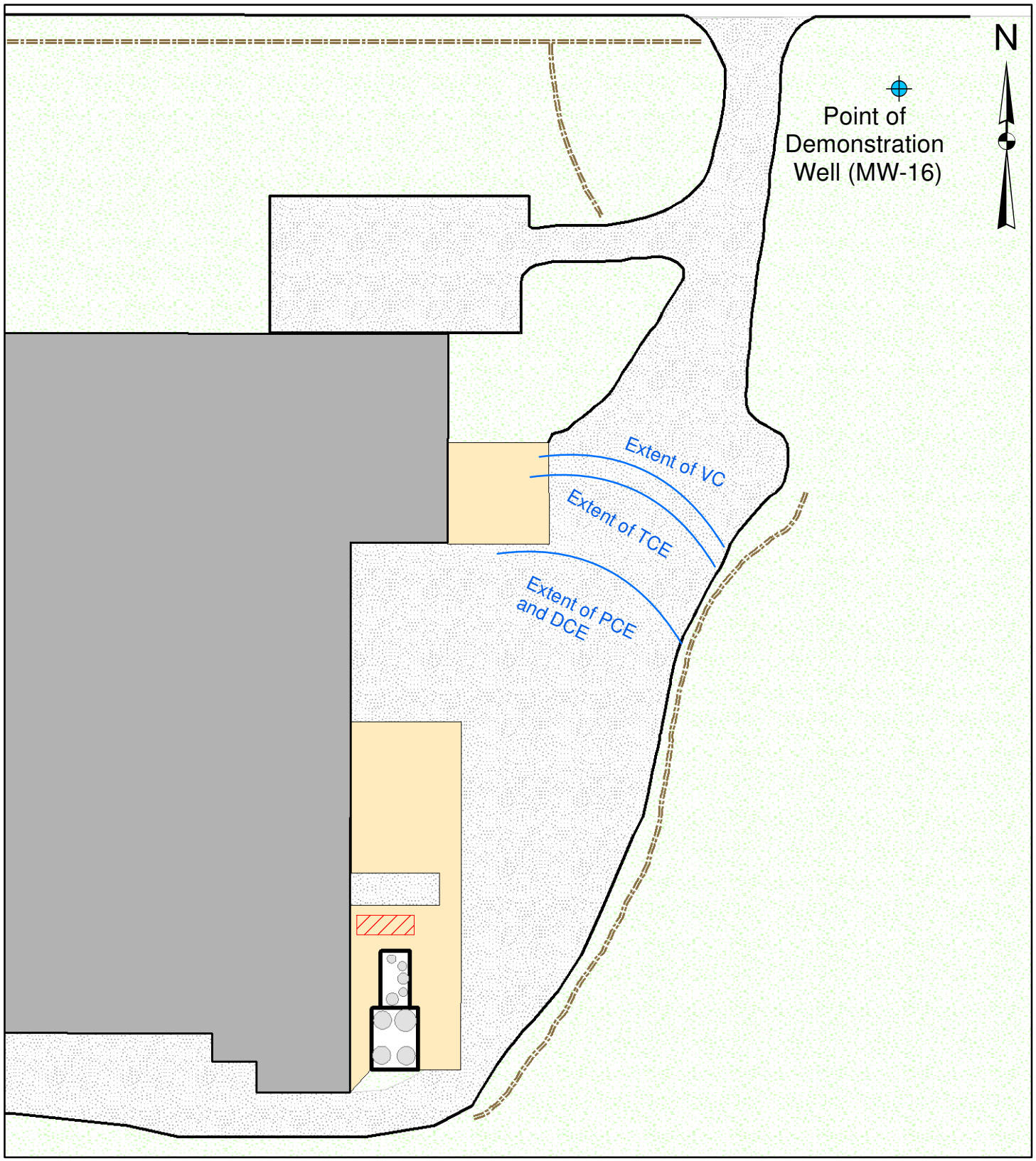
1,1-Dichloroethane



Chloroethane



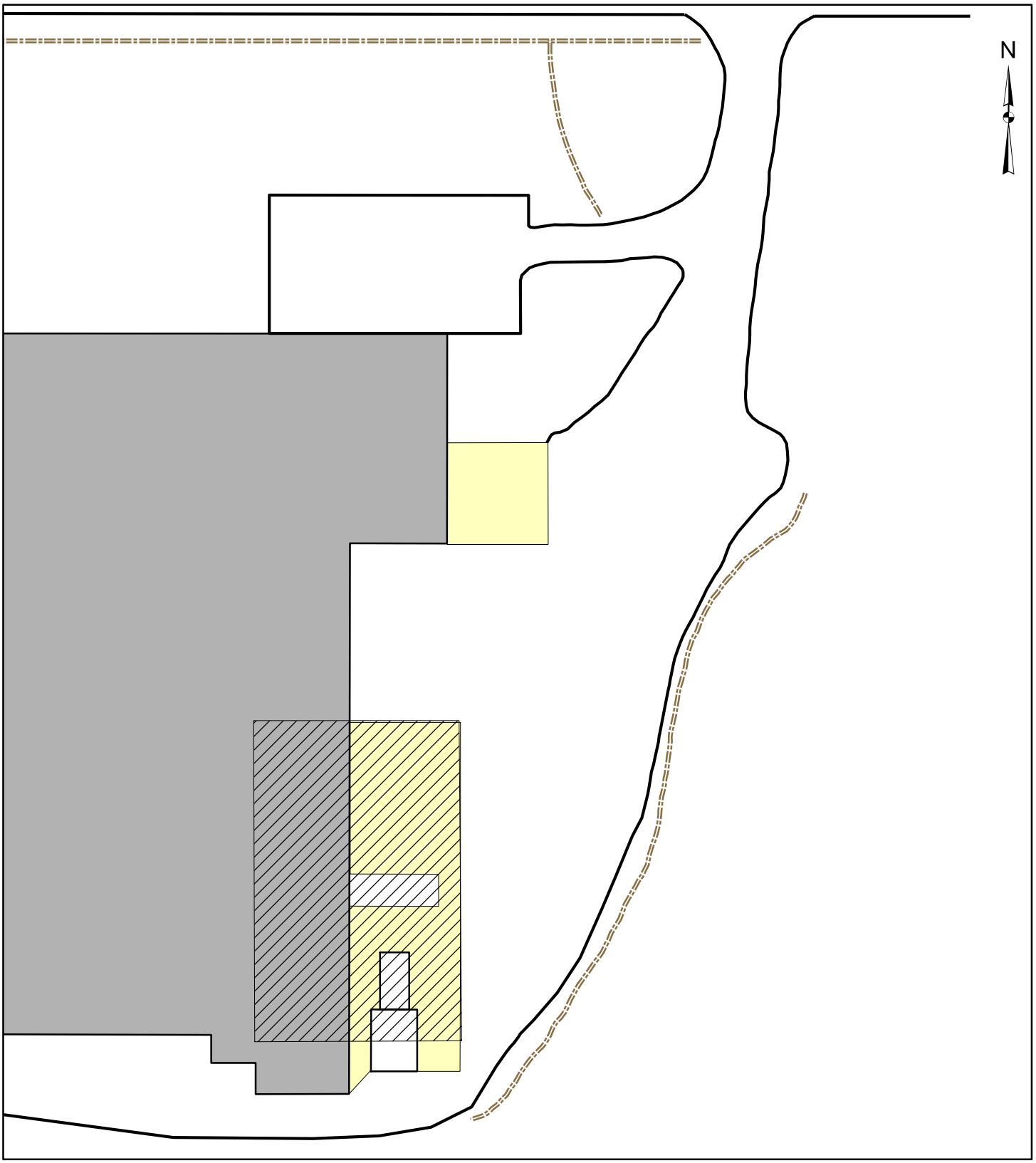
Capitol Adhesive
BIOCHLOR Model Results 2030



EPS
G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig20 BIOCHLOR.mxd

Figure No. 20

Capitol Adhesives
Environmental Covenant Restricted Area



EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\Fig21_UEC.mxd

Figure No. 21

APPENDIX A

PROFESSIONAL GEOLOGIST SUMMARY OF HOURS

Environmental Planning Specialists, Inc.
Time by Job Summary - Kirk Kessler
April through August 2015

	Apr 15	May 15	Jun 15	Jul 15	Aug 15	TOTAL
River Associates:Dalton Adhesives:Progress Reports						
SP-Senior Principal:SP-Project Support	0.00	0.00	0.00	0.00	2.50	2.50
Total River Associates:Dalton Adhesives:Progress Reports	0.00	0.00	0.00	0.00	2.50	2.50
River Associates:Dalton Adhesives:Project Management						
SP-Senior Principal:SP-Project Support	3.00	0.00	3.50	4.50	0.00	11.00
Total River Associates:Dalton Adhesives:Project Management	3.00	0.00	3.50	4.50	0.00	11.00
TOTAL	**3.00**	**0.00**	**3.50**	**4.50**	**2.50**	**13.50**

APPENDIX B

CONCEPTUAL SITE MODEL

EPS

APPENDIX B
CONCEPTUAL SITE MODEL

August 2015

TABLE OF CONTENTS

B1 CONCEPTUAL SITE MODEL

B1.1 Overview

The Conceptual Site Model (CSM) is intended to establish a common knowledge base about the Property and its environmental condition. Elements of the CSM (e.g. delineation and risk evaluation) are presented in the Compliance Status Report (CSR). The remaining elements of the CSR are discussed in this appendix (e.g. the surface and subsurface features at the Property, discusses the fate and transport of chlorinated solvents).

B1.2 Ground Surface Features

The Property 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 facility. The topography of the Property gently slopes from the south to northeast. A shallow drainage ditch is located around the southern and eastern side of the Property 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 Property. These Property features are shown on Figure 2 of the CSR.

B1.3 Subsurface Features

B1.3.1 Geological Setting

The Property 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 Property 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-1, and cross sections are shown on Figures B-2 and B-3. As depicted on these figures, the shallow stratigraphic profile at the Property 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.

B1.3.2 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 Property fluctuates on the scale of 5 to 8 feet 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 (owing to evaporation). 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 Property on three consecutive weekly site visits. The results are presented in Table B-1 along with the results from sampling events since 2011. 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-2 and B-3). The table below shows the high watertable 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 bgs are MW-6, MW-11, MW-12 and MW-13. Figure B-4 shows the locations of the wells and their high water table marks. The overall groundwater flow direction is to the northeast (as shown on Figure 4 of the CSR).

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*

* Flush-mount-well, depth below top of casing shown

The topographic map (Figure 1 of the CSR) 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 Property now exists. This is the same direction as the groundwater flow seen currently at the Property. 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-4 was used to define soil zones on the Property based on the high water table mark. 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-4 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 depths of the vadose zone in other areas of the Property shown on Figure B-4 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 calculations[1] 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. 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_e = effective porosity

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

B1.4 Fate and Transport Summary

B1.4.1 Physical Fate and Transport

The primary constituents of interest at this Property are parent compounds 1,1,1-TCA, PCE, TCE and their breakdown products. In their product state, 1,1,1-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

[1] Hydraulic conductivity and transmissivity were determined by slug tests on four monitoring wells using the Bouwer and Rice method.

section). All aqueous plumes will eventually reach a steady-state condition where the leading edge and side edges no longer expand. For this Property, the predominant groundwater flow is laterally down-gradient (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 Property. 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 Property 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 Property 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 down-gradient wells indicate that the plume has migrated to the northeast (in the direction of groundwater flow). The dissolved plume has been delineated in the down-gradient direction and has not migrated off the Property.

B1.4.2 Biological Degradation

Chlorinated solvents can also degrade biologically in the subsurface through reductive dechlorination. As mentioned previously, parent compounds (i.e., 1,1,1-TCA and PCE) can be degraded biologically into daughter products (1,1-DCA, CA, TCE, cis-DCE and VC). Four lines of evidence are presented in this section to demonstrate that reductive dechlorination is occurring.

B1.4.2.1 Daughter Products and Time Series Graphs

The presence of the daughter products at the Property indicates that biological degradation is occurring. Additionally, time series figures for monitoring well MW-5 (Figures B-5 and B-6) show the decrease of parent products and subsequent increase in daughter products over time. The figures clearly show that the peak for the parent compounds (TCE and 1,1,1-TCA) appears first followed by the next degradation parameters (cis-DCE and 1,1-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.)

B1.4.2.2 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 Property. 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-2 shows the results of this screening at the Property 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 up-gradient well (MW-8) and down-gradient 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 dechlorination is occurring (see Table 4 of the First Progress Report; EPS, 2012).

B1.4.2.3 Microbial Testing

Tables B-3 and B-4 show the results of microbial testing from two different laboratories. Microbe Inotech Laboratories performed the first type of testing, which was based on doing anaerobic (Table B-3) and aerobic (Table B-4) 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 1,1,1-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 1,1,1-TCA and TCE. Interestingly, the aerobic assay shows that the microorganisms in MW-5 also grow very well on 1,1,1-TCA or TCE. This indicates the potential for multiple types of mechanisms to occur at the Property. This testing shows that degradation of 1,1,1-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 1,1,1-TCA to CA. Thus, the presence of these species indicates that reductive dechlorination of PCE/TCE and 1,1,1-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 cis-DCE. Vinyl chloride reductase is the gene responsible for reducing VC to ethene in multiple strains. Similarly, bvcA reductase is the gene responsible for VC reducing to ethene, but only for a specific strain (BAV1) of *Dehalococcoides spp*. The absence of VCreductase and bvcA reductase would indicate that VC would accumulate instead of further degrading to ethene. The results (Table B-3) 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 1,1,1-TCA to CA in both of these wells, but is much more likely in MW-5.

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

B1.4.2.4 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. Please refer to Appendix J of the VIRP for more information.

TABLES

Capitol Adhesives

Table B-1. Depth to Groundwater Measurements 2011-2014

		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-1R	8/23/2012	672.01	NM	3.78	668.23	
	2/4/2013			0.9	671.11	
	8/5/2013			2.32	669.69	
	11/10/2014			3.68	668.33	
MW-2	4/22/2011	675.33	675.51	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0	Artesian	0
	2/7/2012			0	Artesian	0
	8/23/2012			6.65	668.68	6.83
	2/4/2013			0	Artesian	0
	8/5/2013			3.28	672.05	3.46
	11/10/2014			5.95	669.38	6.13
MW-2D	4/22/2011	674.79	675.36	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			6.00	668.79	6.57
	2/7/2012			0	Artesian	0
	8/23/2012			6.04	668.75	6.61
	2/4/2013			0	Artesian	0
	8/5/2013			3	672.22	3
	11/10/2014			5.33	669.46	6
MW-3	4/22/2011	673.83	673.87	0	Artesian	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
	2/4/2013			0.98	672.85	1.02
	8/5/2013			2.58	671.25	2.62
	11/10/2014			4.32	669.51	4.36
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
	2/4/2013			0.75	673.12	1.02
	8/5/2013			2.73	671.14	3.00
	11/10/2014			4.91	668.96	5.18
MW-3B	8/24/2012	674.32	NM	5.29	669.03	
	2/4/2013			0.25	674.07	
	8/5/2013			2.45	671.87	

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Capitol Adhesives

Table B-1. Depth to Groundwater Measurements 2011-2014

		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-4	4/22/2011	671.38	671.85	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0	Artesian	0
	2/7/2012			0	Artesian	0
	8/23/2012	671.93 [1]		2.62	669.31	2.54
	2/4/2013			0	Artesian	0
	8/5/2013			0.23	671.7	0.15
	11/10/2014			2.85	669.08	2.77
MW-5	4/22/2011	670.88	670.13	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0	Artesian	0
	2/7/2012			0	Artesian	0
	8/23/2012			2.47	668.41	1.72
	2/4/2013			0	Artesian	0
	8/5/2013			0	670.52	0
	11/10/2014			2.26	668.62	2
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
	2/4/2013			2.93	671.99	3.29
	8/5/2013			4.31	670.61	4.67
	11/10/2014			6.12	668.80	6.48
MW-7	4/22/2011	675.63	674.71	0	Artesian	0
	4/29/2011			0.32	675.31	-0.60
	5/6/2011			0.87	674.76	-0.05
	2/7/2012			0	Artesian	0
	8/23/2012			6.79	668.84	5.87
	2/4/2013			0.25	675.38	-0.67
	8/5/2013			3.58	672.05	2.66
	11/10/2014			6.13	669.50	5.21
MW-8	4/22/2011	674.52	674.99	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0	Artesian	0
	2/7/2012			0	Artesian	0
	8/23/2012			5.82	668.70	6.29
	2/4/2013			0	Artesian	0
	8/5/2013			2	672.23	3
	11/10/2014			5.07	669.45	6

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Capitol Adhesives

Table B-1. Depth to Groundwater Measurements 2011-2014

		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-9	4/22/2011	675.44	675.80	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0.51	674.93	0.87
	2/7/2012			0	Artesian	0
	8/23/2012			6.48	668.96	6.84
	2/4/2013			0	Artesian	0
	8/5/2013			3	672.39	3
	11/10/2014			5.83	669.61	6
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			6.33	669.21	6.49
	2/4/2013			0.96	674.58	1.12
	8/5/2013			3	672.23	3
	11/10/2014			5.45	670.09	5.61
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			--	Artesian	
	2/4/2013			2.18	673.13	2.67
	8/5/2013			4	671.31	4
	11/10/2014			6.20	669.11	6.69
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
	2/4/2013			3.51	672.25	3.51
	8/5/2013			4.85	670.91	4.85
	11/10/2014			6.69	669.07	6.69
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
	2/4/2013			2.35	674.35	2.71
	8/5/2013			5.65	671.05	6.01
	11/10/2014			8.05	668.65	8.41

Capitol Adhesives

Table B-1. Depth to Groundwater Measurements 2011-2014

		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-14	4/22/2011	673.05	673.36	0	Artesian	0
	4/29/2011			0.45	672.60	0.76
	5/6/2011			0.75	672.30	1.06
	2/7/2012			0	Artesian	0
	8/23/2012			5.00	668.05	5.31
	2/4/2013			0.25	672.80	0.56
	8/5/2013			2.71	670.34	3.02
	11/10/2014			4.85	668.20	5.16
MW-15	4/22/2011	670.91	671.33	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0	Artesian	0
	2/7/2012			0	Artesian	0
	8/23/2012			3.07	667.84	3.49
	2/4/2013			0	Artesian	0
	8/5/2013			1.34	669.57	1.76
	11/10/2014			2.92	667.99	3.34
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
	2/4/2013			0.25	669.45	0.79
	8/5/2013			2.07	667.63	2.61
	11/10/2014			2.64	667.06	3.18
MW-17	4/22/2011	676.26	NM	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			--	Artesian	
	2/4/2013			1.24	675.02	
	8/5/2013			3.29	672.97	
	11/10/2014			6	670.63	

NM - not measured

1) Top of casing re-surveyed after the well was repaired.

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Table B-2. Anaerobic Biodegradation Preliminary Screening

Indicator Parameter	Criterion	Scoring Value	Plume				Sidegradient		Downgradient	Upgradient
			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								
pH	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
Alkalinity	> 2 x Bkg	1	181	160	233	915				126
Chloride	> 2 x Bkg	2	34	15	9.7	33				6.5
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			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

EPS

Capitol Adhesives

Table B-3. Anaerobic Microbial Testing Results (October, 2010)

	Test 1: Plate Couting					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)**	***Dehalococcoides spp.* (cells/mL)**	**tceA Reductase**	**vinyl chloride reductase**	**bva Reductase**	***Dehalobacter spp.***
Groundwater 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 Assay										
111-TCA		Excellent	Excellent	No Effect	Inhibited					
TCE		Excellent	Excellent	Inhibited	Good					

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

Table B-4. Aerobic Microbial Testing Results (October, 2010)

	Test 1: Plate 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)**
Groundwater Testing						
MW-3	100	95%	5%			
MW-3D	<10					
MW-5	250			98%	2%	
MW-4	70					100%
Endpoing Assay						
111-TCA		Minimal	Inhibited	Excellent	Excellent	Fair
TCE		No Effect	Inhibited	Excellent	Excellent	Minimal

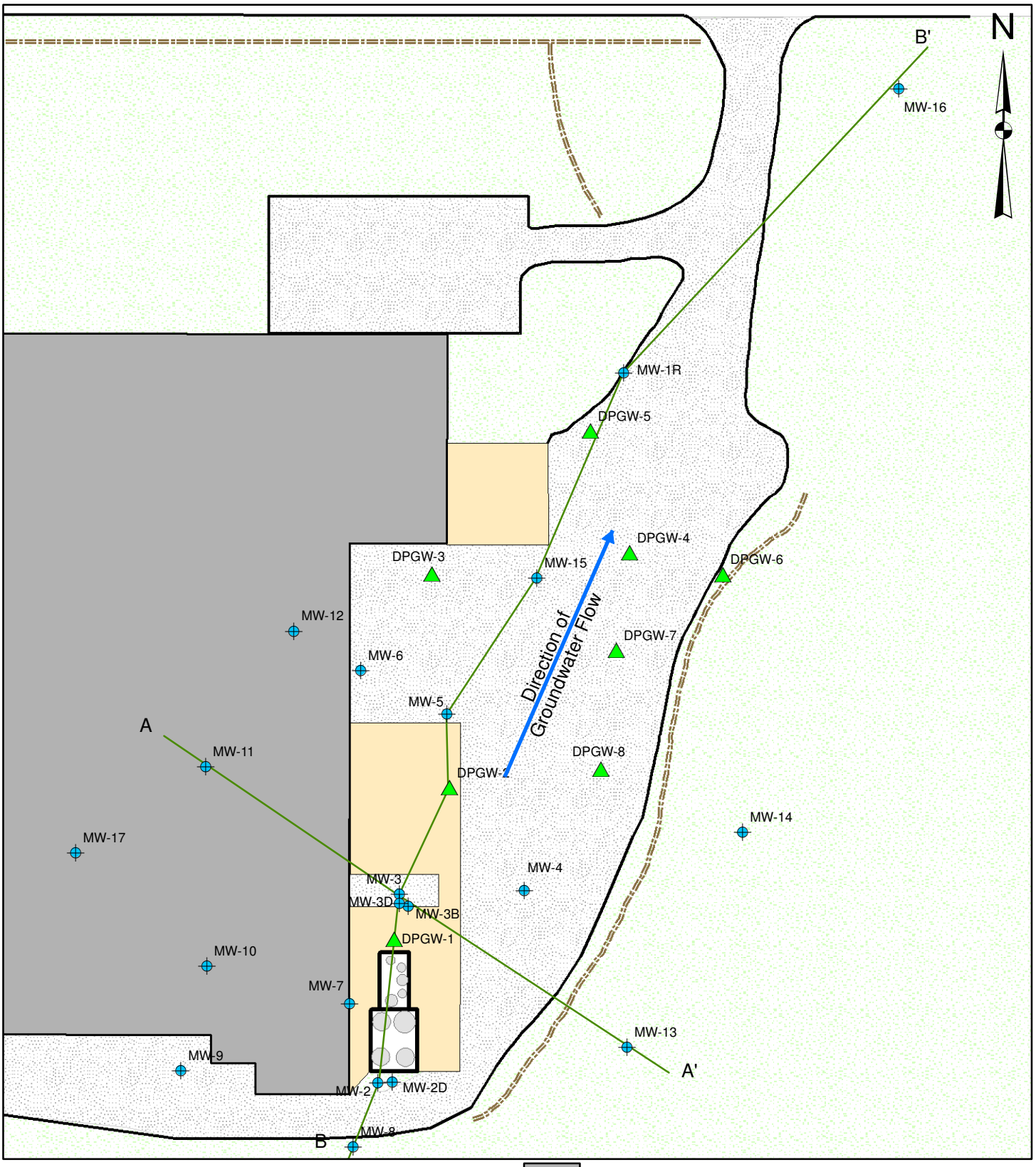
Good indication of biodegradation

Moderate indication of biodegradation

EPS

FIGURES

Capitol Adhesives
Cross-Section Location Map



EPS

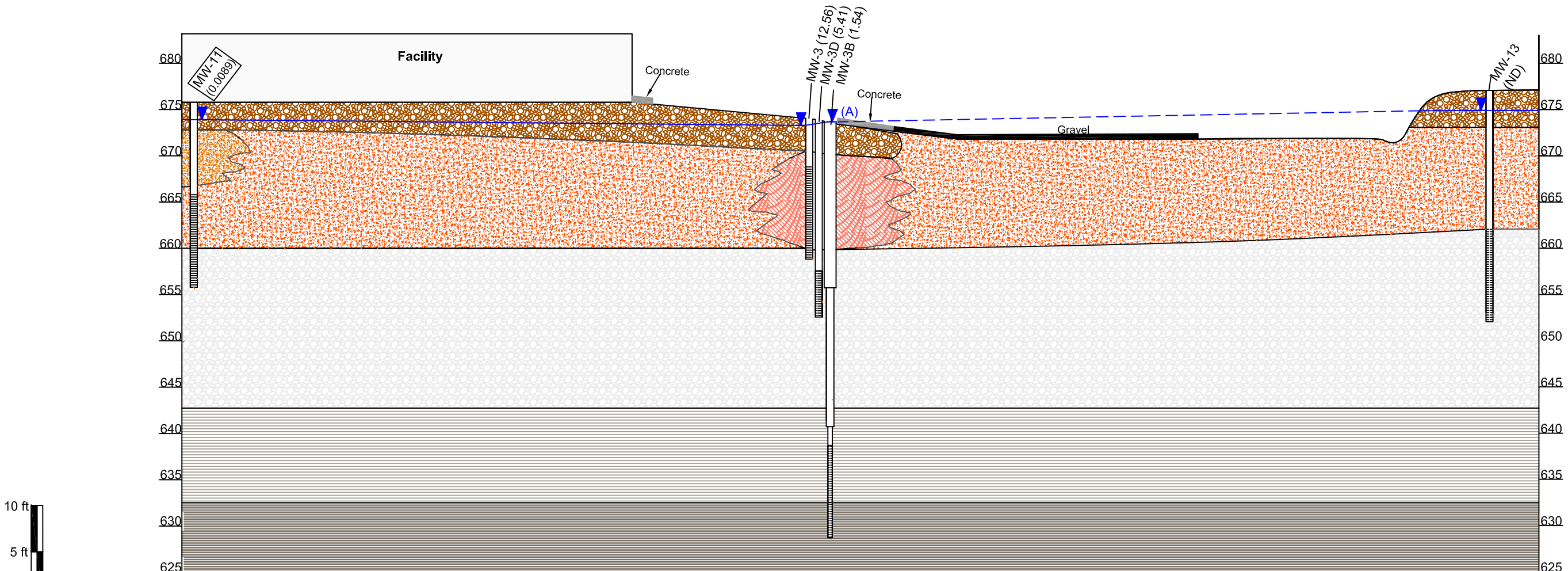
G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig B-1_X Section.mxd

Figure No. B-1

Lithological
Cross Section A-A'
(Profile)

West
A

East
A'



Legend

- Fill Material
- Weathered Shale
- Clayey Fine to Coarse Sand with Gravel
- Shale Rock
- Fine to Coarse Sandy Clay with Trace Gravel
- Shaly Clay
- Harder Rock (Possibly Limestone)

(9.8) Total chlorinated ethanes and ethenes (mg/L) in Feb. 2013; includes TCA, DCA, CA, PCE, TCE, DCE, VC;

▼ Historical "High" recorded water table

(A) Well was artesian at time of gauging

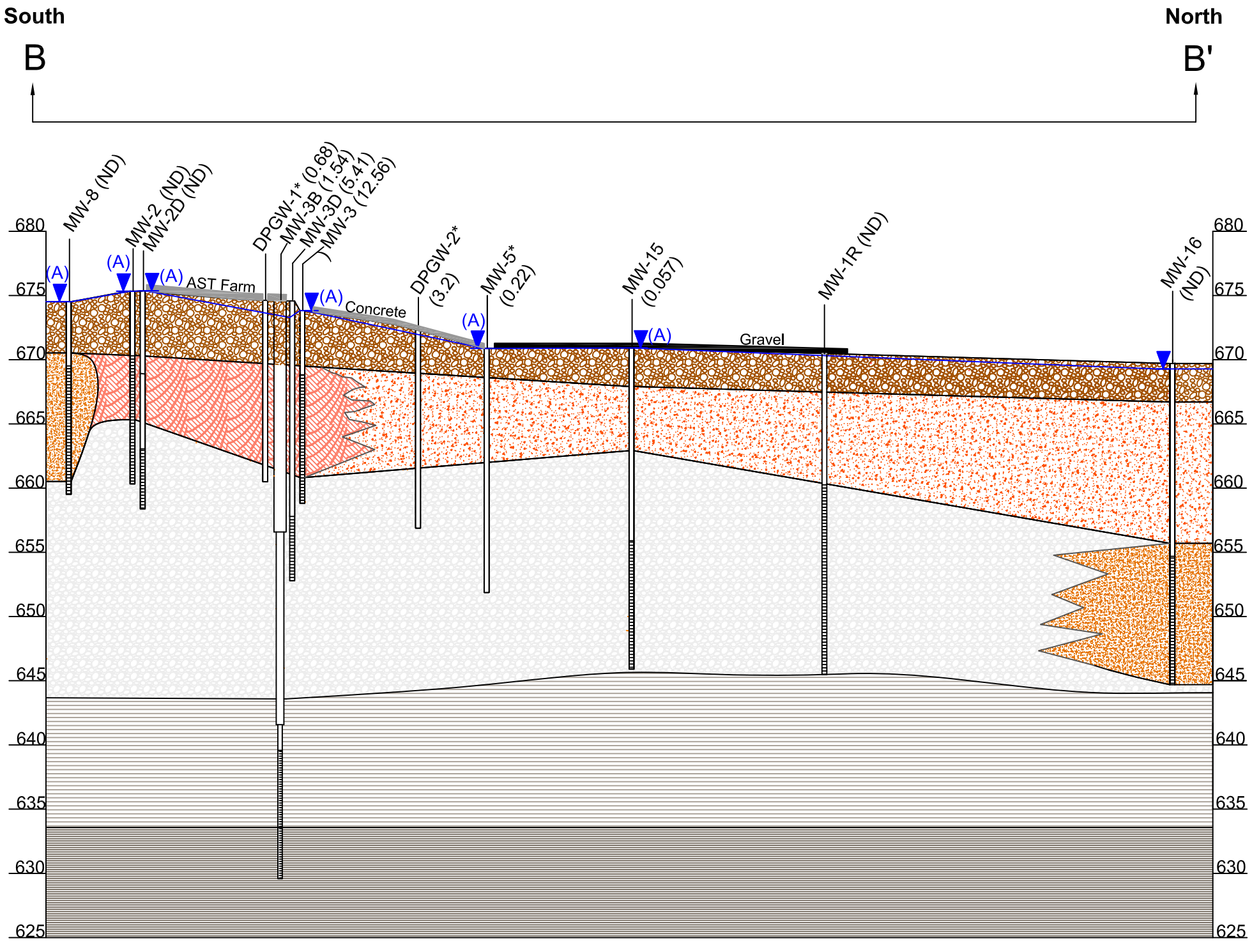
EPS
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338
Phone: (404) 315-9113

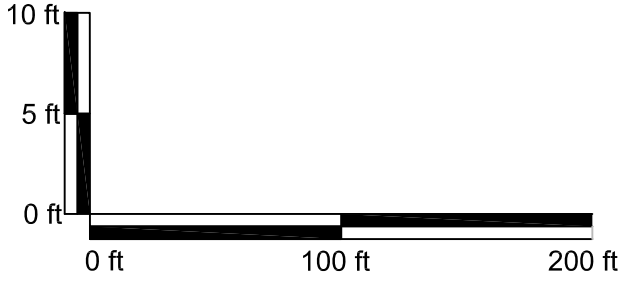
DES			DATE: October 2012
DRN	JD	10/10	Capitol Adhesives 300 Cross Plains Blvd. Dalton, GA 30721
CHK			
REV	FR	9/12	
APP			
PROJ MGR	TB	10/10	
OPER			

Lithological Cross-Section
A-A'

FIGURE
B-2

Lithological
Cross Section B-B'
(Profile)





Legend

- Fine to Coarse Sandy Clay with Trace Gravel
- Weathered Shale
- Clayey Fine to Coarse Sand with Gravel
- Fill Material
- Shale Rock
- Shaly Clay
- Harder Rock (Possilbly Limestone)
- Historical "High" recorded water table
- (A) Well was artesian at time of gauging
- (3.2) Total chlorinated ethanes and ethenes (mg/L) in Feb. 2013 (DPGW samples from 2009); includes TCA, DCA, CA, PCE, TCE, DCE, VC;
- * No boring log available

EPS
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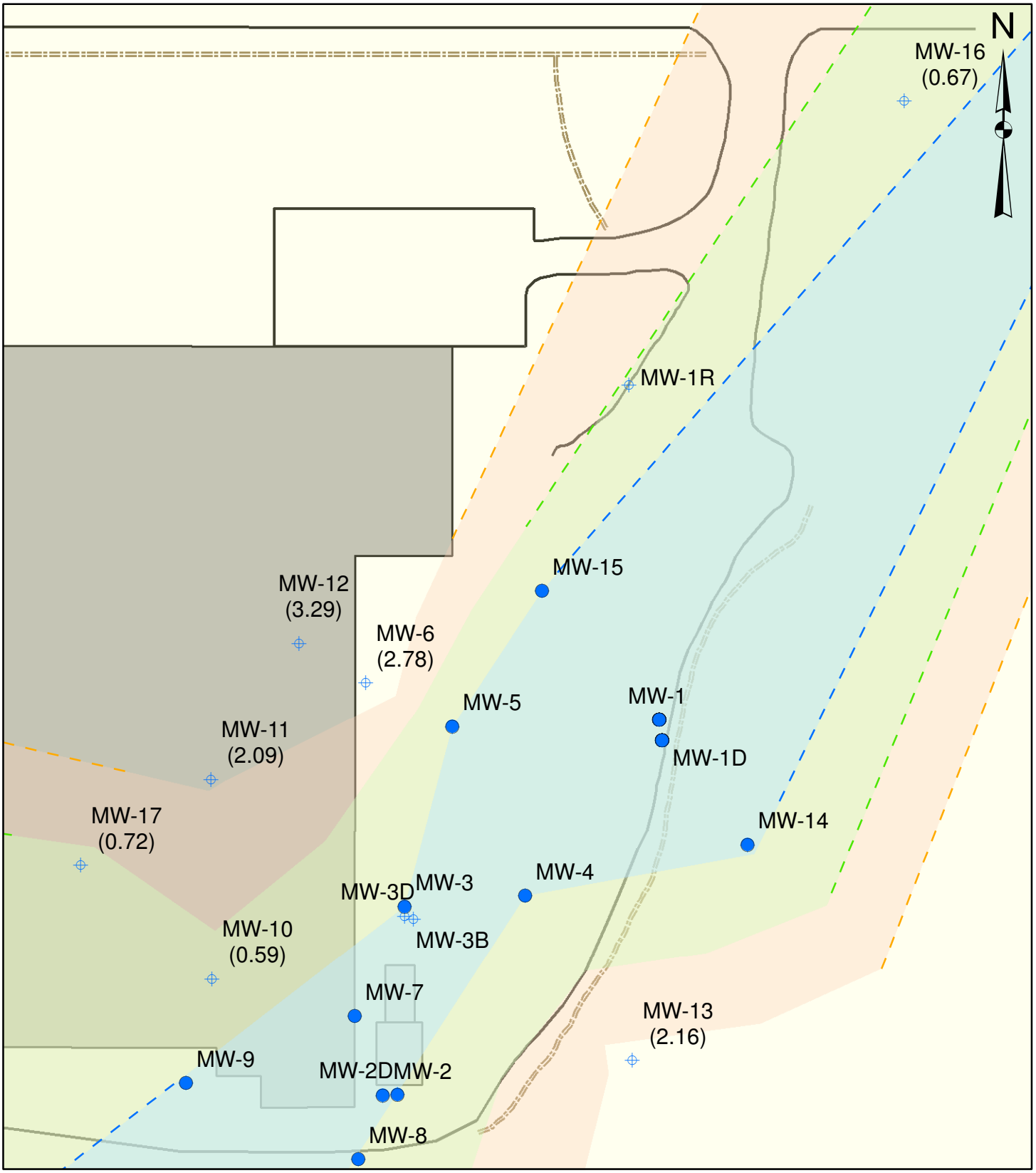
Suite 550
Atlanta, GA 30338
Phone: (404) 315-9113

DES			DATE: October 2012
DRN	JD	10/10	Capitol Adhesives 300 Cross Plains Blvd. Dalton, GA 30721
CHK			
REV	FR	5/11	
APP			
PROJ MGR	TB	10/10	
OPER			

Lithological Cross-Section
B-B'

FIGURE
B-3

Capitol Adhesives
Soil Zones Based on High Water Table Conditions



Legend

- Wells in Fully Saturated Zone
- Monitoring Wells (depth to groundwater in feet)
- Dashed Lines Where Inferred

Soil Zones from High Water Tables

- Fully Saturated Zone
- 0-1' Vadose Zone
- 1-2' Vadose Zone
- >2' Vadose Zone

EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Fig B-4_Artesian wells.mxd

Figure No. B-4

Figure B-5. MW-5 PCE Degradation Time Series

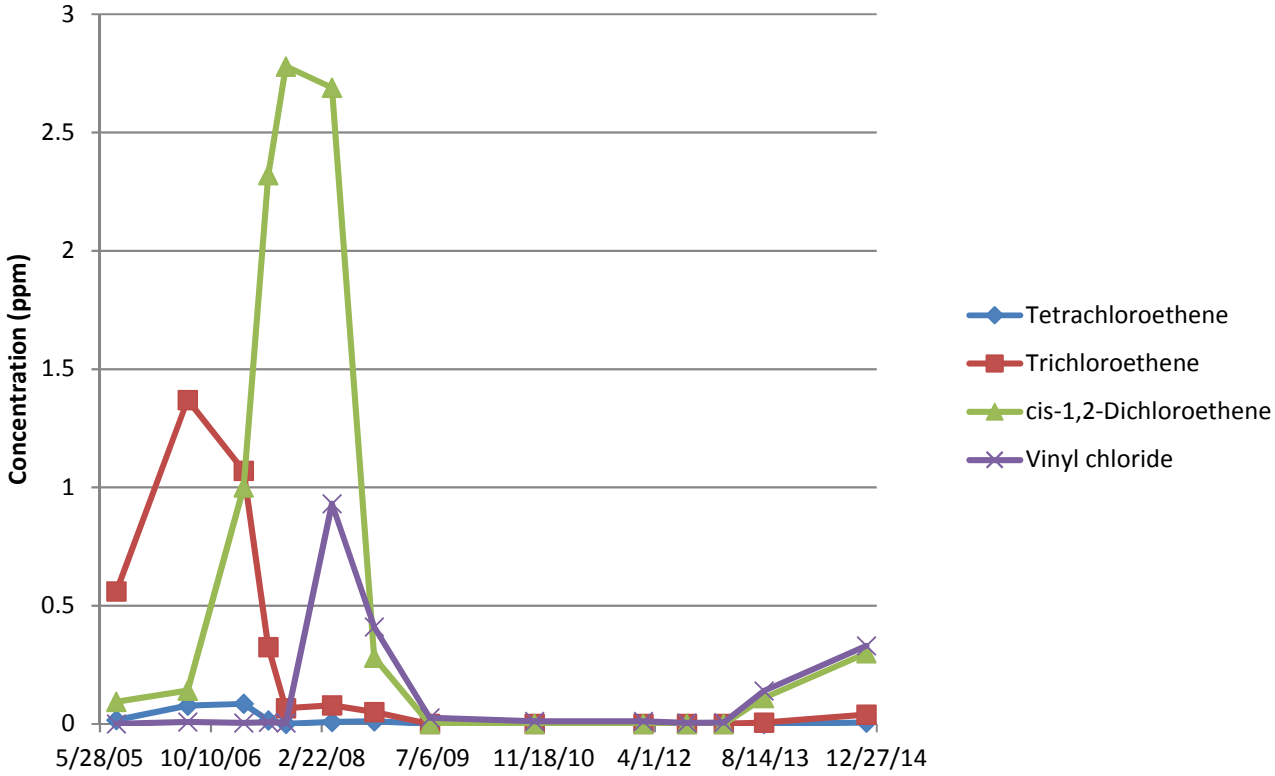
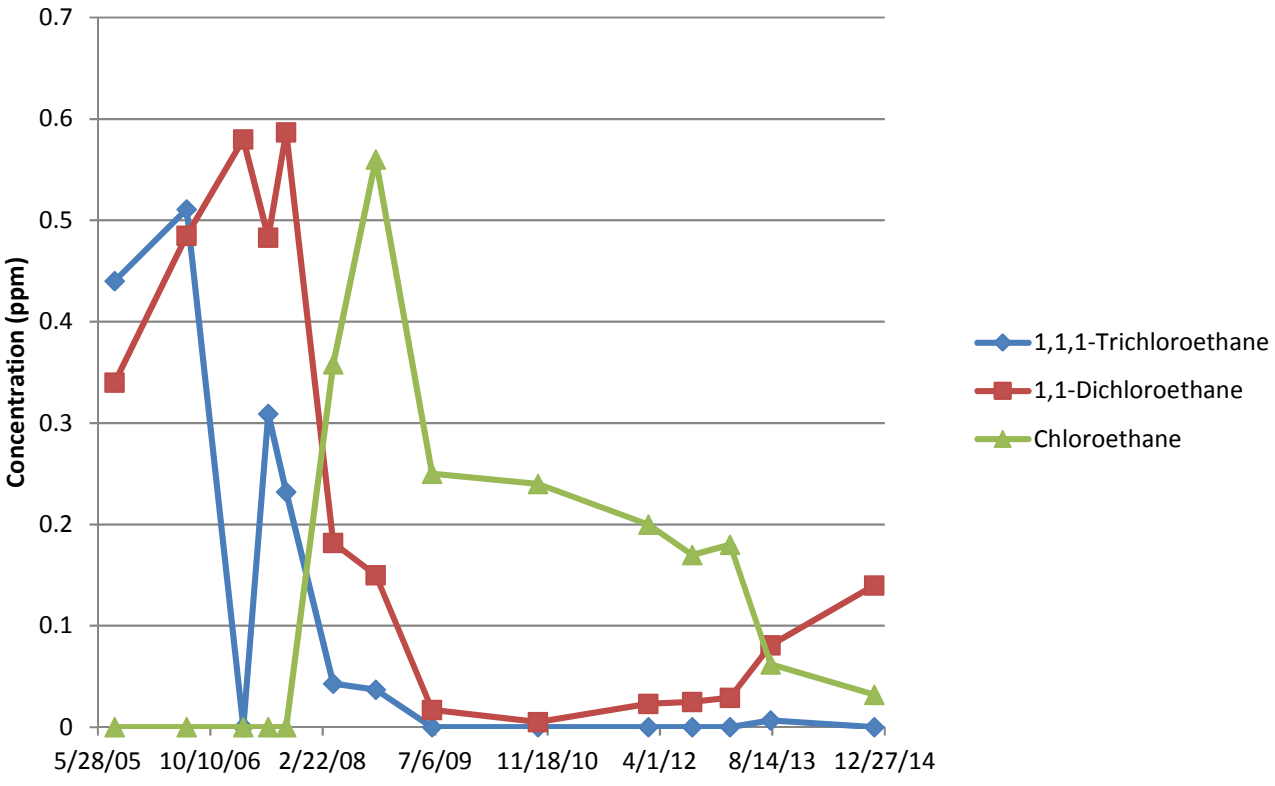


Figure B-6. MW-5 TCA Degradation Time Series



APPENDIX C

INDOOR AIR LABORATORY DATA REPORT

Mobile Geochemistry Inc.

05 June 2015

Ms. Timmerly Bullman
EPS, Inc.
1050 Crown Pointe Parkway, Suite 550
Atlanta, GA 30338

H&P Project: EPS051915-10 Rev
Client Project: Capitol Adhesives / Dalton, GA

Dear Ms. Timmerly Bullman:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 19-May-15 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, I certify that all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

Janis Villarreal

Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. is certified under the California ELAP, the National Environmental Laboratory Accreditation Conference (NELAC) and the Department of Defense Accreditation Programs.

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

EPS, Inc.	Project: EPS051915-10 Rev	
1050 Crown Pointe Parkway, Suite 550	Project Number: Capitol Adhesives / Dalton, GA	Reported:
Atlanta, GA 30338	Project Manager: Ms. Timmerly Bullman	05-Jun-15 08:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VIIA-01	E505066-01	Vapor	16-May-15	19-May-15
VIIA-02	E505066-02	Vapor	16-May-15	19-May-15
VIIA-03	E505066-03	Vapor	16-May-15	19-May-15
VIIA-04	E505066-04	Vapor	16-May-15	19-May-15
VIIA-05	E505066-05	Vapor	16-May-15	19-May-15

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Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
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Atlanta, GA 30338	Project Manager: Ms. Timmerly Bullman	05-Jun-15 08:55

DETECTIONS SUMMARY

Sample ID: **VIIA-01** Laboratory ID: **E505066-01**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **VIIA-02** Laboratory ID: **E505066-02**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **VIIA-03** Laboratory ID: **E505066-03**

Analyte	Result	Reporting Limit	Units	Method	Notes
1,2-Dichloroethane (EDC)	**1.4**	0.41	ug/m3	EPA TO-15	

Sample ID: **VIIA-04** Laboratory ID: **E505066-04**

Analyte	Result	Reporting Limit	Units	Method	Notes
1,2-Dichloroethane (EDC)	**0.83**	0.41	ug/m3	EPA TO-15	

Sample ID: **VIIA-05** Laboratory ID: **E505066-05**

Analyte	Result	Reporting Limit	Units	Method	Notes
Chloroform	**0.60**	0.49	ug/m3	EPA TO-15	
1,2-Dichloroethane (EDC)	**0.97**	0.82	ug/m3	EPA TO-15	

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Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

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1050 Crown Pointe Parkway, Suite 550	Project Number: Capitol Adhesives / Dalton, GA	Reported:
Atlanta, GA 30338	Project Manager: Ms. Timmerly Bullman	05-Jun-15 08:55

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VIIA-01 (E505066-01) Vapor Sampled: 16-May-15 Received: 19-May-15									
Vinyl chloride	ND	0.13	ug/m3	1	EE51908	19-May-15	19-May-15	EPA TO-15	
1,1-Dichloroethene	ND	0.40	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	0.77	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.41	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Chloroform	ND	0.25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.55	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.41	"	"	"	"	"	"	
Trichloroethene	ND	0.55	"	"	"	"	"	"	
Tetrachloroethene	ND	0.69	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*97.0 %*		*76-134*	"	"	"	"	
Surrogate: Toluene-d8		*106 %*		*78-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.8 %*		*77-127*	"	"	"	"	
VIIA-02 (E505066-02) Vapor Sampled: 16-May-15 Received: 19-May-15									
Vinyl chloride	ND	0.13	ug/m3	1	EE51908	19-May-15	19-May-15	EPA TO-15	
1,1-Dichloroethene	ND	0.40	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	0.77	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.41	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Chloroform	ND	0.25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.55	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.41	"	"	"	"	"	"	
Trichloroethene	ND	0.55	"	"	"	"	"	"	
Tetrachloroethene	ND	0.69	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*102 %*		*76-134*	"	"	"	"	
Surrogate: Toluene-d8		*100 %*		*78-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89.2 %*		*77-127*	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
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Atlanta, GA 30338	Project Manager: Ms. Timmerly Bullman	05-Jun-15 08:55

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VIIA-03 (E505066-03) Vapor Sampled: 16-May-15 Received: 19-May-15									
Vinyl chloride	ND	0.13	ug/m3	1	EE51908	19-May-15	19-May-15	EPA TO-15	
1,1-Dichloroethene	ND	0.40	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	0.77	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.41	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Chloroform	ND	0.25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.55	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	**1.4**	0.41	"	"	"	"	"	"	
Trichloroethene	ND	0.55	"	"	"	"	"	"	
Tetrachloroethene	ND	0.69	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*103 %*		*76-134*	"	"	"	"	
Surrogate: Toluene-d8		*104 %*		*78-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87.2 %*		*77-127*	"	"	"	"	
VIIA-04 (E505066-04) Vapor Sampled: 16-May-15 Received: 19-May-15									
Vinyl chloride	ND	0.13	ug/m3	1	EE51908	19-May-15	19-May-15	EPA TO-15	
1,1-Dichloroethene	ND	0.40	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	0.77	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.41	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Chloroform	ND	0.25	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.55	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	**0.83**	0.41	"	"	"	"	"	"	
Trichloroethene	ND	0.55	"	"	"	"	"	"	
Tetrachloroethene	ND	0.69	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*		*76-134*	"	"	"	"	
Surrogate: Toluene-d8		*102 %*		*78-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93.6 %*		*77-127*	"	"	"	"	

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Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

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1050 Crown Pointe Parkway, Suite 550	Project Number: Capitol Adhesives / Dalton, GA	Reported:
Atlanta, GA 30338	Project Manager: Ms. Timmerly Bullman	05-Jun-15 08:55

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VIIA-05 (E505066-05) Vapor Sampled: 16-May-15 Received: 19-May-15									
Vinyl chloride	ND	0.26	ug/m3	2	EE51908	19-May-15	19-May-15	EPA TO-15	
1,1-Dichloroethene	ND	0.80	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	1.5	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.80	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.82	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.80	"	"	"	"	"	"	
Chloroform	**0.60**	0.49	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.1	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	**0.97**	0.82	"	"	"	"	"	"	
Trichloroethene	ND	1.1	"	"	"	"	"	"	
Tetrachloroethene	ND	1.4	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*		*76-134*	"	"	"	"	
Surrogate: Toluene-d8		*104 %*		*78-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*91.3 %*		*77-127*	"	"	"	"	

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Geochemistry Inc.

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760-804-9678 Phone
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1050 Crown Pointe Parkway, Suite 550	Project Number: Capitol Adhesives / Dalton, GA	Reported:
Atlanta, GA 30338	Project Manager: Ms. Timmerly Bullman	05-Jun-15 08:55

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE51908 - TO-15										
Blank (EE51908-BLK1)				Prepared & Analyzed: 19-May-15						
Vinyl chloride	ND	0.13	ug/m3							
1,1-Dichloroethene	ND	0.40	"							
1,1,2-Trichlorotrifluoroethane (F113)	ND	0.77	"							
trans-1,2-Dichloroethene	ND	0.40	"							
1,1-Dichloroethane	ND	0.41	"							
cis-1,2-Dichloroethene	ND	0.40	"							
Chloroform	ND	0.25	"							
1,1,1-Trichloroethane	ND	0.55	"							
1,2-Dichloroethane (EDC)	ND	0.41	"							
Trichloroethene	ND	0.55	"							
Tetrachloroethene	ND	0.69	"							
Surrogate: 1,2-Dichloroethane-d4	*41.6*		*"*	*42.9*		*97.0*	*76-134*			
Surrogate: Toluene-d8	*41.8*		*"*	*41.4*		*101*	*78-125*			
Surrogate: 4-Bromofluorobenzene	*65.3*		*"*	*72.9*		*89.6*	*77-127*			
LCS (EE51908-BS1)				Prepared & Analyzed: 19-May-15						
Vinyl chloride	9.7	0.13	ug/m3	10.4		93.5	70-130			
1,1-Dichloroethene	17	0.40	"	16.2		102	70-130			
1,1,2-Trichlorotrifluoroethane (F113)	32	0.77	"	31.0		104	70-130			
trans-1,2-Dichloroethene	16	0.40	"	16.2		96.9	70-130			
1,1-Dichloroethane	17	0.41	"	16.5		101	70-130			
cis-1,2-Dichloroethene	18	0.40	"	16.0		110	70-130			
Chloroform	21	0.25	"	19.8		104	70-130			
1,1,1-Trichloroethane	22	0.55	"	22.2		98.5	70-130			
1,2-Dichloroethane (EDC)	16	0.41	"	16.5		96.1	70-130			
Trichloroethene	24	0.55	"	21.9		108	70-130			
Tetrachloroethene	30	0.69	"	27.6		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	*42.9*		*"*	*42.9*		*100*	*70-130*			
Surrogate: Toluene-d8	*41.4*		*"*	*41.4*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*70.7*		*"*	*72.9*		*97.0*	*70-130*			

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
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1050 Crown Pointe Parkway, Suite 550	Project Number: Capitol Adhesives / Dalton, GA	Reported:
Atlanta, GA 30338	Project Manager: Ms. Timmerly Bullman	05-Jun-15 08:55

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE51908 - TO-15										
LCS Dup (EE51908-BSD1)				Prepared & Analyzed: 19-May-15						
Vinyl chloride	9.9	0.13	ug/m3	10.4		95.4	70-130	2.06	25	
1,1-Dichloroethene	16	0.40	"	16.2		102	70-130	0.341	25	
1,1,2-Trichlorotrifluoroethane (F113)	32	0.77	"	31.0		103	70-130	0.913	25	
trans-1,2-Dichloroethene	15	0.40	"	16.2		95.1	70-130	1.95	25	
1,1-Dichloroethane	17	0.41	"	16.5		100	70-130	0.594	25	
cis-1,2-Dichloroethene	17	0.40	"	16.0		108	70-130	1.75	25	
Chloroform	20	0.25	"	19.8		101	70-130	2.38	25	
1,1,1-Trichloroethane	21	0.55	"	22.2		96.4	70-130	2.21	25	
1,2-Dichloroethane (EDC)	16	0.41	"	16.5		96.1	70-130	0.0260	25	
Trichloroethene	24	0.55	"	21.9		107	70-130	0.784	25	
Tetrachloroethene	29	0.69	"	27.6		107	70-130	1.41	25	
Surrogate: 1,2-Dichloroethane-d4	*42.4*		*"*	*42.9*		*98.9*	*70-130*			
Surrogate: Toluene-d8	*41.8*		*"*	*41.4*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*71.1*		*"*	*72.9*		*97.5*	*70-130*			

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

EPS, Inc.	Project: EPS051915-10 Rev	
1050 Crown Pointe Parkway, Suite 550	Project Number: Capitol Adhesives / Dalton, GA	Reported:
Atlanta, GA 30338	Project Manager: Ms. Timmerly Bullman	05-Jun-15 08:55

Notes and Definitions

LCC	Leak Check Compound
ND	Analyte NOT DETECTED at or above the reporting limit
MDL	Method Detection Limit
%REC	Percent Recovery
RPD	Relative Percent Difference

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP and the ISO 17025 programs, certification number L11-175.

H&P is approved by the State of Arizona as an Environmental Testing Laboratory and Mobile Laboratory, certification numbers AZM758 and AZ0779.

H&P is approved by the State of California as an Environmental Laboratory and Mobile Laboratory in conformance with the Environmental Laboratory Accreditation Program (ELAP) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste, certification numbers 2740, 2741, 2743, 2744, 2745, 2754 & 2930.

H&P is approved by the State of Florida Department of Health under the National Environmental Laboratory Accreditation Conference (NELAC) certification number E871100.

The complete list of stationary and mobile laboratory certifications along with the fields of testing (FOTs) and analyte lists are available at www.handpmg.com/about/certifications.

H&P Mobile Geochemistry, Inc.
2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com
P 760.804.9678 F 760.804.9159

VAPOR / AIR Chain of Custody

DATE: 5-18-15
Page 1 of 1

Lab Client and Project Information

Lab Client/Consultant: EPS, Inc.
Lab Client Project Manager: Timmerly Bullman
Lab Client Address: 1050 Crown Pointe Pkwy. Ste. 550
Lab Client City, State, Zip: Atlanta, GA 30338
Phone Number: (404) 315-9113

Project Name / #: Capitol Adhesives
Project Location: Dalton, GA
Report E-Mail(s): tbullman@envplanning.com
qwilliams@envplanning.com
(Aaron Williams) Per Jeff Dennis KB 5/19/15

Sample Receipt (Lab Use Only)

Date Rec'd: 5/19/15
Control #: 150360.01
H&P Project # EPS051915-10
Lab Work Order # E505066
Sample Intact: ☑ Yes ☐ No ☐ See Notes Below
Receipt Gauge ID: 1076084
Temp: 21.6°
Outside Lab:
Receipt Notes/Tracking #: 7806 7022 3430
7806 7021 6243
Lab PM Initials: KB

Reporting Requirements

☒ Standard Report ☐ Level III ☐ Level IV
KB 5/19/15
☒ Excel EDD ☐ Other EDD:
☐ CA Geotracker Global ID:

Turnaround Time

~~☒ 5-7 day Stnd~~ ☐ 24-Hr Rush
☐ 3-day Rush ☐ Mobile Lab
KB 5/19/15 Per Jeff
☒ 48-Hr Rush ☐ Other:

Sampler Information

Sampler(s): Jeff Dennis
Signature:
Date: 5-18-15

Additional Instructions to Laboratory:

☒ Check if Project Analyte List ~~is Attached~~ → only Report PCE, TCE, vinyl Chloride 5/22/15 Additional analytes requested - See attached
* Preferred VOC units (please choose one):
☐ µg/L ☐ µg/m³ ☐ ppbv ☐ ppmv
Note: Samples in 2 shipments 5/22/15

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa or Tedlar or Tube	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List ☐ 8260SV ☐ TO-15	VOCs Short List / Project List ☐ 8260SV ☒ TO-15	Oxygenates ☐ 8260SV ☐ TO-15	Naphthalene ☐ 8260SV ☐ TO-15 ☐ TO-17m	TPHv as Gas ☐ 8260SV/m ☐ TO-15m	TPHv as Diesel (sorbent tube) ☐ TO-17m	Aromatic/Aliphatic Fractions ☐ 8260SV/m ☐ TO-15m	Leak Check Compound ☐ DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2			
VIIA-01		05/16/15	1559	AA	6L	317	-8.35		X											
VIIA-02		05/16/15	1557	IA	6L	287	-5.77		X											
VIIA-03		05/16/15	1555	IA	6L	342	-3.61		X											
VIIA-04		05/16/15	1556	IA	6L	291	-3.48		X											
VIIA-05		05/16/15	1553	IA	6L	448	-13.30		X											

Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Jeff Dennis	EPS, Inc.	5-18-15	900		H&P	5/19/15	9:00
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

*Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back

Lisa Eminhizer

From: Kim Boyd <kim.boyd@handpmg.com>
Sent: Tuesday, June 02, 2015 3:50 PM
To: 'Timmerly Bullman'
Cc: 'Lisa Eminhizer'
Subject: RE: Capitol Adhesives Report

Hi Timmerly,

I will have Lisa revise the report to include these 8 compounds.

Kim - H&P
P: 760.804.9678

From: Timmerly Bullman [mailto:tbullman@envplanning.com]
Sent: Tuesday, June 02, 2015 3:38 PM
To: kim.boyd@handpmg.com
Subject: RE: Capitol Adhesives Report

Thank you Kim. At a minimum we would need:

1,1,1-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
1,2-Dichloroethane
Chloroform
cis-1,2-Dichloroethene
Freon-113
trans-1,2-Dichloroethene

The most important ones are in red.
Is there an additional cost for doing just the ones above...or the entire list?

Timmerly Bullman, P.E., Ph.D.
Senior Enviromental Engineer
EPS

The business of the environment.[sm]

1050 Crown Pointe Parkway, Suite 550
Atlanta, GA 30338
Direct: (678) 336-8545
Phone: (404) 315-9113
Fax: (404) 315-8509
tbullman@envplanning.com
www.envplanning.com

APPENDIX D

VISL CALCULATOR

OSWER VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.3.1, May 2014 RSLs

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Commercial	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-05	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (°C)	Tgw	25	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for groundwater target concentrations

	CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 10E-06 or THQ = 1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 10E-06 or THQ = 1	Target Ground Water Conc. @ TCR = 10E-06 or THQ = 1	Is Target Ground Water Conc. < MCL?	Temperature for Groundwater Vapor Conc.	Lower Explosive Limit**	LEL Source	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator	Target Indoor Air Conc. for Carcinogens @ TCR = 10E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 1
			Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c;Cia,nc)		Csg	Cgw	Cgw<MCL?	Tgw or 25	LEL		IUR		RfC		I	Cia,c	Cia,nc
			Yes/No	Yes/No	(ug/m^3)	C/NC	(ug/m^3)	(ug/L)	Yes/No (MCL ug/L)	C	(% by vol)		(ug/m^3)$^{-1}$		(mg/m^3)			(ug/m^3)	(ug/m^3)
	67-66-3	Chloroform	Yes	Yes	5.3E+00	C	5.3E+01	3.6E+01	Yes (80)	25			2.30E-05	I	9.80E-02	A		5.3E+00	4.3E+02
x	75-34-3	Dichloroethane, 1,1-	Yes	Yes	7.7E+01	C	7.7E+02	3.3E+02	--	25	5.4	N	1.60E-06	CA				7.7E+01	
	107-06-2	Dichloroethane, 1,2-	Yes	Yes	4.7E+00	C	4.7E+01	9.8E+01	No (5)	25	6.2	N	2.60E-05	I	7.00E-03	P		4.7E+00	3.1E+01
x	75-35-4	Dichloroethylene, 1,1-	Yes	Yes	8.8E+02	NC	8.8E+03	8.2E+02	No (7)	25	6.5	N			2.00E-01	I			8.8E+02
x	127-18-4	Tetrachloroethylene	Yes	Yes	1.8E+02	NC	1.8E+03	2.4E+02	No (5)	25			2.60E-07	I	4.00E-02	I		4.7E+02	1.8E+02
	76-13-1	Trichloro-1,2,2-trifluoroethane, 1,1,2-	Yes	Yes	1.3E+05	NC	1.3E+06	6.1E+03	--	25					3.00E+01	H			1.3E+05
x	71-55-6	Trichloroethane, 1,1,1-	Yes	Yes	2.2E+04	NC	2.2E+05	3.1E+04	No (200)	25	7.5	N			5.00E+00	I			2.2E+04
x	79-01-6	Trichloroethylene	Yes	Yes	8.8E+00	NC	8.8E+01	2.2E+01	No (5)	25	8	N	see note	I	2.00E-03	I	TCE	3.0E+01	8.8E+00
x	75-01-4	Vinyl Chloride	Yes	Yes	2.8E+01	C	2.8E+02	2.5E+01	No (2)	25	3.6	N	4.40E-06	I	1.00E-01	I	VC	2.8E+01	4.4E+02

Notes:

(1) **Inhalation Pathway Exposure Parameters (RME):**

Exposure Scenario	Units	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell E5) Symbol	Selected Value
Averaging time for carcinogens	(yrs)	ATc_R	70	ATc_C	70	ATc	70
Averaging time for non-carcinogens	(yrs)	ATnc_R	26	ATnc_C	25	ATnc	25
Exposure duration	(yrs)	ED_R	26	ED_C	25	ED	25
Exposure frequency	(days/yr)	EF_R	350	EF_C	250	EF	250
Exposure time	(hr/day)	ET_R	24	ET_C	8	ET	8

(2) **Generic Attenuation Factors:**

Source Medium of Vapors	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell E5) Symbol	Selected Value
Groundwater (-)	AFgw_R	0.001	AFgw_C	0.001	AFgw	0.001
Sub-Slab and Exterior Soil Gas (-)	AFss_R	0.1	AFss_C	0.1	AFss	0.1

(3) **Formulas**

Cia, target = MIN(Cia,c; Cia,nc)
Cia,c (ug/m3) = TCR x ATc x (365 days/yr) x (24 hrs/day) / (ED x EF x ET x IUR)
Cia,nc (ug/m3) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RfC x (1000 ug/mg) / (ED x EF x ET)

(4) **Special Case Chemicals**

Trichloroethylene

	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell E5) Symbol	Selected Value
mIURTCE_R	1.00E-06	mIURTCE_C	0.00E+00	mIURTCE	0.00E+00
IURTCE_R	3.10E-06	IURTCE_C	4.10E-06	IURTCE	4.10E-06

Mutagenic Chemicals — The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.

Age Cohort	Exposure Duration (years)	Age-dependent adjustment factor
0 - 2 years	2	10
2 - 6 years	4	3
6 - 16 years	10	3
16 - 26 years	10	1

Mutagenic-mode-of-action (MMOA) adjustment factor 25 — This factor is used in the equations for mutagenic chemicals.

Vinyl Chloride — See the Navigation Guide equation for Cia,c for vinyl chloride.

Notation:

NVT = Not sufficiently volatile and/or toxic to pose inhalation risk in selected exposure scenario for the indicated medium
C = Carcinogenic
NC = Non-carcinogenic
I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: http://www.epa.gov/iris/subst/index.html
P = PPRTV. EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Available online at: http://hhpprtv.ornl.gov/pprtv.shtml
A = Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Levels (MRLs). Available online at: http://www.atsdr.cdc.gov/mrls/index.html
CA = California Environmental Protection Agency/Office of Environmental Health Hazard Assessment assessments. Available online at:
H = HEAST. EPA Superfund Health Effects Assessment Summary Tables (HEAST) database. Available online at: http://epa-heast.ornl.gov/heast.shtml
S = See RSL User Guide, Section 5
X = PPRTV Appendix
E = The Engineering ToolBox. Available online at http://www.engineeringtoolbox.com/explosive-concentration-limits-d_423.html
N = Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH). Pocket Guide to Chemical Hazards. Available online at: http://www.cdc.gov/niosh/npg/default.html
M = Chemical-specific MSDS
Mut = Chemical acts according to the mutagenic-mode-of-action, special exposure parameters apply (see footnote (4) above).
VC = Special exposure equation for vinyl chloride applies (see Navigation Guide for equation).
TCE = Special mutagenic and non-mutagenic IURs for trichloroethylene apply (see footnote (4) above).
Yellow highlighting indicates site-specific parameters that may be edited by the user.
Blue highlighting indicates exposure factors that are based on Risk Assessment Guidance for Superfund (RAGS) or EPA vapor intrusion guidance, which generally should not be changed.
**Lower explosive limit is the minimum concentration of the compound in air (% by volume) that is needed for the gas to ignite and explode.

APPENDIX E

PHOTOLOG

Photo 1 *Area A facing south.*

Photo 2 *Area A facing east.*

Photo 3 *Area A facing south with fill material.*

Photo 4 *Area A facility facing southeast with concrete.*

Photo 5 *Area B facing north.*

Photo 6 *Area B facing south with fill material.*

Photo 7 *Area B facing west with concrete.*

Photo 8 *Area C facing west with concrete removed.*

Photo 9 *Area C with reactant added.*

Photo 10 *Area C with oxidant added.*

Photo 11 *Area C facing west with concrete.*

APPENDIX F

MANIFESTS

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

CRAIG BAKER		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**
Roger I. Dyer		10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) WARP Row OPR Truck Number David Holt 03	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

Driver's Signature	**Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 282929	Received By SM
Checked By	Date 10-10 14

Expires: 10-24-2014

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

Craig Baker		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**
Roger I Dyer		10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) ALPHA Services Truck Number 9 Dan Steed	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

Driver's Signature	**Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 282966	Received By CWB
Checked By	Date 10/10/2014

Expires: 10-24-2014

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

CRAIG BAKER		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**
Roger I Dyer		10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) Hwy Roll Off Truck Number David Holt 03	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

Driver's Signature **Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 282970	Received By SM
Checked By	Date 10-10-14

Expires: 10-24-2014

57280 in WT

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

Craig Baker		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**

Roger Dyer	Roger Dyer	10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) WARD ROLL-OFF Truck Number David Hoff 03	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

Driver's Signature	**Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 283156	Received By
Checked By	Date 10-13-14

Expires: 10-24-2014

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

Craig Baker		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**

Roger I. Dyer		10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) WARD ROLLOFF Truck Number David Holt 03	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

Driver's Signature	**Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 282997	Received By SM
Checked By	Date 10-10-14

Expires: 10-24-2014

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

Craig Baker		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**

Roger I Dyer		10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) Alpha Services Truck Number 9 David Teel	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

Driver's Signature	**Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 202999	Received By SM
Checked By	Date 10-10-14

Expires: 10-24-2014

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

CRAIG BAKER		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**
Roger L. Dyer		10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) WARD Roll OFF Truck Number David Holt 03	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

Driver's Signature	**Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 283014	Received By SM
Checked By	Date 10-10-14

Expires: 10-24-2014

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

Craig Baker		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**
Roger L. Dyer		10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) WARD Roll-off Truck Number David Holt 03	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

Driver's Signature **Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 283029	Received By SM
Checked By	Date 10-10-14

Expires: 10-24-2014

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

CRAIG BAKER		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**
Roger T. Dyer		10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) Ryan Fowlkes Truck Number 4 David Tee	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

	10-12-14
Drivers Signature	**Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 283166	Received By
Checked By	Date 10.13

Expires: 10-24-2014

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

CRAIG BAKER — 10/9/14
Generator Authorized Agent Name (Print) — **Signature** — **Date**

Roger F. Dyer — 10-10-14
Generator Personnel who Releases Load (Print) — **Signature** — **Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) WARD ROLL OFF Truck Number David Holt 03	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

Driver's Signature — **Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 283172	Received By TE
Checked By	Date 10-13-14

Expires: 10-24-2014

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

CRAIG BAKER		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**
Roger T. Dyer		10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) Alpha Services Truck Number 9 A.J.J Lee	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

	10-13-14
Driver's Signature	**Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 83189	Received By
Checked By	Date 10-13-14

Expires: 10-24-2014

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant) CEA, LLC	Technical Contact W.Craig Baker	
Street Address 1640 Republic Center, 633 Chestnut St.	Phone 423-755-0888	
City/Town Chattanooga	State TN	Zip Code 37450
Site Name Capital Adhesive	Address 300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste Excavated soil			
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

Craig Baker		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**

Roger T. Dyer		10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name SPUR Environmental Svc.	Driver Name (Print) Hydra Services Truck Number 9 David Fitz	
Street Address 2985 Gordy Pkwy.	Phone 404-274-7869	
City/Town Marietta	State GA	Zip Code 30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

	10-13-14
Driver's Signature	**Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility Old Dixie Sanitary Landfill (DWRSWMA)	Disposal Location Permit No: 155-047D(SL) Phase 6
Ticket Number 283004	Received By BS
Checked By	Date 10-13

Expires: 10-24-2014

Waste Code: 100
Account Code: Credit Card

RESTRICTED/SPECIAL WASTE MANIFEST FORM

Dalton-Whitfield Regional Solid Waste Management Authority
4189 Old Dixie Highway
Dalton, GA 30721
Phone: (706) 277-2545 Fax: (706) 277-2546

Part I – Generator Information

Generator Name (NOT Contractor or Consultant)	Technical Contact	
CEA, LLC	W.Craig Baker	
Street Address	Phone	
1640 Republic Center, 633 Chestnut St.	423-755-0888	
City/Town	State	Zip Code
Chattanooga	TN	37450
Site Name	Address	
Capital Adhesive	300 Cross Plains Blvd. - Dalton, GA 30721	

Waste Material Name / Description of Waste	Excavated soil		
Physical Description			
Color Gray to Tan	Odor None	QTY ~200 Tons	Container Roll-Off

I herby certify that the above referenced materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable State Law, have been accurately described, all known or suspected hazards have been disclosed, and have been pre-approved for disposal by the Dalton-Whitfield Regional Solid Waste Management Authority.

CRAIG BAKER		10/9/14
Generator Authorized Agent Name (Print)	**Signature**	**Date**

Roger T. Dyer		10-10-14
Generator Personnel who Releases Load (Print)	**Signature**	**Load Release Date**

Part II – Transporter Information

Transporter Name	Driver Name (Print) Alpha Services	
SPUR Environmental Svc.	Truck Number	
Street Address	Phone	
2985 Gordy Pkwy.	404-274-7869	
City/Town	State	Zip Code
Marietta	GA	30066

I herby acknowledge picking up the above referenced materials for transport from the generator site listed above and that this material has been transported without incident to the disposal facility referenced below.

Driver's Signature	**Delivery Date**

Part III – Disposal Facility Information (To be completed by landfill personnel)

Disposal Facility	Disposal Location
Old Dixie Sanitary Landfill (DWRSWMA)	Permit No: 155-047D(SL) Phase 6
Ticket Number 283040	Received By
Checked By	Date 10-14-14

Expires: 10-24-2014

EPS

APPENDIX G

BIOCHLOR Input/Output

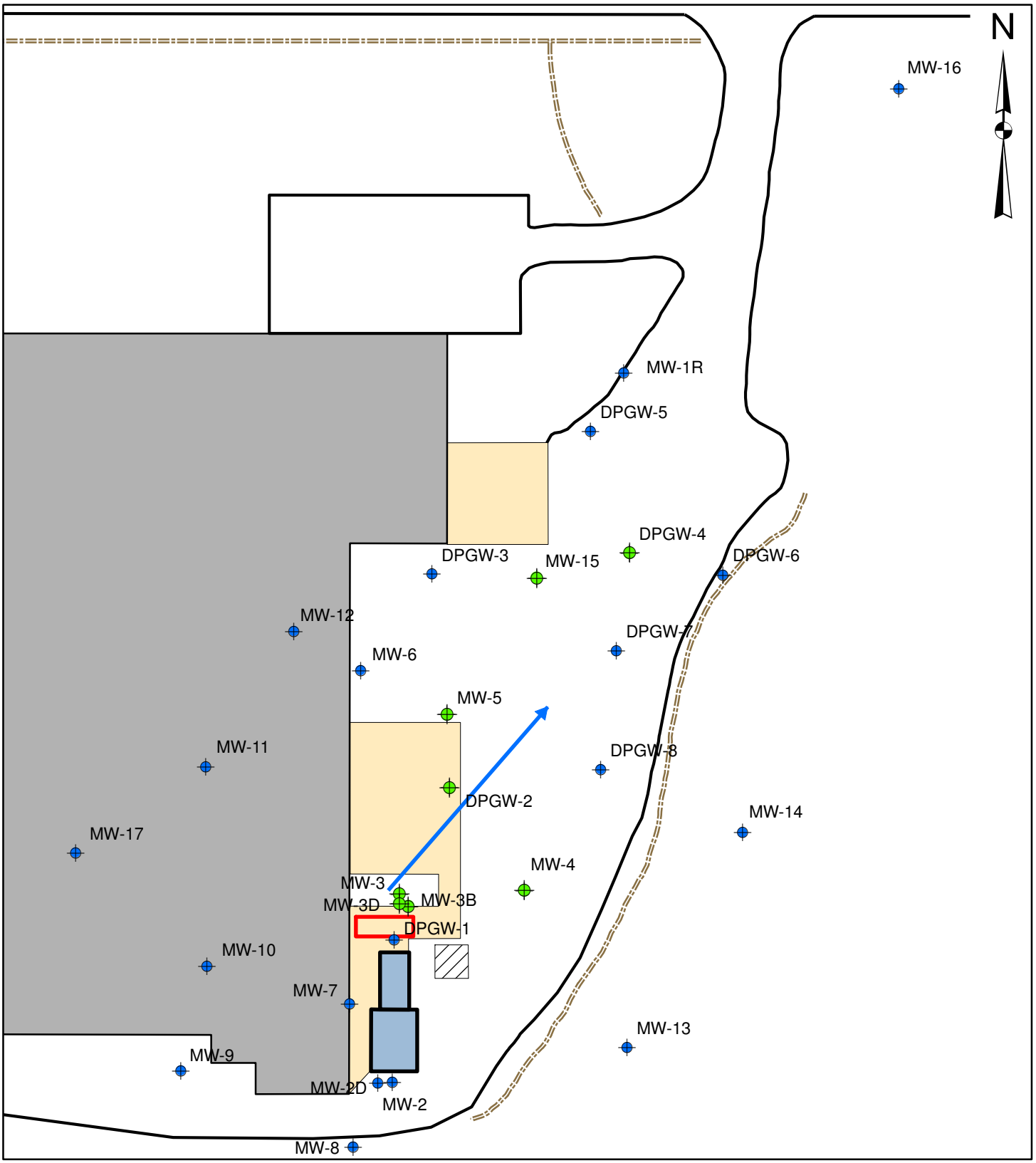
Table 1. Input Parameters for the BIOCHLOR Model

Mechanism	Parameter	Value	Units	Basis
Advection	Hydraulic Conductivity	1.93E-03	cm/s	Average hydraulic conductivity presented in the CAP (WRS, 2006)
	Hydraulic Gradient	0.0125	ft/ft	More conservative hydraulic gradient presented in the CAP (WRS, 2006)
	Effective Porosity	0.3	unitless	Typical value for lithological formation
Dispersion	Alpha X	21	ft/ft	Assume 10% of plume length (approx 210 ft)
	Alpha Y/Alpha X	0.1	unitless	EPA model default
	Alpha Z/Alpha X	5.00E-02	unitless	EPA model default
Adsorption	Soil Bulk Density	1.7	kg/L	EPA model default
	Fraction Organic Carbon	4.00E-03	unitless	Typical value (EPA, 2000)
	Organic Carbon Partitioning Coefficients			
	TCA	426	L/kg	Assumed
	DCA	130	L/kg	Assumed
	CA	125	L/kg	Assumed
	PCE	426	L/kg	EPA model default
	TCE	130	L/kg	EPA model default
	DCE	125	L/kg	EPA model default
	VC	30	L/kg	EPA model default
	Ethenes	302	L/kg	EPA model default
	Retardation Factor	3.95		Calcualted based on above values
Biotransformation	1st Order Decay Coefficients			
	TCA->DCA	2.4	1/yr	Mean value from guidance (EPA, 2002)
	DCA->CA	1	1/yr	Between mean and max value in guidance (EPA, 2002)
	PCE->TCE	2.4	1/yr	Maximum value from guidance (EPA, 2002)
	TCE->DCE	3.2	1/yr	Maximum value from guidance (EPA, 2002)
	DCE->VC	8	1/yr	Between mean and max value in guidance (EPA, 2002)
	VC->Ethene	8.1	1/yr	Between mean and max value in guidance (EPA, 2002)
General	Simulation Time	varies	yr	Assuming the source began in 1995
	Modeled Area Width	150	ft	Assumptin
	Modeled Area Length	600	ft	Assumption
	Zone length	600	ft	Assuming one-zone
Source Contribution	Type	Continuous		Assumes continuous source concentrations throughout time
	Source Thickness in Saturated Zone	25	ft	Approximate thickness of aquifer
	Source Width	20	ft	Approximate width of spill area
	Source Concentrations			
	TCA	8.5	mg/L	Based on model calibration
	DCA	0.55	mg/L	Based on model calibration
	CA	0	mg/L	Based on model calibration
	PCE	4	mg/L	Based on model calibration
	TCE	10	mg/L	Based on model calibration
	DCE	0.01	mg/L	Based on model calibration
	VC	0.001	mg/L	Based on model calibration
Wells used in model and distance from source area:				
	MW-3D / MW-3B	14	ft	
	MW-3	15	ft	
	MW-4	53	ft	
	DPGW-2	82	ft	
	MW-5	118	ft	
	MW-15	208	ft	
	DPGW-4	242	ft	

EPA,2000: BIOCHLOR Natural Attenuation Decision Support System. User's Manual Version 1.0 USEPA. January 2000

EPA,2002: BIOCHLOR Natural Attenuation Decision Support System. User's Manual Addendum. USEPA. March 2002.

Capitol Adhesives
Wells Used for BIOCHLOR Model



Legend

- Groundwater Locations Used in Model
- Groundwater Locations
- Location of Spill

EPS

G:\River Associates\Capitol Adhesives\VRP Program\GIS\CSR\Biochlor.mxd

Figure No. 1

BIOCHLOR Natural Attenuation Decision Support System

Version 2.2
Excel 2000

Capitol Adhesives
Run Name

TYPE OF CHLORINATED SOLVENT: Ethenes ◉ Ethanes ○

1. ADVECTION

Seepage Velocity*	Vs	80.4	(ft/yr)
or			
Hydraulic Conductivity	K	1.9E-03	(cm/sec)
Hydraulic Gradient	i	0.0125	(ft/ft)
Effective Porosity	n	0.3	(-)

2. DISPERSION

Alpha x*	21	(ft)
(Alpha y) / (Alpha x)*	0.1	(-)
(Alpha z) / (Alpha x)*	5.E-02	(-)

Calc.

3. ADSORPTION

Retardation Factor* → R

or

Soil Bulk Density, rho	1.7	(kg/L)		
FractionOrganicCarbon, foc	4.0E-3	(-)		
Partition Coefficient	Koc			
PCE	426	(L/kg)	10.66	(-)
TCE	130	(L/kg)	3.95	(-)
DCE	125	(L/kg)	3.83	(-)
VC	30	(L/kg)	1.67	(-)
ETH	302	(L/kg)	7.85	(-)
Common R (used in model)* =			**3.95**	

4. BIOTRANSFORMATION

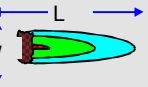
-1st Order Decay Coefficient*

	λ (1/yr)	half-life (yrs)	Yield
Zone 1			
PCE → TCE	2.400		0.79
TCE → DCE	3.200		0.74
DCE → VC	8.000		0.64
VC → ETH	8.100		0.45
Zone 2			
PCE → TCE	0.000		
TCE → DCE	0.000		
DCE → VC	0.000		
VC → ETH	0.000		

λ HELP

5. GENERAL

Simulation Time*	19	(yr)
Modeled Area Width*	150	(ft)
Modeled Area Length*	600	(ft)
Zone 1 Length*	600	(ft)
Zone 2 Length*	0	(ft)



Zone 2=

6. SOURCE DATA

TYPE: Continuous / Single Planar

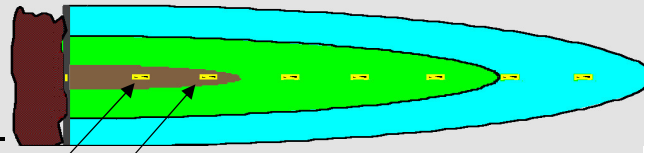
Source Options

Source Thickness in Sat. Zone* 25 (ft)

Width* (ft) Y1: 20

Conc. (mg/L)*	C1	k_s* (1/yr)
PCE	4.0	0
TCE	10.0	0
DCE	.01	0
VC	.001	0
ETH		0

Vertical Plane Source: Determine Source Well Location and Input Solvent Concentrations



View of Plume Looking Down

Observed Centerline Conc. at Monitoring Wells

7. FIELD DATA FOR COMPARISON

PCE Conc. (mg/L)	1.8	2.7			.006							
TCE Conc. (mg/L)	3.4	5.0			.04	.017						
DCE Conc. (mg/L)	2.8	2.8			.3	.022						
VC Conc. (mg/L)	0.4	.39			.3	.005						
ETH Conc. (mg/L)												
Distance from Source (ft)	14	15	53	82	118	208	242					
Date Data Collected	2014											

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN CENTERLINE | **RUN ARRAY**

Help | Restore | RESET

SEE OUTPUT | Paste

Data Input Instructions:

115 → 1. Enter value directly....or

↑ *or*

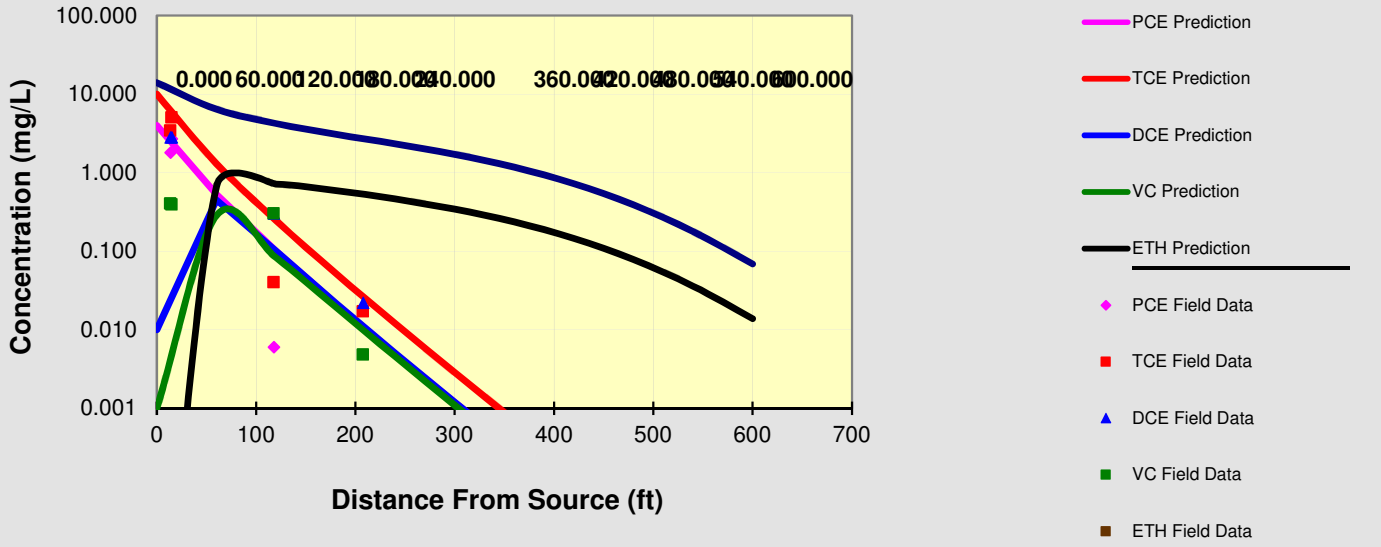
0.02 → 2. Calculate by filling in gray cells. Press Enter, then C

(To restore formulas, hit "Restore Formulas" button)

Variable* → Data used directly in model.

Test if Biotransformation is Occurring → Natural Attenuation

DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE



Log ⟺ Linear

Time:

19 Years

To Input

To Individual Compounds

BIOCHLOR Natural Attenuation Decision Support System

Version 2.2
Excel 2000

Capitol Adhesives
Run Name

Data Input Instructions:
115 → 1. Enter value directly....or
↑ *or* 2. Calculate by filling in gray
0.02 cells. Press Enter, then C
(To restore formulas, hit "Restore Formulas" button)
Variable* → Data used directly in model.

Test if Biotransformation is Occurring → Natural Attenuation

TYPE OF CHLORINATED SOLVENT: Ethenes ○ Ethanes ●

1. ADVECTION

Seepage Velocity*	Vs	80.4	(ft/yr)
or			
Hydraulic Conductivity	K	1.9E-03	(cm/sec)
Hydraulic Gradient	i	0.0125	(ft/ft)
Effective Porosity	n	0.3	(-)

2. DISPERSION

Alpha x*	21	(ft)
(Alpha y) / (Alpha x)*	0.1	(-)
(Alpha z) / (Alpha x)*	5.E-02	(-)

Calc.

3. ADSORPTION

			R	
Retardation Factor*				
or				
Soil Bulk Density, rho	1.7	(kg/L)		
FractionOrganicCarbon, foc	4.0E-3	(-)		
Partition Coefficient	Koc			
TCA	426	(L/kg)	10.66	(-)
DCA	130	(L/kg)	3.95	(-)
CA	125	(L/kg)	3.83	(-)

Common R (used in model)* = 3.95

4. BIOTRANSFORMATION **-1st Order Decay Coefficient***

Zone 1

	λ (1/yr)	half-life (yrs)	Yield
TCA → DCA	2.400		0.74
DCA → CA	1.000		0.65
CA → Ethane	0.000		0.47

Zone 2

	λ (1/yr)	half-life (yrs)
TCA → DCA	0.000	
DCA → CA	0.000	
CA → Ethane	0.000	

λ HELP

5. GENERAL

Simulation Time*	19	(yr)	L
Modeled Area Width*	150	(ft)	W
Modeled Area Length*	600	(ft)	
Zone 1 Length*	600	(ft)	
Zone 2 Length*	0	(ft)	Zone 2=

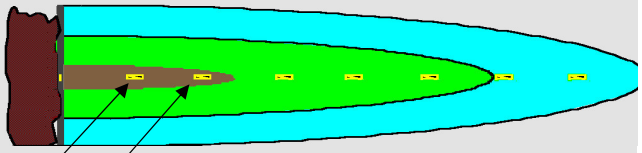
6. SOURCE DATA TYPE: Continuous / Single Planar

Source Options

Source Thickness in Sat. Zone* 25 (ft)

Vertical Plane Source: Determine Source Well Location and Input Solvent Concentrations

	Y1	k_s* (1/yr)
Width* (ft)	20	
Conc. (mg/L)*	C1	
TCA	8.5	0
DCA	.55	0
CA		0



View of Plume Looking Down

Observed Centerline Conc. at Monitoring Wells

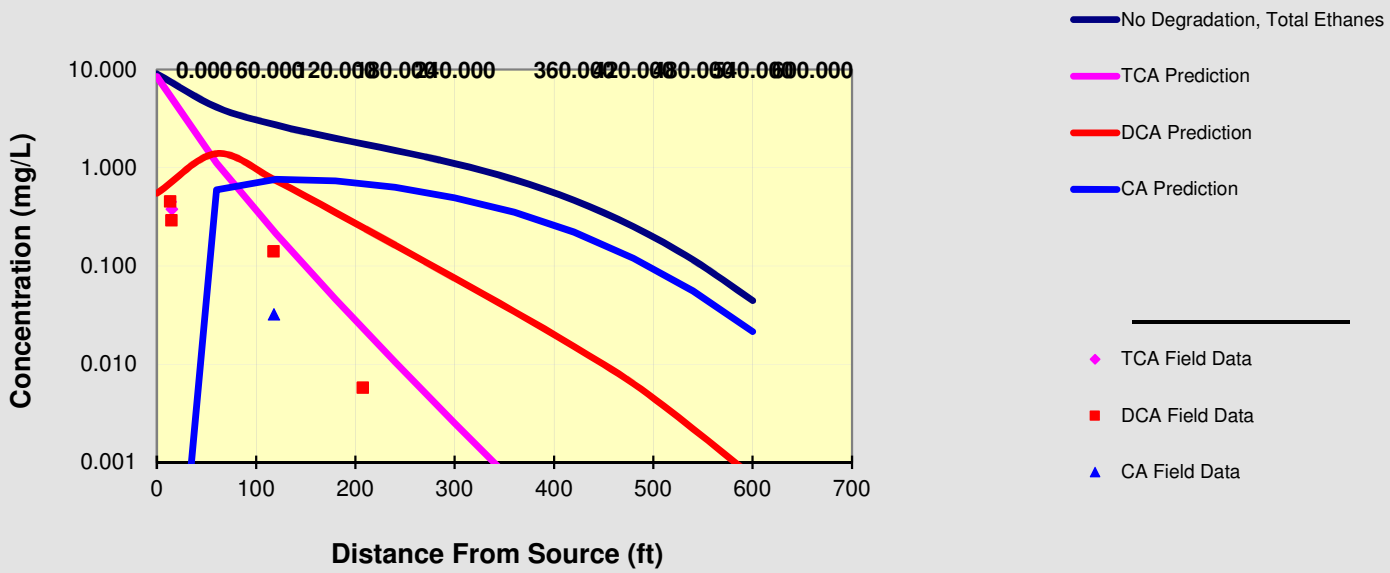
7. FIELD DATA FOR COMPARISON

TCA Conc. (mg/L)	.38	.45										
DCA Conc. (mg/L)	.29	.45		.14	.006							
CA Conc. (mg/L)				.032								
Distance from Source (ft)	15	14	53	118	208							
Date Data Collected	2014											

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN CENTERLINE | RUN ARRAY | Help | Restore | RESET | *SEE OUTPUT* | Paste

DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE



Log ⟺ Linear

Time:

19 Years

To Input

To Individual Compounds

BIOCHLOR Natural Attenuation Decision Support System

Version 2.2
Excel 2000

Capitol Adhesives
Run Name

TYPE OF CHLORINATED SOLVENT: Ethenes ◉ Ethanes ○

1. ADVECTION

Seepage Velocity*	Vs	80.4	(ft/yr)
or			
Hydraulic Conductivity	K	1.9E-03	(cm/sec)
Hydraulic Gradient	i	0.0125	(ft/ft)
Effective Porosity	n	0.3	(-)

2. DISPERSION

Alpha x*	21	(ft)
(Alpha y) / (Alpha x)*	0.1	(-)
(Alpha z) / (Alpha x)*	5.E-02	(-)

Calc.

3. ADSORPTION

Retardation Factor* → R

or

Soil Bulk Density, rho		1.7	(kg/L)	
FractionOrganicCarbon, foc		4.0E-3	(-)	
Partition Coefficient	Koc			
PCE	426	(L/kg)	10.66	(-)
TCE	130	(L/kg)	3.95	(-)
DCE	125	(L/kg)	3.83	(-)
VC	30	(L/kg)	1.67	(-)
ETH	302	(L/kg)	7.85	(-)

Common R (used in model)* = 3.95

4. BIOTRANSFORMATION

-1st Order Decay Coefficient*

	λ (1/yr)	half-life (yrs)	Yield
Zone 1			
PCE → TCE	2.400		0.79
TCE → DCE	3.200		0.74
DCE → VC	8.000		0.64
VC → ETH	8.100		0.45
Zone 2			
PCE → TCE	0.000		
TCE → DCE	0.000		
DCE → VC	0.000		
VC → ETH	0.000		

λ HELP

5. GENERAL

Simulation Time*	35	(yr)
Modeled Area Width*	150	(ft)
Modeled Area Length*	600	(ft)
Zone 1 Length*	600	(ft)
Zone 2 Length*	0	(ft)

L, W

Zone 2=

6. SOURCE DATA

TYPE: Continuous / Single Planar

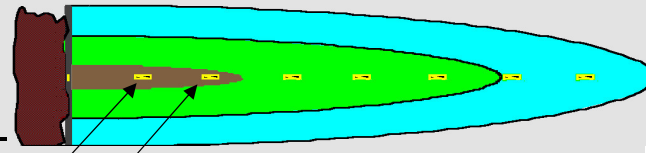
Source Options

Source Thickness in Sat. Zone* 25 (ft)

Width* (ft) Y1: 20

Conc. (mg/L)*	C1	k_s* (1/yr)
PCE	4.0	0
TCE	10.0	0
DCE	.01	0
VC	.001	0
ETH		0

Vertical Plane Source: Determine Source Well Location and Input Solvent Concentrations



View of Plume Looking Down

Observed Centerline Conc. at Monitoring Wells

7. FIELD DATA FOR COMPARISON

PCE Conc. (mg/L)											
TCE Conc. (mg/L)											
DCE Conc. (mg/L)											
VC Conc. (mg/L)											
ETH Conc. (mg/L)											
Distance from Source (ft)											
Date Data Collected	2030										

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN CENTERLINE | **RUN ARRAY**

Help | Restore | RESET

SEE OUTPUT | Paste

Data Input Instructions:

115 → 1. Enter value directly....or

↑ *or*

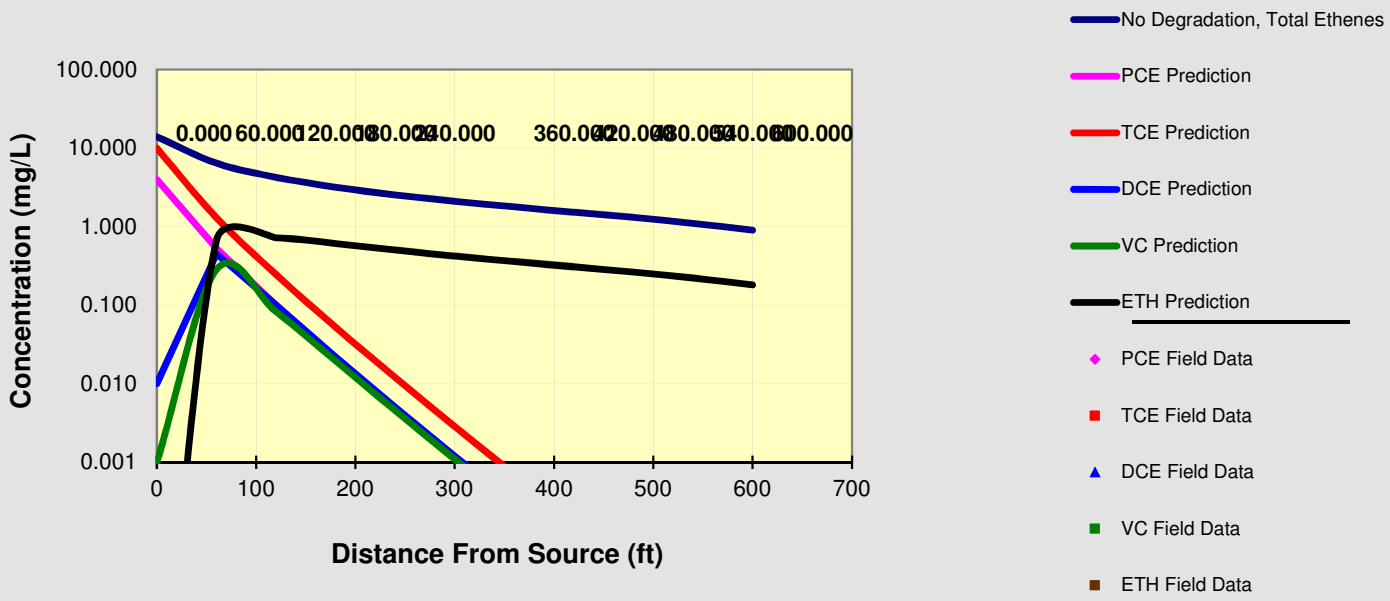
0.02 → 2. Calculate by filling in gray cells. Press Enter, then C

(To restore formulas, hit "Restore Formulas" button)

Variable* → Data used directly in model.

Test if Biotransformation is Occurring → Natural Attenuation

DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE



Log ⟺ Linear

Time:

35 Years

To Input

To Individual Compounds

BIOCHLOR Natural Attenuation Decision Support System

Version 2.2
Excel 2000

Capitol Adhesives
Run Name

Data Input Instructions:
115 → 1. Enter value directly....or
↑ *or* 2. Calculate by filling in gray
0.02 cells. Press Enter, then C
(To restore formulas, hit "Restore Formulas" button)
Variable* → Data used directly in model.

Test if Biotransformation is Occurring → Natural Attenuation

TYPE OF CHLORINATED SOLVENT: ○ Ethenes ◉ Ethanes

1. ADVECTION

Seepage Velocity*	Vs	80.4	(ft/yr)
or			
Hydraulic Conductivity	K	1.9E-03	(cm/sec)
Hydraulic Gradient	i	0.0125	(ft/ft)
Effective Porosity	n	0.3	(-)

2. DISPERSION

Alpha x*	21	(ft)
(Alpha y) / (Alpha x)*	0.1	(-)
(Alpha z) / (Alpha x)*	5.E-02	(-)

Calc.

3. ADSORPTION

Retardation Factor* → R
or

Soil Bulk Density, rho	1.7	(kg/L)		
FractionOrganicCarbon, foc	4.0E-3	(-)		
Partition Coefficient	Koc			
TCA	426	(L/kg)	10.66	(-)
DCA	130	(L/kg)	3.95	(-)
CA	125	(L/kg)	3.83	(-)

Common R (used in model)* = 3.95

4. BIOTRANSFORMATION -1st Order Decay Coefficient*

Zone 1

	λ (1/yr)	half-life (yrs)	Yield
TCA → DCA	2.400		0.74
DCA → CA	1.000		0.65
CA → Ethane	0.000		0.47

Zone 2

	λ (1/yr)	half-life (yrs)
TCA → DCA	0.000	
DCA → CA	0.000	
CA → Ethane	0.000	

λ HELP

5. GENERAL

Simulation Time*	35	(yr)
Modeled Area Width*	150	(ft)
Modeled Area Length*	600	(ft)
Zone 1 Length*	600	(ft)
Zone 2 Length*	0	(ft)

L, W

Zone 2=

6. SOURCE DATA TYPE: Continuous / Single Planar

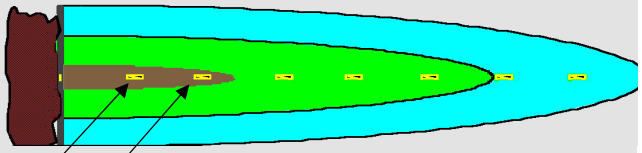
Source Options

Source Thickness in Sat. Zone* 25 (ft)

Width* (ft) Y1: 20

Conc. (mg/L)*	C1	k_s* (1/yr)
TCA	8.5	0
DCA	.55	0
CA		0

Vertical Plane Source: Determine Source Well Location and Input Solvent Concentrations



View of Plume Looking Down

Observed Centerline Conc. at Monitoring Wells

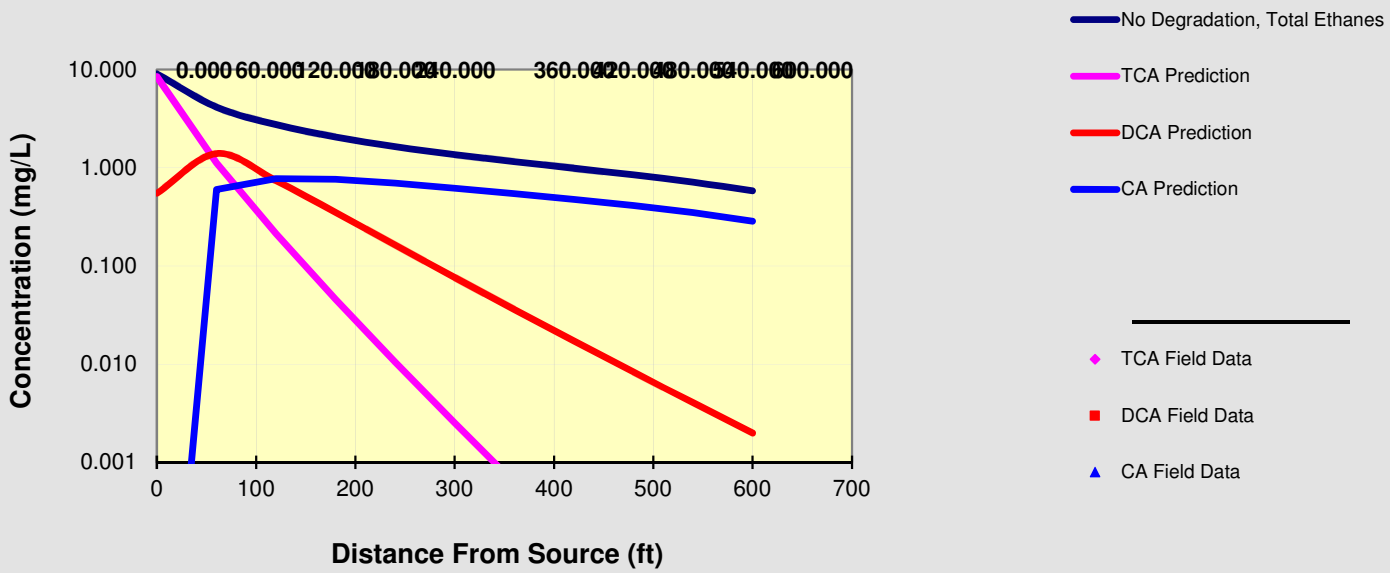
7. FIELD DATA FOR COMPARISON

TCA Conc. (mg/L)											
DCA Conc. (mg/L)											
CA Conc. (mg/L)											
Distance from Source (ft)											
Date Data Collected	2030										

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN CENTERLINE | RUN ARRAY | Help | Restore | RESET | *SEE OUTPUT* | Paste

DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE



Log ⟺ Linear

Time:

35 Years

To Input

To Individual Compounds

APPENDIX H

DRAFT ENVIRONMENTAL COVENANT

After Recording Return to:

Georgia Environmental Protection Division
Response and Remediation Program
2 Martin Luther King, Jr. Drive, SE
Suite 1054
East
Atlanta, Georgia 30334

Environmental Covenant

This instrument is an Environmental Covenant executed pursuant to the Georgia Uniform Environmental Covenants Act, OCGA § 44-16-1, *et seq.* This Environmental Covenant subjects the Property identified below to the activity and/or use limitations specified in this document. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded in accordance with OCGA § 44-16-8(a).

Fee Owner of Property/Grantor:	Barrett Real Estate Holdings, LLLP P. O. Box 742 Dalton, Georgia 30722
Grantee/Entity with express power to enforce:	State of Georgia Department of Natural Resources Environmental Protection Division 2 Martin Luther King Jr. Drive, SE Suite 1054 East Tower Atlanta, GA 30334
Parties with interest in the Property:	Q.E.P., Co, Inc. (Tenant) 300 Cross Plains Boulevard Dalton, Georgia 30721

Property:

The property subject to this Environmental Covenant (hereinafter "Property") is located at 300 Cross Plains Boulevard in Dalton, Whitfield County, Georgia. This tract of land was conveyed on April 18, 2003 from Capitol USA, LLC to Barrett Properties, LLC, recorded in Deed Book 3914, Page 113-116 in the Whitefield County Records. Barrett Properties, LLC converted to Barrett Real Estate Holdings, LLLP. The area is located in Land Lot 99 of the 13th District and 3rd Section of Whitfield County, Georgia. The Property is approximately 15.37 acres. A complete legal description of the area is attached as Exhibit A and a map of the area is attached as Exhibit B.

Tax Parcel Number(s):

99-13-8 and 99-13-9 of Whitfield County, Georgia

Name and Location of Administrative Records:

- Revised Voluntary Remediation Program Application
  Capitol USA – Dalton Adhesives
  May 2011

- Voluntary Remediation Program Semiannual Progress Reports
  Capitol USA – Dalton Adhesives
  (First report was submitted to EPD in April 2012)

- Voluntary Remediation Plan Compliance Status Report
  Capitol USAA – Dalton Adhesives
  _____ [date TBD]

  These documents are available at the following location:

  Georgia Environmental Protection Division
  Response and Remediation Program
  2 MLK Jr. Drive, SE, Suite 1054, East Tower
  Atlanta, GA 30334
  M-F 8:00 AM to 4:30 PM excluding state holidays

Description of Contamination and Corrective Action:

This Property has been listed on the state's hazardous site inventory and has been designated as needing corrective action due to the presence of hazardous wastes, hazardous constituents, or hazardous substances regulated under state law. Contact the property owner or the Georgia Environmental Protection Division for further information concerning this Property. This notice is provided in compliance with the Georgia Hazardous Site Response Act.

This Declaration of Covenant is made pursuant to the Georgia Uniform Environmental Covenants Act, O.C.G.A. § 44-16-1 *et seq.* by Barrett Real Estate Holdings, LLLP, its successors and assigns and the State of Georgia, Department of Natural Resources, Environmental Protection Division (hereinafter "EPD"), its successors and assigns. This Environmental Covenant is required because a release of 1,1,1-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloropropane, Acetone, Chlorobenzene, Chloroform, Dichlorobromomethane, Ethylbenzene, Tetrachloroethene, tran-1,2-Dichloroethene, Trichlorofluoromethane, Xylenes, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,4-Dioxane, Benzene, Chloroethane, Cis-1,2-Dichloroethene, Dichloromethane, Methyl ethyl ketone, Toluene, Trichloroethene and Vinyl Chloride, as defined under the Georgia Hazardous Site Response Act, O.C.G.A. § 12-8-90 et seq., and the rules promulgated thereunder (hereinafter "HSRA" and "Rules", respectively) has occurred on the Property.

The Corrective Action consists of the installation and maintenance of institutional controls to protect human health and the environment, as specified below in the description of the Activity and Use Limitations and Continuing Obligations, along with those obligations pursuant to the site's enrollment in the State of Georgia Voluntary Remediation Program.

Barrett Real Estate Holdings, LLLP hereby binds Grantor, its successors and assigns to the activity and use restriction(s) for the Property identified herein and grants such other rights under this Environmental Covenant in favor of EPD. EPD shall have full right of enforcement of the rights

conveyed under this Environmental Covenant pursuant to HSRA, O.C.G.A. § 12-8-90 *et seq.*, and the rules promulgated thereunder. Failure to timely enforce compliance with this Environmental Covenant or the use or activity limitations or access provisions contained herein by any person shall not bar subsequent enforcement by such person and shall not be deemed a waiver of the person's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict EPD from excising any authority under applicable law.

Barrett Real Estate Holdings, LLLP makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, pursuant to O.C.G.A. § 44-16-5(a); is perpetual, unless modified or terminated pursuant to the terms of this Covenant pursuant to O.C.G.A. § 44-16-9; and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereinafter "Owner"). Should a transfer or sale of the Property occur before such time as this Environmental Covenant has been amended or revoked then said Environmental Covenant shall be binding on the transferee(s) or purchaser(s).

The Environmental Covenant shall inure to the benefit of EPD and Barrett Real Estate Holdings, LLLP and their respective successors and assigns and shall be enforceable by the Director or his agents or assigns, and by Barrett Real Estate Holdings, LLLP or their successors and assigns, as provided for in O.C.G.A. § 44-16-11, in a court of competent jurisdiction.

Activity and/or Use Limitation(s) and Continuing Obligations

1. Registry. Pursuant to O.C.G.A. § 44-16-12, this Environmental Covenant and any amendment or termination thereof, may be contained in EPD's registry for environmental covenants.

2. Notice. The Owner of the Property must give thirty (30) day advance written notice to EPD of the Owner's intent to convey the Property to a new owner. Notice to EPD shall be given by certified mail, return receipt requested. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for the continuing monitoring, operation, and maintenance of the Corrective Action, and the continuing obligations hereunder.

3. Notice of Limitation in Future Conveyances. Each instrument hereafter conveying an interest in the Property subject to this Environmental Covenant shall contain a notice of the activity and use limitations set forth in this Environmental Covenant and shall provide the recorded location of the Environmental Covenant.

4. Periodic Reporting. Annually, by no later than one year following the effective date of this Environmental Covenant, Barrett Real Estate Holdings, LLLP shall submit to EPD an Annual Report in the form attached hereto as Exhibit C, certifying that the Activity and Use Limitations in this Environmental Covenant are being abided by.

5. Activity and Use Limitation(s).

    a. The Property shall be used only for non-residential uses, as defined in Section 391-3-19-.02 of the Rules. Any residential use on the Property shall be prohibited.

b. If construction, utility or repair workers require access to subsurface areas where contamination exists (as denoted on Exhibit B), such that any cover then in place (such as pavement, concrete, buildings, etc.) are to be removed, then proper precautions shall be taken to protect those workers under a construction worker risk scenario as specified in the Act, or by OSHA, if a Hazard Communication Program is in effect for the site.

c. The use or extraction of groundwater beneath the Property for drinking water or for any other non-remedial purposes shall be prohibited.

d. Any activity on the Property that may create a new exposure pathway inside a building is prohibited.

6. Right of Access. In addition to any rights already possessed by EPD, the Owner shall allow authorized representatives of EPD and their successors and assigns the right to enter the Property at reasonable times for the purpose of performing and evaluating the corrective action, to take samples, to inspect the corrective action conducted at the Property, to determine compliance with this Environmental Covenant, and to inspect records that are related to the corrective action. Except in the event of an emergency, EPD shall give reasonable advance notice to Owner that they are exercising their rights under this section.

7. Recording of Environmental Covenant and Proof of Notification. Within sixty (60) days after the date of the Director's signature, the Owner shall file this Environmental Covenant with the Recorders of Deeds for each County in which the Property is located, and send a file stamped copy of this Environmental Covenant to EPD within sixty (60) days of recording. Notice to EPD shall be provided by certified mail, return receipt requested. Within that time period, the Owner shall also send a file-stamped copy to each of the following: (1) each person holding a recorded interest in the Property subject to the covenant; (2) each person in possession of the real property subject to the covenant; (3) each municipality, county, consolidated government, or other unit of local government in which real property subject to the covenant is located; and (4) each owner in fee simple whose property abuts the property subject to the Environmental Covenant.

8. Termination or Modification. The Environmental Covenant shall remain in full force and effect in accordance with O.C.G.A. § 44-5-60, unless and until the Director determines that the Property is in compliance with the Type 1, 2, 3, or 4 Risk Reduction Standards, as defined in Georgia Rules of Hazardous Site Response (Rules) Section 391-3-19-.07 and removes the Property from the Hazardous Site Inventory, whereupon the Environmental Covenant may be amended or revoked in accordance with Section 391-3-19-08(7) of the Rules and O.C.G.A. § 44-16-1 *et seq.*

9. Severability. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

10. No Property Interest Created in EPD. This Environmental Covenant does not in any way create any interest by EPD in the Property that is subject to the Environmental Covenant. Furthermore, the act of approving this Environmental Covenant does not in any way create any interest by EPD in the Property in accordance with O.C.G.A. § 44-16-3(b).

Representations and Warranties.

Barrett Real Estate Holdings, LLLP hereby represents and warrants that:

a) It has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder;
b) It is the sole owner of the Property and holds fee simple title;

c) It has identified all other parties that hold any interest (e.g., encumbrance) in the Property and notified such parties of the Barrett Real Estate Holdings, LLLP' intention to enter into this Environmental Covenant;
d) It has served each of the people or entities referenced on the first page hereof with an identical copy of this Environmental Covenant in accordance with O.C.G.A. § 44-16-4(d).
e) To its knowledge, this Environmental Covenant will not materially violate or contravene any zoning law or other law regulating use of the Property; and
f) To its knowledge, this Environmental Covenant does not authorize a use of the Property that is otherwise prohibited by a recorded instrument that has priority over the Environmental Covenant.

Notices.

Any document or communication required to be sent pursuant to the terms of this Environmental Covenant shall be sent to the following persons via certified mail, return receipt requested:

Georgia Environmental Protection Division
Branch Chief
Land Protection Branch
2 Martin Luther King Jr. Drive SE
Suite 1054 East Tower
Atlanta, GA 30334

Barrett Real Estate Holdings, LLLP has caused this Environmental Covenant to be executed pursuant to The Georgia Uniform Environmental Covenants Act, on the _____ day of _____, 20__.

BARRETT REAL ESTATE HOLDINGS, LLLP

_____
[Name of Signatory]
[Title]

Dated: _____

STATE OF GEORGIA
ENVIRONMENTAL PROTECTION DIVISION

_____
[Name of Person Acknowledging Receipt]
[Title]

Dated: _____

[INDIVIDUAL ACKNOWLEDGMENT]

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, and acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

_____
Notary Public in and for the State of
Georgia, residing at _____.
My appointment expires_____.

[CORPORATE ACKNOWLEDGMENT]

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the _____ of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said corporation.

_____
Notary Public in and for the State of
Georgia, residing at _____.
My appointment expires_____.

[REPRESENTATIVE ACKNOWLEDGEMENT]

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** signed this instrument, on oath stated that **he/she** was authorized to execute this instrument, and acknowledged it as the _____ [type of authority] of _____ [name of party being represented] to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.

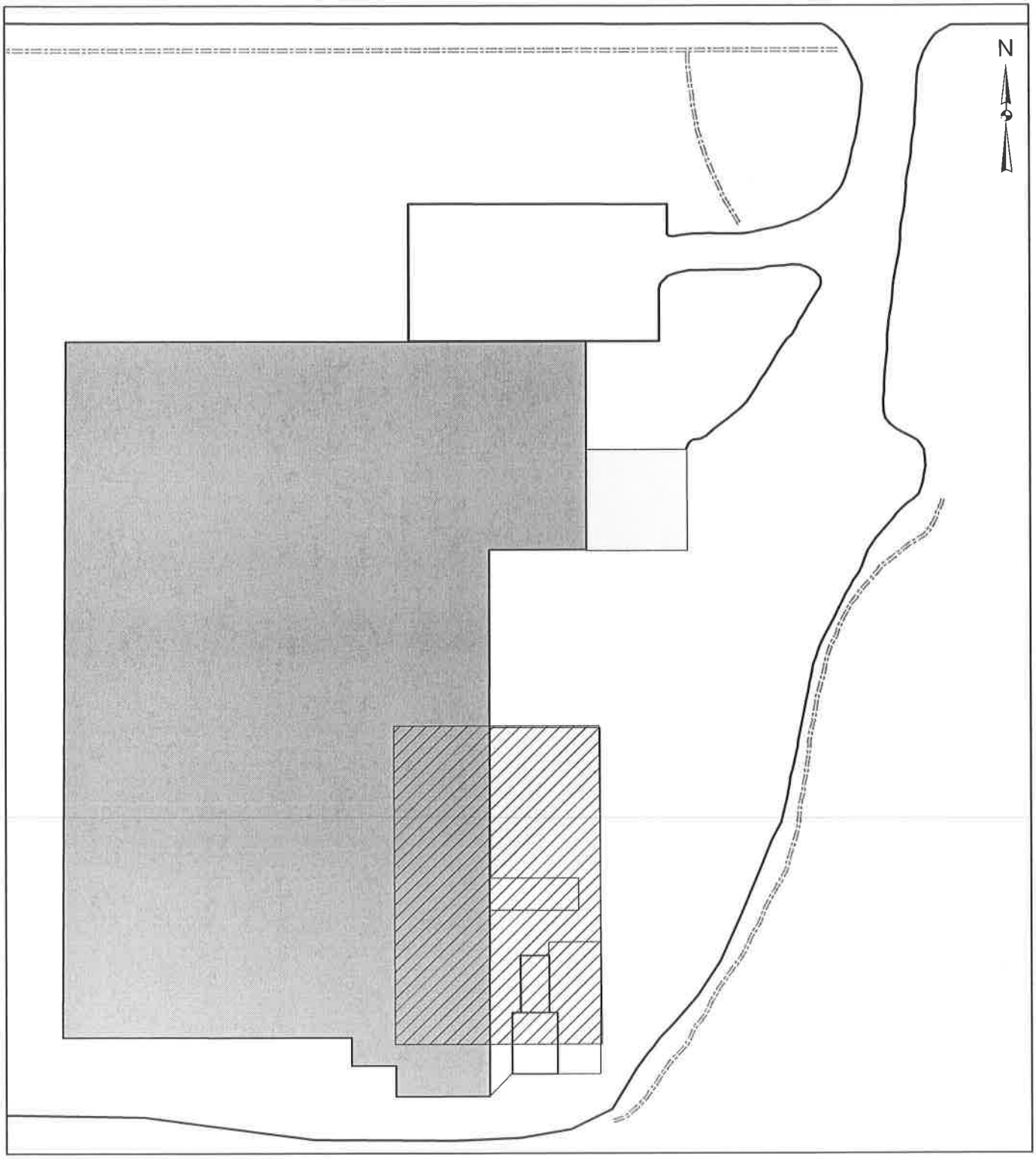
_____
Notary Public in and for the State of
Georgia, residing at _____.
My appointment expires _____.

Exhibit A
Legal Description

Exhibit B

Figure Showing Areas of Known Subsurface Contamination

Capitol Adhesives
Environmental Covenant Restricted Area



EPS
G:\River Associates\Capitol Adhesives\VRP Program\GIS\UEC_rev.mxd

Figure No. 1

EXHIBIT C

Georgia Environmental Protection Division
Branch Chief -- Land Protection Branch
2 Martin Luther King, Jr., Drive, S.E.
Suite 1054, East Tower
Atlanta, Georgia 30334

Re: 300 Cross Plains Boulevard
Dalton, Whitfield County, Georgia, 30721 (the Property)

To whom it may concern:

_____ is the current owner of the Property. The Environmental Covenant for the Property, recorded on _____, requires that the current Property owner certify annually that the Activity and Use Limitations in the Covenant are being abided by.

_____ certifies that, in the past twelve months:

1) The Property has been used only for non-residential uses, as defined in the Department's rules.

2) No construction, utility or repair workers required access to subsurface areas where contamination exists, as denoted on Exhibit B to the Covenant. [Or, "Work was performed in areas where contamination exists, as denoted on Exhibit B, and proper precautions were taken to protect those workers under a construction worker risk scenario, or as required under OSHA.]

3) There has been no use or extraction of groundwater beneath the Property for drinking water or for any other non-remedial purpose.

4) No material modification or material renovation (e.g. new construction, installation of walls, lowering of ceiling, adjustments to ventilation system) has occurred within the area denoted on Exhibit B (including in that part of the building that is within that area) without prior authorization by the EPD.

Sincerely,

_____