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MAY 31 2011

Response and Remediation Program

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May 27, 2011

Alexandra Y. Cleary
Program Manager
Response and Remediation Program
2 Martin Luther King, Jr. Drive, S.E.
Suite 1462, East Tower
Atlanta, Georgia 30334-9000

Re: Notice of Incomplete Application
Voluntary Remediation Plan and Application of October 29, 2010
Capitol USA -Dalton Adhesives, HSI Site No.1 0795
300 Cross Plains Boulevard, Dalton, Georgia; Whitfield County
Tax Parcel ld. Nos. 13-099-08-000 and 13-099-09-000

Dear Ms. Cleary,

We have reviewed your letter to Craig Baker dated March 31, 2011 concerning the application for the Capitol USA – Dalton Adhesives site into the Voluntary Remediation Program. As requested in your letter, please find attached a revised application. Comments 1 through 11 from your letter are discussed below and references are made as to where and/or how these comments have been addressed in the revised application.

Comment 1) Please provide a vapor-intrusion model for the on-site manufacturing building. The narrative in Section 2.8 on page 11 states "Vapor intrusion is not a complete pathway because there are no buildings overlying the plume or within the source area." However, chlorinated compounds have been detected in MW-6, MW-7, MW-10, and MW-11, all of which are either located inside the manufacturing building or just outside its exterior wall.

Response: Section 2.8 has been revised to state that vapor intrusion will be evaluated in a future Status Report.

Comment 2) EPD disagrees that soil contamination need not be considered a medium of interest because of an historically high water table, as stated in Section 1.2 on page 2. The depth to groundwater in the general area of the spill has rarely been less than 2 feet below the ground

surface and is often greater than 3 feet. Furthermore, EPD notes that excavation of contaminated soil in the spill area has previously been proposed for this site. Please include the soil pathway as a complete exposure pathway.

Response: Recent groundwater gauging events have confirmed the presence of artesian conditions at portions of the site, including the area where the spill occurred. The HSRA Rules indicate that RRS are only applicable to the soils above the "uppermost groundwater zone." Thus, the VRP application has been revised to classify solid matrix material according to whether it is located above or below the high water table mark. The application has been revised to consider both vadose zone soils (above the high water table mark) and what is being termed the "solid aquifer matrix" for solid material below the high water table mark. The vadose zone soils will be compared to RRSs and the solid aquifer matrix will be evaluated to determine the presence and location of source material (as determined by a comparison to soil saturation concentrations). Remedial action will be taken to address any source material found.

Comment 3) On both geologic cross-sections, Figures 4 and 5, isoconcentration contours depict both horizontal and vertical components of groundwater contamination. In the absence of packer testing or discreetly screened well intervals, EPD does not consider the contours to be accurate representations of contaminant concentrations at varying depths in the subsurface.

Response: The isoconcentration contours have been removed from Figures 4 and 5.

Comment 4) Please revise the soil descriptions on the geologic cross-sections to provide a more accurate representation of subsurface conditions. The cross-sections provided in the application describe the overburden layer as consisting of clay. However, the site hydraulic conductivity (K) average value of 5.29 feet per day (fVday), or 1.87 x 10-3 centimeters per second (cm/s), is considerably higher than the range of K values that would be anticipated in a clay layer. Furthermore, many of the soil boring logs indicate the overburden consists of clayey silt or sandy clay or silty clay.

Response: The cross-sections (Figures 4 and 5) have been revised to show more soil descriptions while maintaining the geologists' descriptions on the boring logs.

Comment 5) On Figure 4, MW-3D is depicted with a 10-foot screened interval, partially screened in both overburden and bedrock. However, the well-construction diagram for that well indicates that a 5-foot screened interval was installed in bedrock. To aid EPD in evaluating the efficiency of contaminant monitoring, well diagrams included on cross-sections must be to scale. Please revise Figure 4 accordingly.

Response: Figure 4 has been revised to show a 5-foot screened interval for MW-3D.

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Comment 6) EPD has concerns about the Biochlor simulations presented in Appendix H. Specifically:

a) *EPD questions the source concentration values obtained during model calibration and their potential effect on the accuracy of the model. For instance, tetrachloroethylene (PCE) concentrations in MW-3 exceed the model input of 2 milligrams per liter (mg/L) during 8 out of 9 sampling events conducted from July 2004 through June 2009. The PCE concentration in that well in October 2008 was 3.9 mg/L, almost twice the model-input value. The PCE concentration in MW-3 in June 2009 was 3.2 mg/L.*

b) *The zero valent iron compound (ZVI) EHC was injected into the site subsurface in and downgradient of the source area in January 2007. Accordingly, the analytical data used to calibrate the model may not be reflective of natural attenuation processes. Additional data will need to be collected to determine what, if any, impact the ZVI injections have on the current groundwater and how that may be incorporated into the Biochlor modeling.*

Response: The source concentrations were initially chosen to best model the results for all parameters for all years from 2004 through 2009. However, to address both points, the source concentrations have been increased and the model has been calibrated using the data from 2004 through 2007 (prior to the injections). As a result, the source concentrations are now higher than the PCE and TCA analytical results observed at the wells.

The revised model provides a good match between model-simulated conditions compared to observed conditions in wells from 2004 through 2007. However, it appears that after 2007 (when the injections occurred), the model simulations over-estimate the constituent concentrations, resulting in estimated concentrations that exceed the actual field data in most instances. As a result, the revised model is now more conservative compared to the original setup (with predicted results being higher than actual results), and actual conditions into the future in the downgradient direction of the plume should be less than modeled predictions.

Comment 7) Please conduct a sensitivity analysis on the Biochlor model and present the results in tabular format along with an explanatory narrative. When using literature values or when uncertainty otherwise exists regarding Biochlor input parameters, a sensitivity analysis should be conducted on the input values. This type of analysis can tell the user how much the model output will vary with variation in certain input parameters. Sensitivity analyses are commonly run on the first order decay coefficients and common retardation factors. A detailed explanation of sensitivity analyses is presented in Appendix A.6 of the Biochlor User's Manual, Version 1.0, dated January 2000.

Response: A sensitivity analysis was conducted and is presented in Appendix J.

Comment 8) Please provide tabulated field data to accompany Biochlor output graphs where such data is included in the graphs.

Response: The tabulated field data has been included with the output graphs.

Comment 9) Provide a table specifying delineation standards in soil for each regulated substance on site. We note that 1,2-dichloropropane was detected in soil at MW-3, and that 1,4-dioxane was detected in soil at MIP-13. Please add these two substances to the list of regulated substances.

Response: Table 2 has been revised to include 1,2-dichloropropane and 1,4-dioxane. Type 1 RRSs for soils have also been added to this table.

Comment 10) In Table 2, Groundwater Delineation Standards, please make the following revisions:

a) Please revise the Type 1 Risk Reduction Standard (RRS) for chloroform to read 0.08 milligrams per liter (mg/L).
b) Please remove methylcyclohexane from the table. That substance is not regulated under HSRA.
c) Next to cyclohexane, please insert DL in the Type 1 RRS column instead of NA.

Response: These changes have been made to Table 2.

Comment 11) In accordance with Section 12-8-108(5) of the Act, please:

a) Provide a remedial plan for direct exposure to contaminated soils within two feet of the ground surface.
b) Provide a remedial plan for construction-worker exposure to contaminated soil at specified depths below the ground surface.

Response: The revised application addresses both vadose zone soils (above the high water table) and source material in the solid aquifer matrix (below the high water table). Analytical results from vadose zone soils will be compared to applicable RRSs and sample results from the solid aquifer matrix will be compared to soil saturation concentrations to determine areas that may warrant remedial action. Remedial action will be taken to address source material in the solid aquifer matrix. The potential receptors and exposure pathways section has been revised to incorporate vadose zone soils and source materials in the solid aquifer matrix.

Comment According to Section 12-8-106 of the Act, "a participant in the voluntary remediation program must not be in violation of any order, judgment, statute, rule, or regulation subject to

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the enforcement authority of the director." Pursuant to our notice of violation of October 21 , 2010, CEA, LLC is currently in violation of the Corrective Action Plan (CAP) submittal schedule set forth by EPD. The site is therefore in a state of non-compliance. CEA, LLC must address the compliance issues for this site to meet the criteria of Section 12-8-106 of the Act.

Response: CEA entered into a Consent Order with the EPD, which was signed by CEA and submitted to the EPD on May 16, 2011. CEA will pay the associated fine once the agreement is final.

The initial VRP application included a schedule that began in October 2010. As the Property has not been accepted into the program yet, the schedule has been adjusted accordingly. Nevertheless, the groundwater sampling event scheduled for October 2010 was conducted and the results are presented in this revised VRP application.

If you have any questions, please feel free to contact me (404-315-9113).

Sincerely,

Kirk Kessler

Kirk Kessler, P.G.

Attachment: Revised VRP Application
c: Mr. Craig Baker
Jonathan F. Kent, Esq.
John C. Spinrad, Esq.

REVISED VOLUNTARY REMEDIATION PROGRAM APPLICATION

CAPITOL USA – DALTON FACILITY
DALTON, GEORGIA

Prepared For:

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

Prepared By:

ENVIRONMENTAL PLANNING SPECIALISTS, INC.
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Kirk Kessler, P.G.
Principal

May 2011

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REVISED VOLUNTARY REMEDIATION PROGRAM APPLICATION
CAPITOL USA – DALTON FACILITY
DALTON, GEORGIA

May 2011

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1.0 INTRODUCTION

1.1 Overview

This Revised Voluntary Remediation Program Application is being submitted on behalf of CEA, LLC for the facility located at 300 Cross Plains Boulevard, Dalton, Whitfield County, Georgia (Property). A Voluntary Remediation Program Application and Checklist and a copy of the Application Fee check are included in Appendix A. Tax map and warranty deed information is provided in Appendix B.

Figure 1 (see Appendix C for all figures) 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 facility, which is currently operated by QEP Co., Inc., produces water-based and organic solvent-based adhesives, hot-melt tape, and warehouses and distributes the adhesive products. The Property consists of one steel frame building. Two aboveground storage tank (AST) farms with concrete walled secondary containment are located outside of the southeast corner of the building. The ASTs contain process chemicals including toluene, tetrachloroethene (PCE), trichloroethene (TCE), VMP naphtha, mineral spirits lacolene and acetone. Chemicals (TCE, 45% solution of potassium hydroxide, heptanes, PCE, and 1,1,1-TCE) are also stored in totes and 55-gallon steel drums under a roof on the concrete slab adjacent to the tank farms.

1.2 Background

In January 1995, a documented release of approximately 585 gallons of reclaimed 1,1,1-trichloroethane (TCA) occurred from a delivery truck due to failure of the tanker sidewall. The spill was contained and post-spill response involved excavation of surface soils. Groundwater samples were not collected during the post spill response; however, a later investigation identified TCE, PCE, and daughter products in the groundwater. It has been generally assumed that the tanker truck spill is the source of TCA and its daughter products detected in the groundwater. Reclaimed solvents contain a fairly higher proportion of other chemical products; therefore, it is believed that the tanker truck spill is also the primary source of PCE/TCE and its daughter products detected in the groundwater (and perhaps the other volatile organic compounds (VOCs) also detected in the groundwater). Incidental releases around the AST and tote/drum storage areas may also have occurred.

A Corrective Action Plan (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 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 onsite the water table has historically varied from being several feet below ground surface (bgs), to as high as the ground surface, often exhibiting artesian conditions. 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 site characterization data set for this 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.

1.4 Purpose

The purpose of this document is to support application for enrollment into the Voluntary Remediation Program by presenting a current understanding of conditions at the Property based on existing Property data and a Conceptual Site Model (CSM), and proposed remedial action for the Property.

1.5 Property Eligibility

The Property meets the eligibility criteria for the Voluntary Remediation Program. A release of regulated substances on the Property has been confirmed. The Property is not listed on the National Priorities List, is not currently undergoing response activities required by an order of the Regional Administrator of the United States Environmental Protection Agency (EPA), and is not required to have a permit under Code Section 12-8-66. Qualifying the Property under this VRP program would not violate the terms and conditions under which the division operates and administers remedial programs by delegation or by similar authorization from the EPA. There are no, and never have been any, outstanding liens filed against the Property pursuant to Code Sections 12-8-96 and 12-13-12.

1.6 Participant Eligibility

CEA, LLC is the Voluntary Remediation Program applicant. CEA believes it is in compliance with all orders, judgments, statutes, rules, and regulations subject to the enforcement authority of the Director with respect to this site. CEA has express permission from the property owner, Barrett Properties, to perform correction action on this Property.

2.0 PRELIMINARY CONCEPTUAL SITE MODEL

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

2.1 Elements of the Conceptual Site Model

Figures 3 through 14 are plan view and profile diagrams depicting the extent of chlorinated solvents in the subsurface. Viewed in total, these figures give a three-dimensional representation of the site conditions.

2.2 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 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 and several lean-to structures are on the south and west sides. There is limited grassy terrain on the eastern and northern side of the Property. 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 surface water features on or adjacent to the Property.

2.3 Source of Contamination

In January 1995, a documented release of approximately 585 gallons of reclaimed 1,1,1-trichloroethane (TCA) occurred from a delivery truck due to failure of the tanker sidewall. Figure 2 depicts the approximate location of the spill[1]. 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[2]. Groundwater samples

[1] The location depicted for the tanker truck spill has been modified from previous depictions in the Corrective Action Plan Addendum (EPS, 2009) due to recently-discovered information.
[2] There is no documentation of the dimensions or specific locations of the soil excavation.

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

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

2.4 Subsurface Features

2.4.1 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 lithology seen at the Property 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 3, and cross sections are shown on Figures 4 and 5. 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 20 feet bgs.

2.4.2 Hydrogeological Setting

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

> Wells in shale yield up to 5 gpm, or in some locations 17 gpm; and dry wells also occur. Wells in limestone normally supply between 5 and 25 gpm and ones properly located with

respect to the drainage will furnish up to 300 gpm. Most wells are less than 300 feet deep, though some extend to a depth of 500 feet. Wells penetrating shale and limestone mixed generally supply from about 2 to 20 gpm, but some yield up to 100 gpm if they are near a source of recharge. The well water varies from soft to hard and has a low to moderate iron content. Some large springs have openings in the Conasauga, but discharge water from the Knox Group.

The water table at the Property fluctuates on the scale of 5-8 ft at a given location, with many locations exhibiting a high water table mark at the ground surface (artesian conditions). In the spring of 2011 a weekly groundwater measurement program was implemented for three consecutive weeks to better define the extent of artesian 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 1 (all tables are provided in Appendix D). 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 4 and 5). The table below shows the high water table mark for the shallow wells. Ten of the shallow wells have exhibited artesian conditions. The only wells that have consistently shown groundwater deeper than two feet below the ground surface are MW-6, MW-11, MW-12 and MW-13. Figure 6 shows the locations of the artesian wells and the high water table mark for the non-artesian wells. Figure 7 is a potentiometric surface map from the May 6, 2011 gauging event. The overall groundwater flow direction is to the northeast.

The topographic map (Figure 1) is dated 1982, prior to the construction of the facility. This map shows that the facility is located in a low topographic relief (valley) area. This figure (which shows the approximate location of the facility) also shows that an intermittent stream ran through where the southeastern corner of the building now stands. This stream ran in a northeasterly direction across where the Property now exists. This is the same direction as the groundwater flow seen currently at the site (Figure 7). 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 artesian conditions are likely occurring because the valley bottom was filled with material having higher permeability than the native soil. Additionally, the valley bottom pitches from the south to the north creating artesian pressure when the water table is generally high.

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

* Ground surface elevation unknown, depth below top of casing shown

Figure 6 was used to define an artesian zone on the Property, which was conservatively assumed to be the area between the artesian wells. It is very likely that the actual artesian zone is larger than this area. This artesian zone is shown on Figure 6. Also shown on this figure are zones that are estimated to have a high water table mark of 0-1 ft bgs, 1-2 ft bgs, and greater than 2 ft bgs. It is reasonable to infer that the artesian zone is located where the intermittent stream formerly ran.

In the artesian zone there is no vadose zone soil as the high water table mark is at or above the ground surface. Instead, there is a solid aquifer matrix that will be evaluated to determine if

there is potential source material. In the other zones there is a vadose zone soil matrix above the high water table mark and solid aquifer matrix below the high water table mark.

Hydraulic gradients, hydraulic conductivity and transmissivity calculations[3] were presented in the CAP (WRS, 2006). Horizontal hydraulic gradients range from 0.0083 to 0.0125 feet/foot. The hydraulic conductivity ranges from 2.63 to 8.09 feet per day with an average and geometric mean of 5.29 and 4.46 ft/day. The transmissivity ranges from 244.61 to 1,452 gallons per day per foot (gpd/ft). Ranges of groundwater flow velocities were estimated using the modified Darcy equation:

$$V = Ki/n_e$$

where: V = average linear velocity
K = hydraulic conductivity
i = hydraulic gradient
n_e = effective porosity

Groundwater flow velocities were estimated using the average hydraulic conductivity 5.29 ft/day and an estimated effective porosity (n_e) for site soils of 0.3. Using the range of hydraulic gradients (0.0083 to 0.0125 feet/ft), the range of groundwater flow velocities were calculated to be approximately 53 to 80 ft/year.

2.5 Delineation Standards

Type 1 Risk Reduction Standards (RRSs) have been selected for the delineation standards for groundwater and vadose zone soils at the Property. The Type 1 RRS for groundwater and soil are presented in Table 2 and the calculations are shown in Appendix E

Delineation criteria for the source material are the constituent-specific soil saturation concentrations (Csat). Csat corresponds to the contaminant concentration at which the contaminant may be present in a free phase. This occurs when the absorptive limits of the soil particles, the solubility limits of the soil pore water, and saturation of soil pore air have been reached. Thus, the presence of a constituent above its Csat indicates source material. These concentrations will be presented in an updated CSM accompanying a future Status Report. The Csat values presented in the EPA's Regional Screening Level (RSL) Tables will be evaluated to determine if they are appropriate for site conditions. If not, site-specific Csat values will be calculated.

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

2.6 Extent of Contamination

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

2.6.1 Groundwater Conditions

Twenty groundwater monitoring wells at the Property have been sampled over time (boring logs and well construction diagrams are presented in Appendix F and Appendix G, respectively). Additionally, nine direct push-point water samples were collected in March 2009. A groundwater sampling event was conducted recently (October 2010) at the request of the EPD. These results have not previously been reported to the EPD, thus, the laboratory data reports are included in Appendix H. A summary of the historical analytical results from these groundwater sampling events are presented in Table 3.

TCA, PCE, and TCE are the primary constituents of interest at the Property due to the known TCA spill and because these constituents (and daughter products) have been consistently detected above RRSs. These chlorinated solvents can degrade biologically in the subsurface. Through reductive dechlorination, parent compounds (i.e., TCA and PCE/TCE) can be degraded biologically into daughter products. TCA can be degraded into 1,1-dichloroethane (DCA) and then chloroethane (CA). Similarly, PCE can be degraded into TCE, cis-1,2-dichloroethene (DCE) and vinyl chloride (VC). Groundwater concentrations of total chlorinated ethanes (TCA, DCA and CA) in 2010 are shown in Figure 8. Similarly, groundwater concentrations of chlorinated ethenes (PCE, TCE, DCE and VC) are shown in Figure 9. The spatial distribution of constituents in groundwater is consistent with the pattern observed in the subsurface solid matrix with groundwater exhibiting the highest concentrations immediately north of the AST containment area. The primarily direction of the groundwater plumes are to north and northeast of the basin consistent with groundwater flow.

The distribution of parent compounds and degradation products demonstrate degradation has occurred over the Property's history, with degradation products having a tendency to exhibit a greater spatial distribution compared to the parent compounds. Degradation products also tend to exhibit higher concentrations down gradient from the AST containment area compared to the source area at the AST containment area.

Figures 10 and 11 show time series graphs for monitoring well MW-5 (which is in the plume, downgradient from the AST containment area) for the PCE and TCA degradation parameters, respectively. These figures demonstrate that biodegradation is occurring in the plume. The

figures clearly show that the peak for the parent compounds (TCE and TCA) appears first followed by the next degradation parameters (DCE and DCA) then the final degradation parameters (VC and CA). (There were only very small concentrations of PCE, likely due to biodegradation occurring prior to reaching MW-5.)

The plume has been characterized and delineated horizontally (see Figures 8 and 9) with MW-16 to the north, MW-14 to the east, MW-8 to the south and MW-17 to the west. Three pairs of monitoring wells are available to evaluate the vertical extent of VOCs (MW-1/MW-1D, MW-2/MW-2D, and MW-3/MW-3D). However, MW-1 and MW-1D have been damaged and are no longer operable. A review of data from the MW-2 and MW-3 well clusters identified VOCs in both the shallow and deep wells, but both the number of constituents and concentrations are lower in the deep well of each pair. Thus, the concentrations of constituents decrease with depth. However, MW-2D and MW-3D are not much deeper than MW-2 and MW-3 and are all in weathered shale. The well depth for MW-2 is 15 ft bgs and 17.3 ft bgs for MW-2D. Similarly, MW-3's well depth is 15 ft bgs and MW-3D's is 22.5 ft bgs. As there are no wells located deeper than MW-3D, vertical delineation has not been completed yet. This is a data gap that will be addressed as a part of the VRP process.

2.6.2 Solid Aquifer Matrix and Vadose Zone Soil

2.6.2.1 Subsurface Investigations and Matrix Classification

Although the solid aquifer matrix and vadose zone soil will be considered separately in terms of potential corrective action, for ease of presentation and delineation both matrices will be discussed together. Six subsurface investigations have been completed to date at the Property. A brief summary of the historical investigations is provided below. Solid-matrix samples were collected and analyzed for VOCs during these investigations both from the zone of the water table fluctuation and from beneath the low water table mark, for the purpose of helping to describe/define the groundwater conditions from a perspective of source area(s) that might warrant a different remedial action approach to that for the dissolved-phase plume. A summary of the analytical results is presented in Table 4 and the sample locations are shown on Figure 12. Available boring logs are presented in Appendix F.

Figure 12 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.

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

August 2005 Subsurface Investigation. In August 2005, 13 solid matrix samples were collected from direct-push cores to the east of the main facility building (identified as the GP samples in Figure 12). Samples were collected at depths from 2 to 8 ft bgs. The only sample locations that are in the greater than 2 ft high water table zone are GP007 and GP008. These two samples will be considered as representing the vadose zone while the remaining samples are in the solid aquifer matix. Consistent with the July 2004 investigation, chlorinated ethenes and ethanes were detected in these samples.

June 2006 Subsurface Investigation. In June and July 2006, nine solid matrix samples were collected during the installation of additional site monitoring wells (MW-8 to MW-16 in Figure 12). Samples were collected at depths from 5 to 15 ft bgs. The high water table mark for all of these locations is less than 5 feet, thus all of these samples are in the solid aquifer matrix. Only two sample locations exhibited chlorinated ethenes (MW-10 and MW-11) and one location exhibited compounds characteristic of petroleum hydrocarbons or BTEX compounds (MW-15).

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

After completion of the MIP field screening, six core samples were collected at offsets (1 to 2 ft) to the completed MIP borings to quantify VOCs and their respective concentrations (MIP sample series on Figure 12). Solid media samples were collected to characterize a range of electron capture detector (ECD) responses from the MIP both above and below the measured water table

during this point in time. A comparison of the core sample and MIP result are presented in Appendix I. All but two (MIP-6 and MIP-12) of these sample locations fall in the artesian zone, and are, therefore, classified as being in the solid aquifer matrix. MIP-6 and MIP-12 fall in the 0-1ft high water table zone. However, all of the samples collected at these locations were at depths greater than 1 ft bgs. Therefore, these samples are also classified as being in the solid aquifer matrix.

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

Supplemental Subsurface and Groundwater Samples. On March 10, 2009, 10 subsurface solid matrix samples were collected from the area north of the AST containment basin and at the furthest known extent of the VOC groundwater plume. The highest concentrations were observed in SO-3, which was collect in the truck spill area, just north of the AST containment area. With the exception of SO-5, all of these sample locations are within the artesian zone. Therefore, the samples collected from these locations are considered to be in the solid aquifer matrix. SO-5 is in the 0-1 ft high water table zone; however, the sample collected at this location was at 5 ft bgs and is, thus, also in the solid aquifer matrix.

2.6.2.2 Extent of Chlorinated Solvents

Figures 13 and 14 show the extent of total chlorinated ethanes and ethenes in these solid matrix samples, respectively. Where more than one sample was taken at a location, the highest total result is shown. The spatial distribution of chlorinated solvents in the solid subsurface matrix

exhibits a clear concentration gradient with highest values occurring adjacent to the north end of the AST containment area (near the area where the tanker truck spill occurred). Chlorinated solvent concentrations lessen with distance from this area. This area of high concentrations is in the artesian zone indicating that it is comprised of the solid aquifer matrix (without any vadose zone soil). The presence of source material in the solid aquifer matrix in this area will be determined by comparison of the analytical data to Csat values, which is explained further in Section 3.2.

2.6.2.3 Delineation

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. Figures 13 and 14 show that the solid matrix has been delineated to background in all directions, except for MW-11 on the west side. The only constituents detected in MW-11 is trichloroethene at a concentration of 0.008 mg/kg, which is below the Type 1 RRS for trichloroethene (0.5 mg/kg). Thus, the solid matrix material has been delineated to the Type 1 RRS in all directions.

2.7 Fate and Transport Summary

2.7.1 Physical Fate and Transport

The primary parent constituents of interest at this Property are TCA, PCE, TCE and their breakdown products. In their product state, TCA, PCE and TCE are dense nonaqueous phase liquids (DNAPLs), which can be classified as either mobile or immobile. In the groundwater, they are found in a dissolved state. Thus, there are three states of interest: mobile DNAPL, immobile DNAPL and dissolved-phase. Following release at the surface, DNAPLs actively spread primarily due to gravity. Vertical migration continues through the vadose zone and aquifer until the released DNAPL either loses continuity and becomes dispersed into isolated bodies (referred to as ganglia or globules) or reaches a less permeable layer where it either accumulates in a pool or flows semi-laterally along the layer. During downward migration, a globule trail of residual product and sorbed-phase contamination is left. The DNAPLs in this trail are incapable of further migration. Eventually, the entire DNAPL mass becomes immobile as the gravity head is lost.

When the groundwater comes in contact with a DNAPL, an aqueous phase plume is created and slowly fed by the sorbed, residual or pooled DNAPL. A residual-phase DNAPL source offers a large surface contact area (as compared to a pooled DNAPL) for contact with the groundwater, which results in a higher flux from the DNAPL state to the dissolved phase. This in turn results

in an accelerated rate of DNAPL depletion. Once in the dissolved-phase, the solvents are transported in the water primarily along in the direction of the groundwater flow, but also horizontally (cross- or up-gradient) due to dispersion and diffusion. The aqueous phase plumes become elongated in the hydraulically down-gradient direction and are subject to attenuation process such as dispersion, sorption, matrix diffusion and biodegradation (discussed in the next section). All aqueous plumes will eventually reach a steady-state condition where the leading edge and side edges no longer expand. For this Property, the predominant groundwater flow is laterally downgradient (to the northeast). Additionally, the rapid rise and fall of the water table gives evidence that the groundwater provides for transport of dissolved phase chlorinated solvents to the ground surface (upward migration) through artesian flow and very shallow water table conditions. The water table fluctuation brings dissolved phase contaminants into contact with the solid matrix, resulting in the contaminant becoming entrained and sorbed in the solid matrix. Thus, the fluctuating groundwater table is another transport mechanism occurring at the 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 downgradient wells indicate that the plume has migrated to the northeast (in the direction of groundwater flow). The dissolved plume has been delineated in the downgradient direction and has not migrated off the Property.

2.7.2 Biological Degradation

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

2.7.2.1 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 (Figures 10 and 11) show the decrease of parent products and subsequent increase in daughter products over time.

2.7.2.2 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. 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 5 shows the results of this screening at the Property using data collected during the October 2010 sampling event (laboratory data reports are shown in Appendix H). Results are shown for the primary wells within the plume (MW-3/3D, MW-4, and MW-5), two side-gradient wells (MW-12 and MW-14), and an upgradient well (MW-8) and downgradient well (MW-16). Based on the October 2010 results, the wells within the plume show strong evidence that reductive dechlorination is occurring, while the wells up-, side- or down-gradient of the plume show limited or inadequate evidence that reductive dechlorination is occurring, which is not unexpected since there are low to non-detectable concentrations of chlorinated solvents in these wells.

2.7.2.3 Microbial Testing

Tables 6 and 7 show the results of microbial testing at two different laboratories. Microbe Inotech Laboratories performed the first type of testing, which was based on doing anaerobic (Table 6) and aerobic (Table 7) cultures using plate counting techniques. The laboratory data report can been found in Appendix H. The first column shows the density (number of colony

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

Microbial Insights performed the second microbial testing technique, which is called CENSUS. The laboratory data report is presented in Appendix H. DNA is extracted from the groundwater samples and quantitative real-time polymerase chain reaction analysis is used to detect and quantify specific targets of interest (e.g., a specific microbial species). Samples from MW-3 and MW-5 were analyzed for *Dehalococcoides spp* and *Dehalobacter spp,* both of which are common dechlorinating bacteria. *Dehalococcoides spp* is the only known group of bacteria capable of completely degrading PCE to ethene. *Dehalobacter spp* is capable of dechlorinating PCE to cis-DCE and TCA to chloroethane. Thus, the presence of these species indicates that reductive dechlorination of PCE/TCE and TCA is favorable and likely occurring. The functional genes for *Dehalococcoides spp* were also analyzed to determine if the genes are present that are necessary for the different steps in the dechlorination chain. tceA reductase is the gene responsible for reducing TCE to DCE. Vinyl chloride reductase is the gene responsible for reducing vinyl chloride to ethene in multiple strains. Similarly, bvcA reductase is the gene responsible for vinyl chloride reducing to ethene, but only for a specific strain (BAV1) of *Dehalococcoides spp*. The absence of VCreductase and bvcA reductase would indicate that vinyl chloride would accumulate instead of further degrading to ethene. The results (Table 6) show that these organisms and genes are present in both wells, but are significantly higher in MW-5. This indicates that the conditions are favorable and most likely occurring for reductive dechlorination of PCE to ethene and TCA to chloroethane in both of these wells, but is much more likely in MW-5.

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

2.7.2.4 Modeling

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

2.8 Potential Receptors and Exposure Pathways

2.8.1 Setting

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

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

2.8.2 Human Health

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. However, the well is not directly downgradient from the Property (Tri-State, 2004b). 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.

2.8.2.1 Industrial Worker

As the area impacted by the release is mostly covered by concrete and/or gravel, exposure to vadose zone soil or potential source material in the solid aquifer matrix is not a complete exposure pathway for the industrial worker. However, due to the shallow depth of groundwater (often exhibiting artesian conditions where the groundwater plume is most concentrated), potential exposure of workers to groundwater at the surface will be evaluated under the VRP program for this Property.

Some chlorinated compounds have been detected in wells inside the manufacturing building. Thus, there is a potential for a vapor intrusion pathway. The EPD has requested that vapor intrusion modeling be conducted for the Property. The vapor intrusion pathway will be evaluated and discussed in a future Status Report. The applicability of vapor intrusion modeling in the context of an operating facility (where Occupational Safety and Health Administration (OSHA) worker safety programs may govern) will be considered. If it is appropriate under these circumstances, vapor intrusion modeling will be conducted and the results will be presented in a future Status Report.

2.8.2.2 Construction and Utility Workers

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

2.8.3 Ecological

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

3.0 PROPOSED REMEDIAL ACTION

Chlorinated solvents have been detected in solid matrices (both in the solid aqueous matrix and vadose zone soil) and in groundwater at the Property. Remedial action approaches are discussed below for groundwater and source material. As for soil, it is not known whether conditions at the Property require remedial action as non-residential RRS values have not been established and compared to the soils data (this will be done at a later date).

3.1 Proposed Groundwater Remedial Action

The proposed remedial action for this Property consists of Monitored Natural Attenuation (MNA). MNA is a remedial option where a combination of sorption, dispersion, volatilization, abiotic degradation and biodegradation result in the degradation of chemicals of concern. Several conditions (presented in Section 2.7.2) indicate that reductive dechlorination is both favorable and occurring at the Property:

- Daughter products are present in the groundwater and time series graphs demonstrate the expected trends of decreasing parent compound concentrations followed by increasing daughter compound concentrations.

- The EPA's Anaerobic Biodegradation screening using VOC and MNA analytical results show there is strong evidence for reductive dechorination in the wells in the plume.

- Microbial testing of water collected from the plume shows the presence of organisms that are capable of degrading PCE and TCA. Additionally, the species and functional genes that are capable of completely degrading PCE to ethene and TCA to chloroethane are present.

- Model simulations using BIOCHLOR (see Appendix J) provides another line of evidence that reductive dechlorination is occurring at the Property.

Although reductive dechlorination is the primary mechanism involved in the MNA remedial action, other mechanisms are simultaneously occurring to supplement the reduction in plume size and concentrations. As mentioned previously, aerobic microorganisms have been identified in the wells in the plume, which indicates that biological degradation through aerobic means may be occurring in aerobic portions of the subsurface. Additionally, the EHC® injections performed in 2007 provide a supplemental means of increasing the rate at which chemical degradation is occurring. As mentioned previously, the BIOCHLOR model (see Appendix J) was calibrated using empirical data collected prior to the injections. Thus, the model assumes that no injections

occurred. Model simulations for the years following the injections result in estimated concentrations of parent compounds (TCA, PCE and TCE) that are higher than seen in empirical data collected. This indicates that the injections may have resulted in an increased rate of chemical degradation. Therefore the model conservatively estimates future concentrations. MNA will control the size of and reduce the concentrations in the plume, but the residual impact of the EHC® injections and aerobic processes may work in conjunction with reductive dechlorination to achieve reduction of the plume faster.

It is anticipated that after a demonstration period, the Property will be able to certify compliance of groundwater to Type 1 RRSs at the Point of Exposure. According to the VRP regulations, the Point of Exposure is the nearest of the following: the closest existing downgradient drinking water well, the likely nearest future downgradient drinking water well, or at a hypothetical point of exposure 1000 feet downgradient of the plume edge. As mentioned previously, the nearest known drinking water well is over a mile from the Property and is cross-gradient instead of downgradient. The Property is surrounded by undeveloped property and commercial properties, which are serviced by a public water supply. Thus, the Point of Exposure for this Property is a hypothetical point 1000 feet downgradient from the plume. It is proposed that the Point of Demonstration be monitoring well MW-16, which is located at the property boundary, approximately 520 feet downgradient from the location of the spill and 230 feet downgradient from the edge of the plume. Groundwater concentrations in MW-16 are currently below the Type 1 RRSs and BIOCHLOR model simulations (Appendix J) predict that concentrations in this well will not exceed Type 1 RRSs in the future.

3.2 Proposed Source Material Remediation

As mentioned previously, chemicals present in the solid matrices will be compared to their respective Csat threshold concentrations to determine areas that constitute source material and, therefore, may warrant remedial action. Csat values will be selected for each constituent from Table 2 that has been detected in the solid aquifer matrix. The Csat values will either be set as the values presented in the EPA's RSL Table or will be calculated based on site-specific variables if the values in the RSL tables are not applicable. Samples with results that exceed Csat values will be considered source material and the area where the samples were collected will be considered the source zone.

Remedial action will be evaluated for the source zone. The specific remedial action planned for this area will be presented in a future Status Report. The two most likely technologies that will be evaluated include chemical oxidation and direct removal of the .

3.3 Proposed Schedule

The following phases are proposed to implement the proposed remedial action:

Phase 1. Monitoring Well Installation

As mentioned previously, monitoring wells MW-1 and MW-1D are inoperable and vertical delineation of groundwater has not been completed. As such, the following wells will be installed:

- Replacement of MW-1 with a well located further west, within the plume.
- Replacement of MW-1D, with a deep bedrock well located either near the relocated MW-1, near MW-5 or near MW-3/3D.
- Another deep bedrock well may be installed if necessary to achieve delineation. One such well may be installed downgradient of MW-15.

Phase 2. Source Zone Evaluation and Remedial Action

During this phase the source area will be determined by comparison of the solid aquifer matrix analytical results to Csat values. An appropriate remedial action (if needed) will be selected to address this source zone. Approaches such as excavation and chemical oxidation will be considered and the selected approach will be presented in an updated CSM that will accompany a future Status Report. Remedial action of this source zone would serve to reduce the overall VOC mass in the subsurface and therefore achieve some amount of positive benefit in terms of flushing of groundwater vertically in this area.

Following submission of the Status Report containing the source zone evaluation, the selected source zone remedial action will be implemented.

Phase 3. Groundwater Monitoring

Groundwater monitoring will be conducted for a minimum of two years. Two years will be sufficient as data has already been collected each year since 2004. This will give a total of nine years of data. The monitoring will include:

- Annual groundwater monitoring of all wells for VOCs.
- Annual groundwater analysis for MNA parameters at specific wells (MW-3, MW-3D, MW-4, MW-5).

- Semi-annual groundwater monitoring of specific wells that may be used in the computer model (MW-3, MW-3D, MW-4, MW-5, MW-15, MW-1 and MW-16) for VOCs.
- Model calibration. The model will be calibrated and adjusted (if needed) based on new data. The model will be used to simulate future conditions at the Point of Demonstration.
- Semi-annual Status Reports. Results of the groundwater monitoring and modeling will be summarized in semi-annual status reports to the EPD.

Phase 5. Verification of Remedial Action

5.1 Source Zone

If source zone remedial action is taken, samples of the solid aquifer matrix will be taken at accessible locations in the source zone to confirm that the source material (solid matrix concentrations above the Csat) has been removed.

5.2. Groundwater

It is anticipated that following the two-year groundwater monitoring period, the Property will be able to certify compliance with RRSs at the Point of Exposure using analytical results collected from the Point of Demonstration well (MW-16) supported by groundwater modeling. After the two-year monitoring period, a CSR will be submitted and groundwater monitoring will cease. The CSR will also contain a human health risk evaluation as discussed in Section 2.8 and the data generated from additional delineation. If the Property cannot certify compliance, either additional groundwater monitoring and/or additional corrective action (e.g., enhanced MNA) will be considered. In this case, the fourth semi-annual report will include the proposed additional measures.

Projected Milestone Schedule

The anticipated schedule (shown in Table 8) is benchmarked according to acceptance into the VRP. For example, the source area evaluation will occur in the first quarter following acceptance into the program.

4.0 REFERENCES

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APPENDIX A

Voluntary Remediation Program Application and Checklist

Voluntary Remediation Plan Application Form and Checklist

VRP APPLICANT INFORMATION					
COMPANY NAME	CEA, LLC				
CONTACT PERSON/TITLE	W. Craig Baker				
ADDRESS	1640 Republic Center, 633 Chestnut Street, Chattanooga, TN 37450				
PHONE	423-755-0888	**FAX**	423-755-0870	**E-MAIL**	cbaker@riverassociatesllc.com

GEORGIA CERTIFIED PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER OVERSEEING CLEANUP					
NAME	Kirk Kessler			**GA PE/PG NUMBER**	PG 000685
COMPANY	Environmental Planning Specialists				
ADDRESS	900 Ashwood Parkway; Suite 350				
PHONE	404-315-9113	**FAX**	404-315-8509	**E-MAIL**	kkessler@envplanning.com

APPLICANT'S CERTIFICATION

In order to be considered a qualifying property for the VRP:

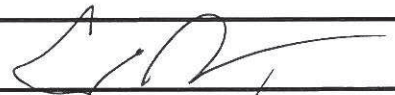
(1) The property must have a release of regulated substances into the environment;
(2) The property shall not be:
- (A) Listed on the federal National Priorities List pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601.
- (B) Currently undergoing response activities required by an order of the regional administrator of the federal Environmental Protection Agency; or
- (C) A facility required to have a permit under Code Section 12-8-66.

(3) Qualifying the property under this part would not violate the terms and conditions under which the division operates and administers remedial programs by delegation or similar authorization from the United States Environmental Protection Agency.
(4) Any lien filed under subsection (e) of Code Section 12-8-96 or subsection (b) of Code Section 12-13-12 against the property shall be satisfied or settled and released by the director pursuant to Code Section 12-8-94 or Code Section 12-13-6.

In order to be considered a participant under the VRP:
- (1) The participant must be the property owner of the voluntary remediation property or have express permission to enter another's property to perform corrective action.
- (2) The participant must not be in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the director.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision 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.

I also certify that this property is eligible for the Voluntary Remediation Program (VRP) as defined in Code Section 12-8-105 and I am eligible as a participant as defined in Code Section 12-8-106.

APPLICANT'S SIGNATURE			
APPLICANT'S NAME/TITLE (PRINT)	CRAIG BAKER / VICE PRESIDENT	**DATE**	5-22-11

QUALIFYING PROPERTY INFORMATION			
TAX PARCEL ID	99-13-8 and 99-13-9	PROPERTY SIZE (ACRES)	15.37 acres
PROPERTY ADDRESS	300 Cross Plains Blvd		
CITY	Dalton	COUNTY	Whitfield
LATITUDE	34°40'28.74"N	LONGITUDE	84°58'11.35"W
PROPERTY OWNER(S)	Barrett Properties, LLC	PHONE #706-259-2586	
MAILING ADDRESS	c/o J. Tom Minor IV, Minor Bell Neal, 745 College Drive		
CITY	Dalton	STATE/ZIP	GA 30720

ITEM #	DESCRIPTION OF REQUIREMENT	Location in VRP (i.e. pg., Table #, Figure #, etc.)	For EPD Comment Only (Leave Blank)
1.	**$5,000 APPLICATION FEE** IN THE FORM OF A CHECK PAYABLE TO THE GEORGIA DEPARTMENT OF NATURAL RESOURCES.	**Enclosed**	
2.	**WARRANTY DEED(S)** FOR QUALIFYING PROPERTY.	**Appendix B**	
3.	**TAX PLAT** OR OTHER FIGURE INCLUDING QUALIFYING PROPERTY BOUNDARIES, ABUTTING PROPERTIES, AND TAX PARCEL IDENTIFICATION NUMBER(S).	**Appendix B**	
4.	**ONE (1) PAPER COPY AND TWO (2) COMPACT DISC (CD) COPIES** OF THE VOLUNTARY REMEDIATION PLAN IN A SEARCHABLE PORTABLE DOCUMENT FORMAT (PDF).		
5.	The VRP participant's initial plan and application must include , using all reasonably available current information to the extent known at the time of application, a graphic three-dimensional preliminary conceptual site model (CSM) including a preliminary remediation plan with a table of delineation standards, brief supporting text, charts, and figures (no more than 10 pages, total) that illustrates the site's surface and subsurface setting, the known or suspected source(s) of contamination, how contamination might move within the environment, the potential human health and ecological receptors, and the complete or incomplete exposure pathways that may exist at the site; the preliminary CSM must be updated as the investigation and remediation progresses and an up-to-date CSM must be included in each semi-annual status report submitted to the director by the participant; a **PROJECTED MILESTONE SCHEDULE** for investigation and remediation of the site, and after enrollment as a participant, must update the schedule in each semi-annual status report to the director describing implementation of the plan during the preceding period. A Gantt chart format is preferred for the milestone schedule. The following four (4) generic milestones are required in all initial plans with the results reported in the participant's next applicable semi-annual reports to the director. The director may extend the time for or waive these or other milestones in the participant's plan where the director determines, based on a showing by the participant, that a longer time period is reasonably necessary:	**Sections 2 and 3 and associated Tables and Figures**	

5.a.	Within the first 12 months after enrollment, the participant must complete horizontal delineation of the release and associated constituents of concern on property where access is available at the time of enrollment;	**Completed – Section 2.0**	
5.b.	Within the first 24 months after enrollment, the participant must complete horizontal delineation of the release and associated constituents of concern extending onto property for which access was not available at the time of enrollment;	**NA**	
5.c.	Within 30 months after enrollment, the participant must update the site CSM to include vertical delineation, finalize the remediation plan and provide a preliminary cost estimate for implementation of remediation and associated continuing actions; and	**Table 6 (will be incorporated into CSR or Third Semi-Annual Report)**	
5.d.	Within 60 months after enrollment, the participant must submit the compliance status report required under the VRP, including the requisite certifications.	**Table 6**	
6.	**SIGNED AND SEALED PE/PG CERTIFICATION** AND SUPPORTING DOCUMENTATION: "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 685 — 5/27/11 Printed Name and GA PE/PG Number — Date Signature and Stamp	**See attached summary of hours**	

Environmental Planning Specialists, Inc.
Time by Job Detail
All Transactions

Notes	Date	Name	Duration
River Associates:Dalton Adhesives:VRP Application			
P-Principal:P-Meeting	07/26/2010	Kessler, Kirk J.	4.00
		Total July 2010	**4.00**
P-Principal:P-Teleconference	09/20/2010	Kessler, Kirk J.	1.00
P-Principal:P-Document Preparation	09/24/2010	Kessler, Kirk J.	1.00
P-Principal:P-Document Preparation	09/26/2010	Kessler, Kirk J.	1.00
P-Principal:P-Document Preparation	09/30/2010	Kessler, Kirk J.	3.00
		Total September 2010	**6.00**
P-Principal:P-Teleconference	10/01/2010	Kessler, Kirk J.	2.25
P-Principal:P-Planning / Preparation	10/17/2010	Kessler, Kirk J.	2.00
P-Principal:P-Document Preparation	10/18/2010	Kessler, Kirk J.	6.00
P-Principal:P-Document Preparation	10/26/2010	Kessler, Kirk J.	4.00
P-Principal:P-Document Preparation	10/27/2010	Kessler, Kirk J.	3.00
P-Principal:P-Document Preparation	10/28/2010	Kessler, Kirk J.	2.00
P-Principal:P-Document Preparation	10/29/2010	Kessler, Kirk J.	1.00
		Total October 2010	**20.25**
P-Principal:P-Document Review	04/11/2011	Kessler, Kirk J.	1.00
P-Principal:P-Teleconference	04/12/2011	Kessler, Kirk J.	1.50
P-Principal:P-Document Review	04/13/2011	Kessler, Kirk J.	1.00
P-Principal:P-Document Review	04/17/2011	Kessler, Kirk J.	1.00
P-Principal:P-Document Review	04/18/2011	Kessler, Kirk J.	1.00
P-Principal:P-Teleconference	04/18/2011	Kessler, Kirk J.	1.00
		Total April 2011	**6.50**
P-Principal:P-Document Preparation	05/03/2011	Kessler, Kirk J.	1.00
P-Principal:P-Document Preparation	05/05/2011	Kessler, Kirk J.	1.00
P-Principal:P-Document Preparation	05/12/2011	Kessler, Kirk J.	2.00
P-Principal:P-Document Preparation	05/13/2011	Kessler, Kirk J.	3.00
P-Principal:P-Document Preparation	05/18/2011	Kessler, Kirk J.	3.00
P-Principal:P-Document Preparation	05/20/2011	Kessler, Kirk J.	1.50
P-Principal:P-Document Preparation	05/26/2011	Kessler, Kirk J.	8.00
		Total May 2011	**19.50**

APPENDIX B

Tax Maps and Warrantee Deeds

BOOK 3914 OF 0113

FILED & RECORDED

TIME: 9:00

DATE: 4-18-03

DEED BOOK: 3914

PAGE: 113-115

BETTY NELSON, C.S.C.

WHITFIELD COUNTY, GA

[Space above this line for recording data.]

After Recording Return to:
John T. Minor, IV
Minor, Bell & Neal
P.O. Box 2586
Dalton, GA 30722-2586

9:00 18 MAR 2

Whitfield County, Georgia
Real Estate Transfer Tax
Paid $ 8,000.00
Date 4/18/03
Betty Nelson
Clerk of Superior Court

WARRANTY DEED

Georgia, Whitfield County

THIS INDENTURE made this 16th day of April, 2003, between **Capitol USA, LLC, a Tennessee limited liability company, successor by merger to Eshco, L.L.C.**, Grantor, and **Barrett Properties, LLC**, A Georgia Limited Liability Company, Grantee.

The words "Grantee" and "Grantor" whenever used herein shall include all individuals, corporations and any other persons or entities, and all the respective heirs, executors, administrators, legal representatives, successors and assigns of the parties hereto, and all those holding under either of them, and the pronouns used herein shall include, when appropriate, either gender and both singular and plural, and the grammatical construction of sentences shall conform thereto. If more than one party shall execute this deed each Grantor shall always be jointly and severally liable for the performance of every promise and agreement made herein.

WITNESSETH: That the GRANTOR, for and in consideration of the sum of TEN DOLLARS AND OTHER VALUABLE CONSIDERATIONS, in hand paid at or before the sealing and delivery of these presents, the receipt of which is hereby acknowledged, has bargained and sold, and by these presents does grant, bargain, sell and convey unto the said GRANTEE the property described in Exhibit "A" attached hereto, the terms of which are made a part hereof.

THIS CONVEYANCE is made subject to all zoning ordinances, easements, and restrictions of record insofar as the same may lawfully affect the above-described property.

TO HAVE AND TO HOLD the said tract of land, with all and singular the rights, members and appurtenances thereof, to the same being, belonging, or in any wise appertaining, to the only proper use, benefit and behoof of the said GRANTEE forever, in Fee Simple. The said GRANTOR will warrant and forever defend the right and title to the above-described property unto the said GRANTEE against the lawful claims of all persons.

IN WITNESS WHEREOF, this deed has been duly executed and sealed by Grantor the day and year first above written.

Capitol USA, LLC

BY: _____ **(SEAL)**
Mike D. Brookshire, Secretary/Treasurer

Signed, Sealed and delivered
in the presence of:

_____
Unofficial Witness

_____
Notary Public (Please affix seal)
My commission expires: 8-9-2004

File No. 2003030256
F:\wp\REAL\Documents\2003\Warranty and Other Deeds\Capitol - Barrett.DOC

EXHIBIT "A"

All that tract or parcel of land lying and being in Land Lot No. 99 in the13th District and 3rd Section of Whitfield County, Georgia, and being Tract Nos. 13, 14 and 15 and being more particularly described according to a plat of survey prepared by Martin Smith, Jr., Georgia Registered Land Surveyor No. 2649, and being more particularly described according to said survey as follows:

BEGINNING at an iron pin at the intersection of the southeast right of way line of Cross Plains Industrial Boulevard (80' R/W) and the south line of said Land Lot No. 99; thence running north 30 degrees 07 minutes east, along the southeast right of way line of Cross Plains Industrial Boulevard, a distance of 298.23 feet; thence running in a northeasterly direction, along and the southeast right of way line of Cross Plains Industrial Boulevard, along an arc to the right, an arc distance of 711.46 feet, the chord of said arc being north 60 degrees 15 minutes 30 seconds east a chord distance of 679.09 feet; thence running south 89 degrees 35 minutes 51 seconds east, along and the south right of way line of Cross Plains Industrial Boulevard, a distance of 593.84 feet to an iron pin located at the northeast corner of said Tract No. 13; thence leaving Cross Plains Industrial Boulevard and running south 00 degrees 23 minutes 48 seconds west a distance of 599.98 feet to an iron pin on the south line of said Land Lot No. 99; thence running south 89 degrees 36 minutes west, along the south line of said land lot, 1,328.98 feet to the point of beginning.

For prior title, see Deed Book 2742 Page 111, Whitfield County, Georgia Land Records.

CAPITOL ADHESIVES, INC.

LOTS 13-15, CROSS PLAINS INDUSTRIAL PARK
IN LAND LOT 99, 13TH. DISTRICT,
3RD. SECTION, WHITFIELD COUNTY, GEORGIA

N

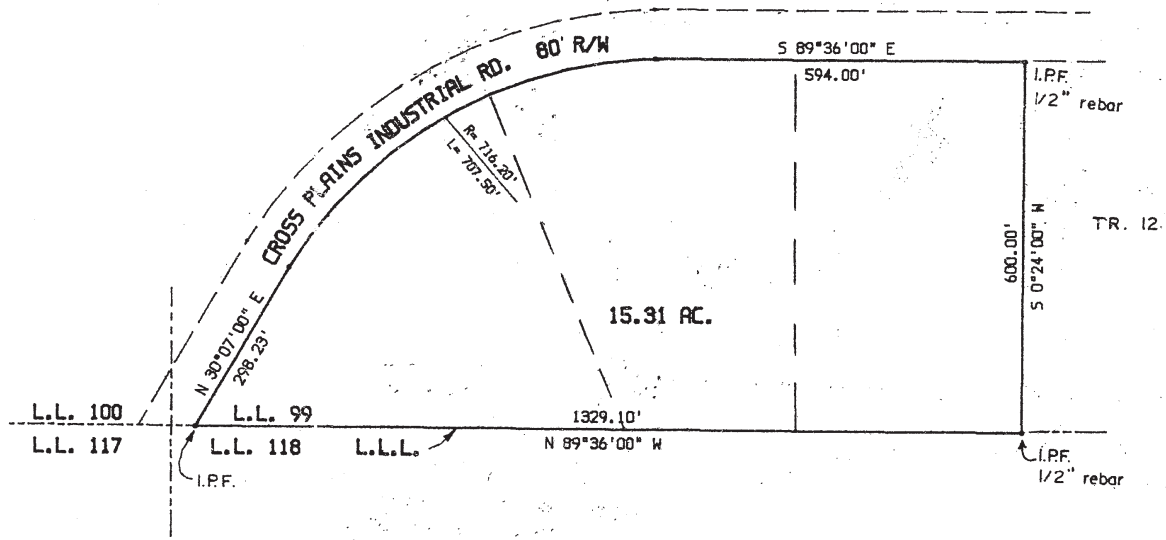
MAGNETIC

0 200 400 600

GRAPHIC SCALE

SCALE 1" = 200'

DEC. 16, 1992



I hereby certify that I have surveyed the property shown hereon and that the property [redacted] (is not) located in a flood zone as shown by maps prepared by the United States Corps of Engineers for use in the administration of the HUD Flood Insurance Program. [redacted]

E. Martin Smith

E. Martin Smith DALTON, GEORGIA
REGISTERED LAND SURVEYOR, NO. 923

E. MARTIN SMITH & ASSOCIATES P. C.
PROFESSIONAL LAND SURVEYORS
P. O. BOX 3514, DALTON, GA. 30721
(404) 278-6413
martin smith

GEORGIA REGISTERED No. 923 PROFESSIONAL LAND SURVEYOR E. M. SMITH

The field data upon which this plat is based has a closure precision of one foot in 9991 feet and an angular error of .01" per angle point, and was adjusted using the compass rule.

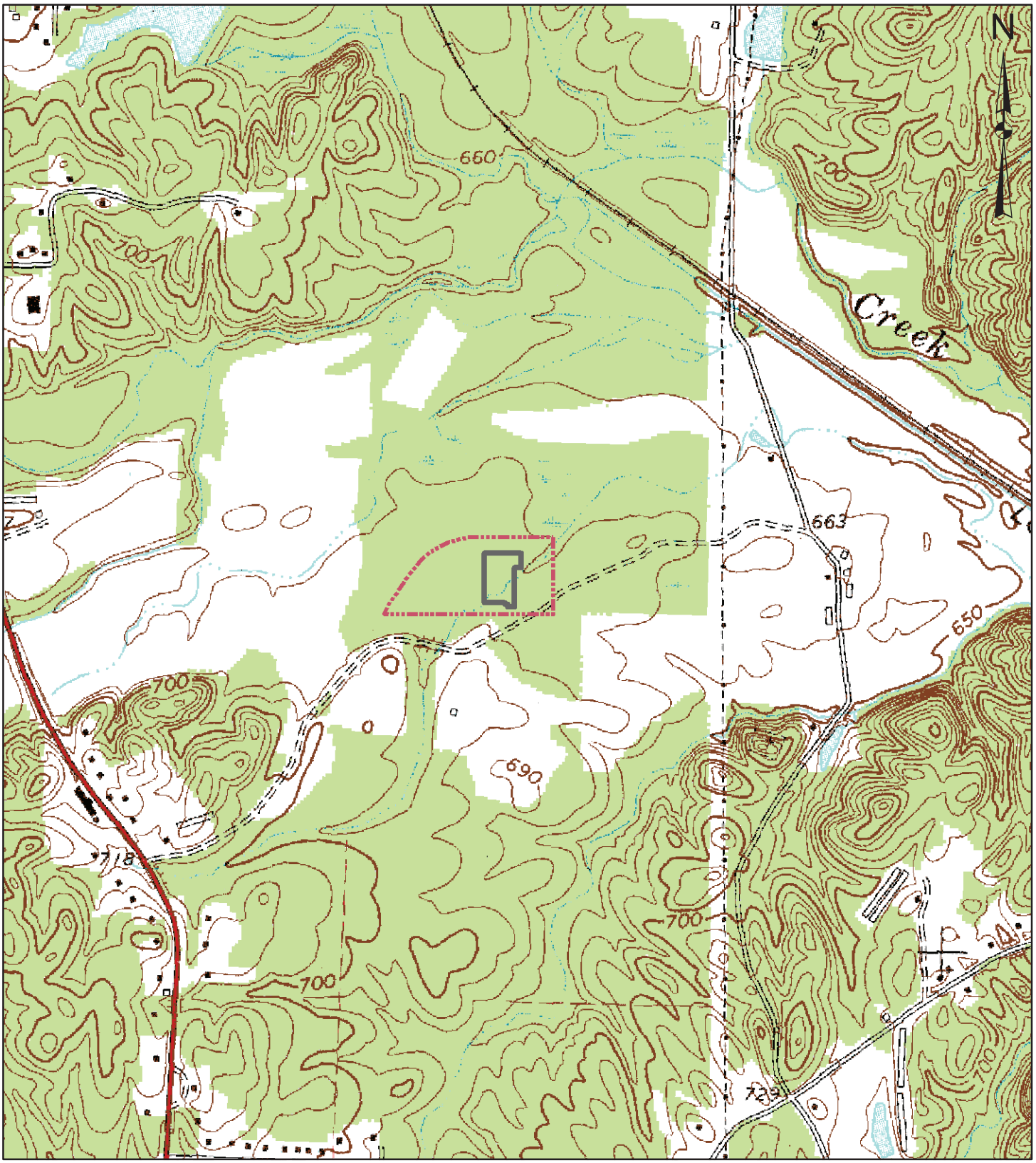
This plat has been calculated for closure and is found to be accurate within one foot in 10,000 feet.

Field work was done by using a GTS2 transit and a EDM [redacted].

APPENDIX C

Figures

Capitol Adhesives
Site Location



Source: USGS Quadrangle Dalton South, Georgia 1982

Legend

Building

Property Boundary

Capitol Adhesives
Aerial of Property and Site Features



0 37.5 75 150
Feet

Legend

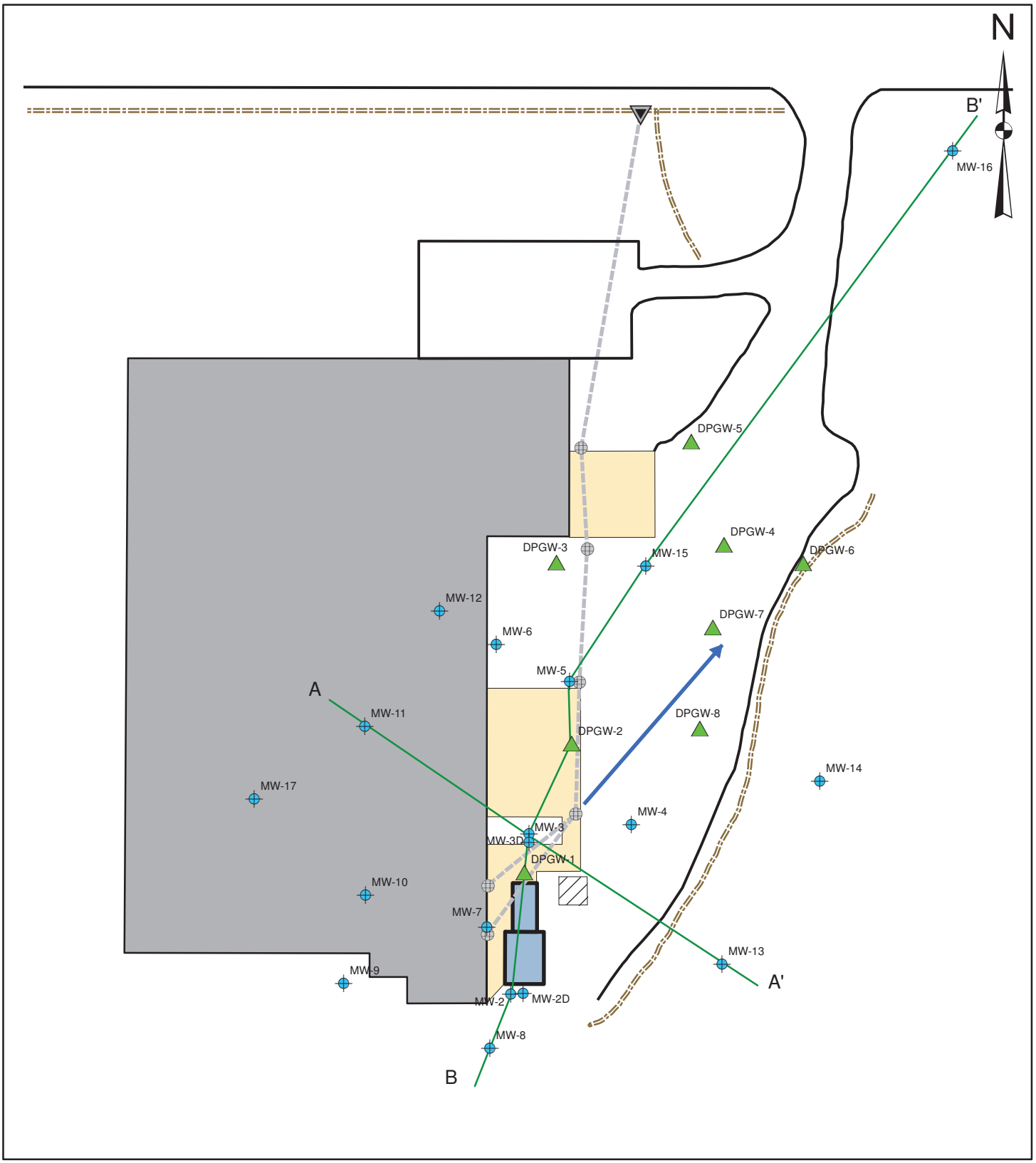
- AST Containment Area
- Location of Spill (approx)
- Storm Water Outfall
- Open Drains
- Subgrade Storm/Drain Lines
- Drainage Ditch
- Approximate Property Boundary

Source: FlashEarth 2008

Environmental Planning Specialists, Inc.
G:\River Associates\Capitol Adhesives\VRP\GIS\Fig2_Aerial.mxd

Figure No.2

Capitol Adhesives
Cross-Section Location Map



0 50 100
Feet

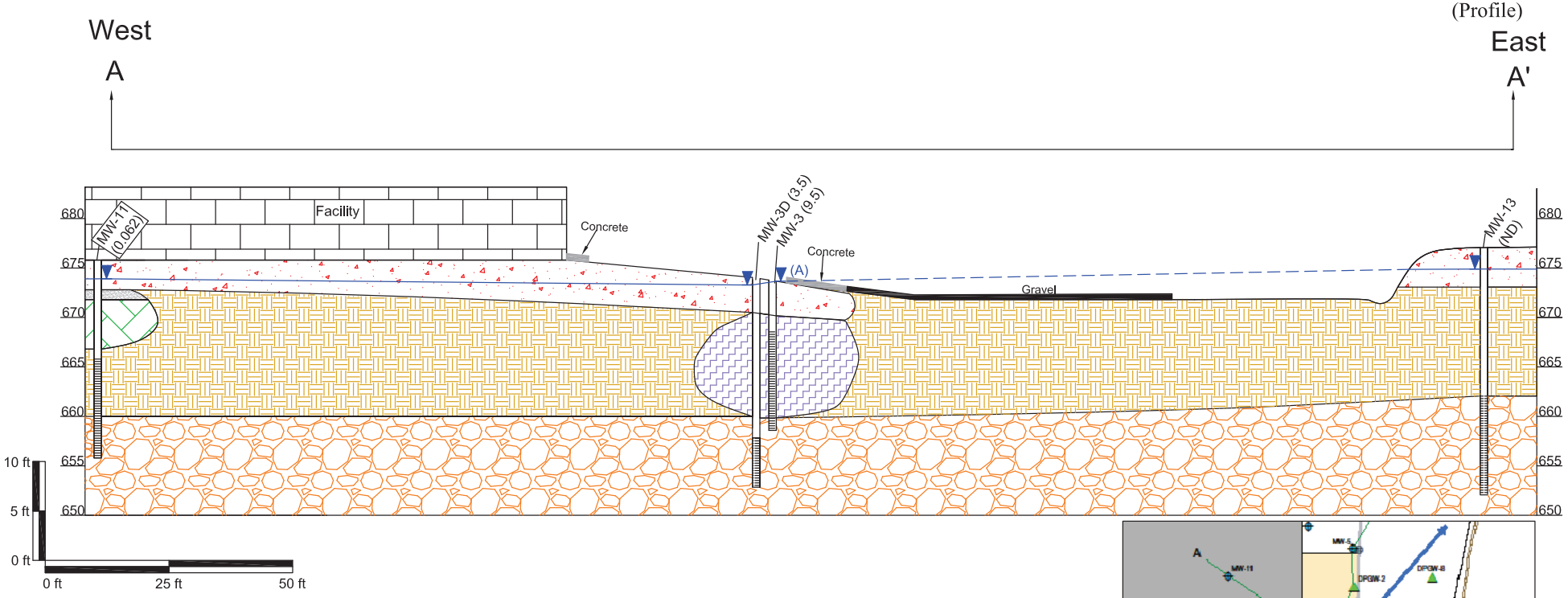
Legend

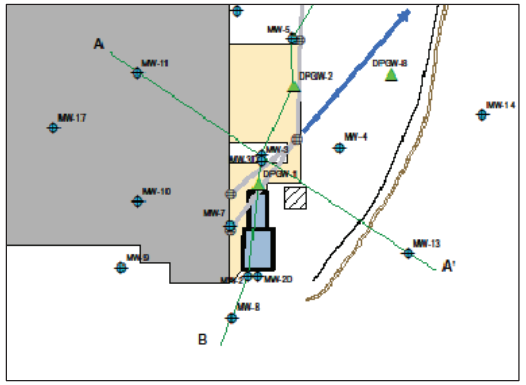
- MW Monitoring Well Location
- DPGW Direct-push Groundwater Sampling Location
- General Direction of Groundwater Flow
- Surface Drainage Ditch
- Transportation Area
- Subgrade Storm/Drain Lines
- Open Drains
- Storm Water Outfall
- AST Containment
- Facility
- Concrete Surface
- Propane Tanks

Environmental Planning Specialists, Inc.
G:\River Associates\Capitol Adhesives\VRP\GIS\Fig3_X Section.mxd

Figure No. 3

Lithological
Cross Section A-A'
(Profile)





Plan View (Not to scale)

Legend

- Fill Material
- Weathered Shale
- Clayey Fine to Coarse Sand with Gravel
- Fine to Coarse Sandy Clay with Trace Gravel
- Shaly Clay
- Silty Fine Sand
- (9.8) Total chlorinated ethanes and ethenes (mg/L) in Oct. 2010; includes TCA, DCA, CA, PCE, TCE, DCE, VC;
- Historical "High" recorded water table
- (A) Well was artesian at time of gauging

EPS
EPS is about the business of the environment.
Environmental Planning Specialists, Inc.
900 Ashwood Parkway, Suite 350
Atlanta, GA 30338
Phone: (404) 315-9113
Fax: (404) 315-8509

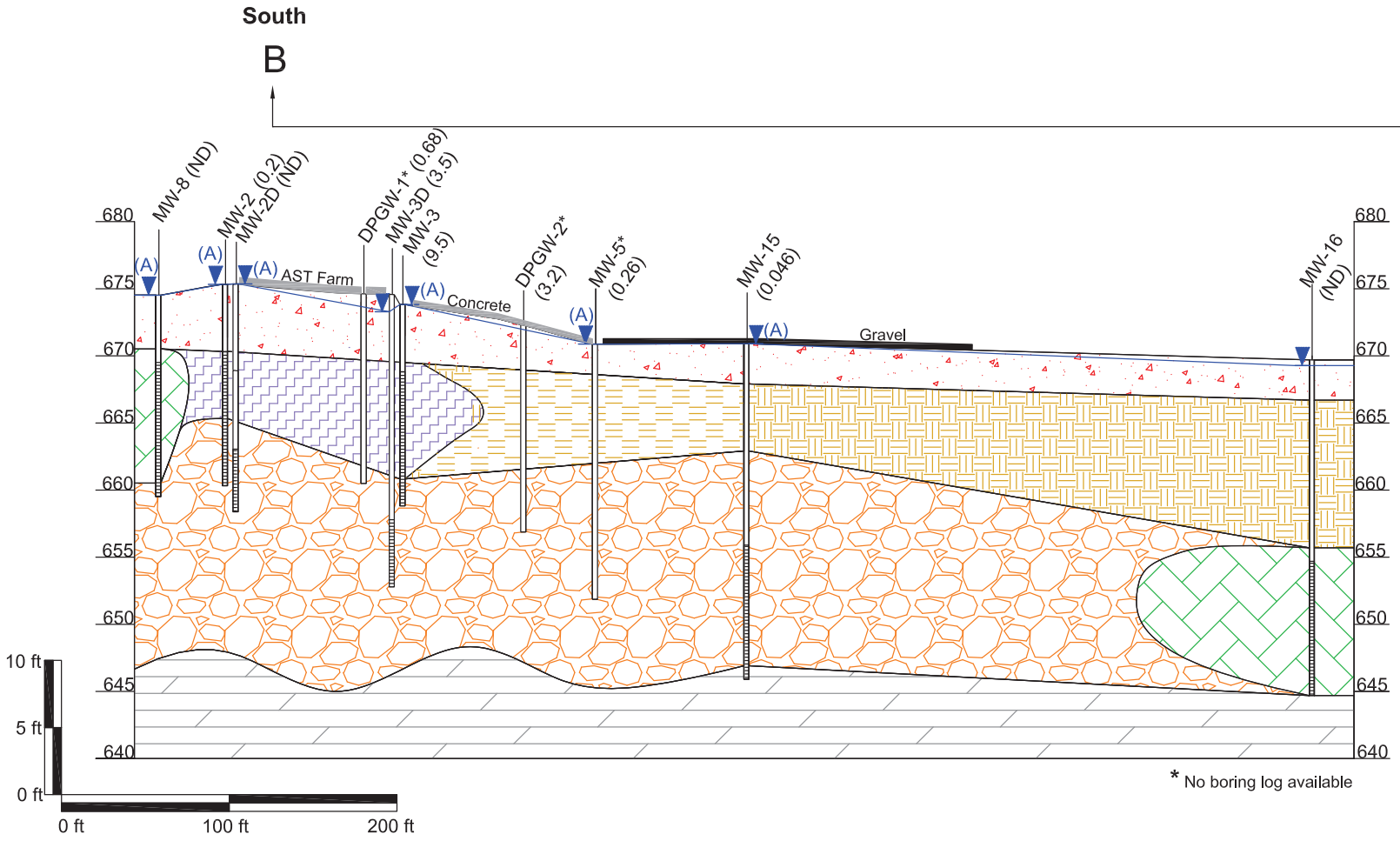
DES			DATE: May 2011
DRN	JD	10/10	
CHK			
REV	FR	5/11	
APP			
PROJ MGR	TB	10/10	
OPER			

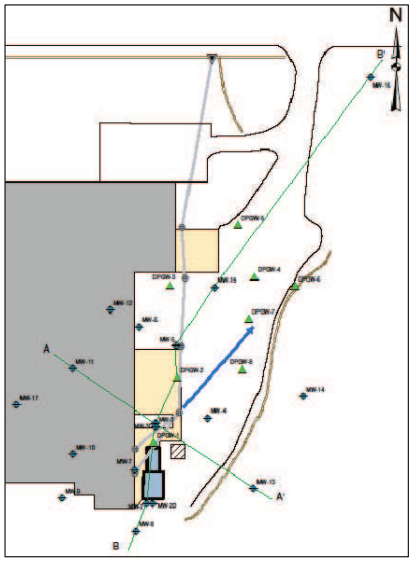
Capitol Adhesives
300 Cross Plains Blvd.
Dalton, GA 30721

Lithological Cross-Section
A-A'

FIGURE
4

Lithological Cross Section B-B' (Profile)





Plan View (Not to scale)

Legend

- Fine to Coarse Sandy Clay with Trace Gravel
- Weathered Shale
- Clayey Fine to Coarse Sand with Gravel
- Fill Material
- Shale Rock
- Shaly Clay
- (3.2) Total chlorinated ethanes and ethenes (mg/L) in Oct. 2010; includes TCA, DCA, CA, PCE, TCE, DCE, VC;
- Historical "High" recorded water table
- (A) Well was artesian at time of gauging

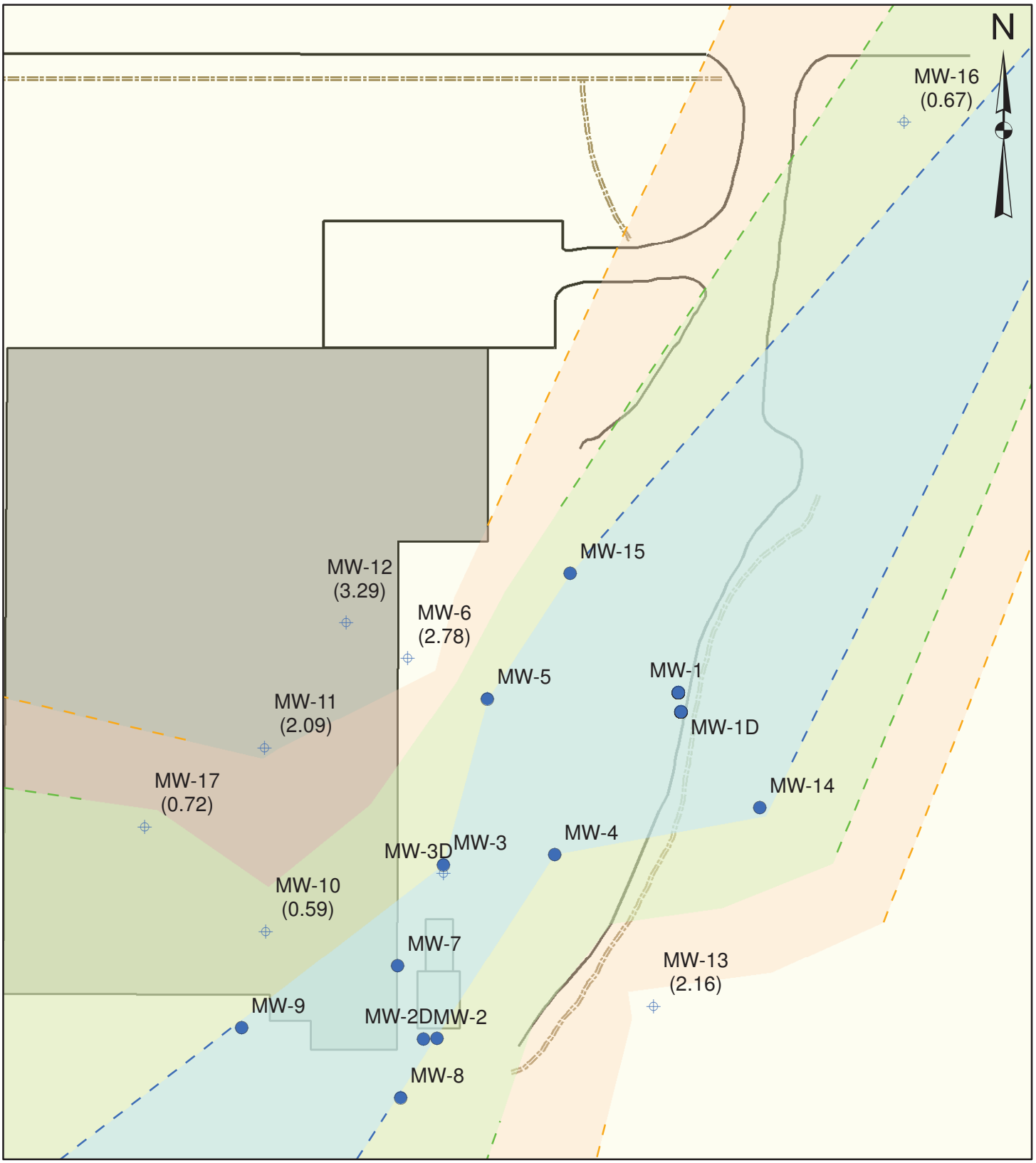
EPS
EPS is about the business of the environment.
Environmental Planning Specialists, Inc.
900 Ashwood Parkway, Suite 350
Atlanta, GA 30338
Phone: (404) 315-9113
Fax: (404) 315-8509

DES			DATE: May 2011
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 5

Capitol Adhesives
Artesian Wells and High Water Table Zones



Legend

- Artesian Wells
- Non-Artesian Wells (depth to groundwater in feet)
- Dashed Lines Where Inferred

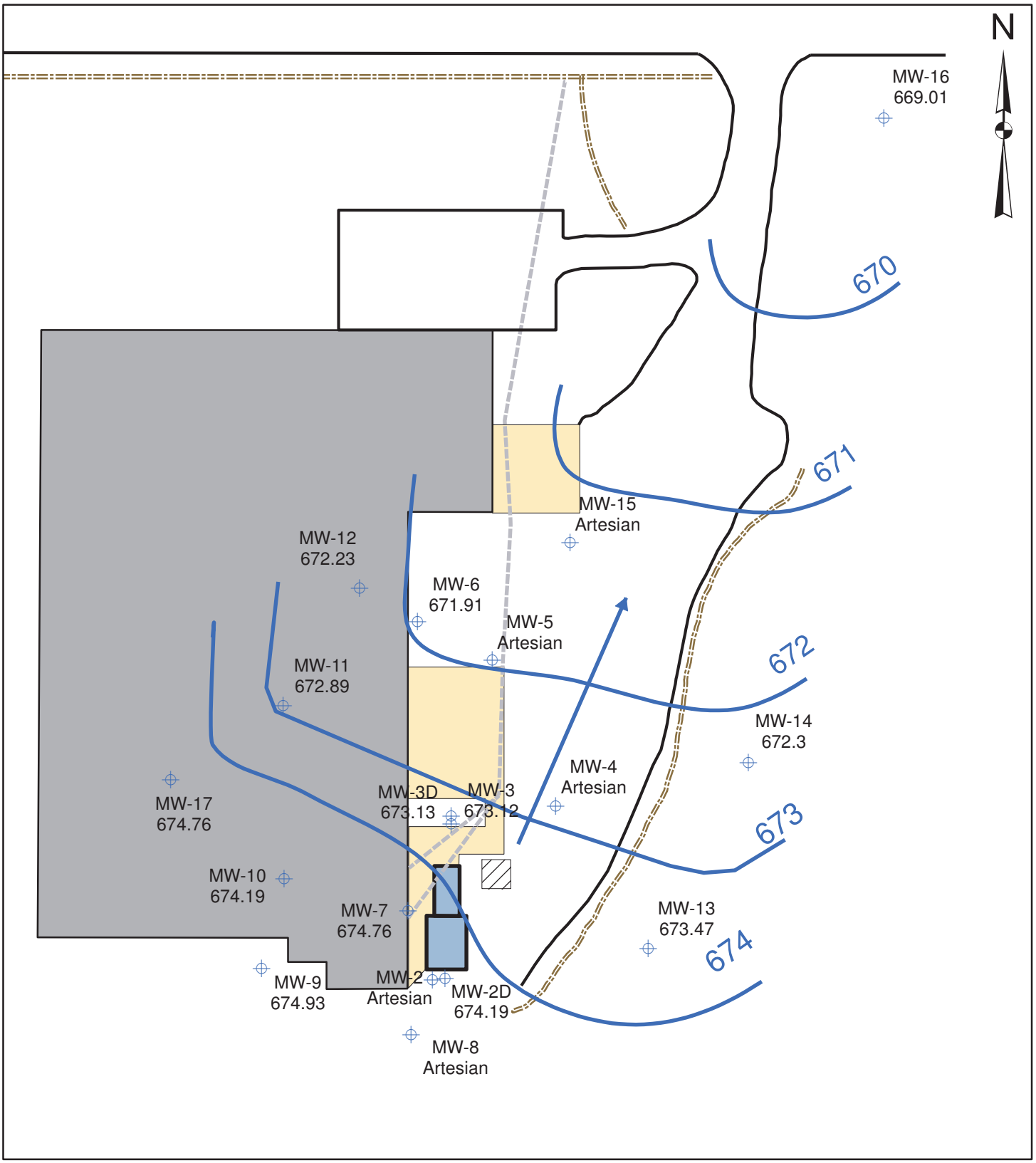
High Water Table Zone

- Artesian Zone
- 0-1' High Water Table Zone
- 1-2' High Water Table Zone
- >2' High Water Table Zone

Environmental Planning Specialists, Inc.
G:\River Associates\Capitol Adhesives\VRP\Revised\GIS\Artesian wells.mxd

Figure No. 6

Capitol Adhesives
Potentiometric Surface Map of Surficial Aquifer (May 6, 2011)

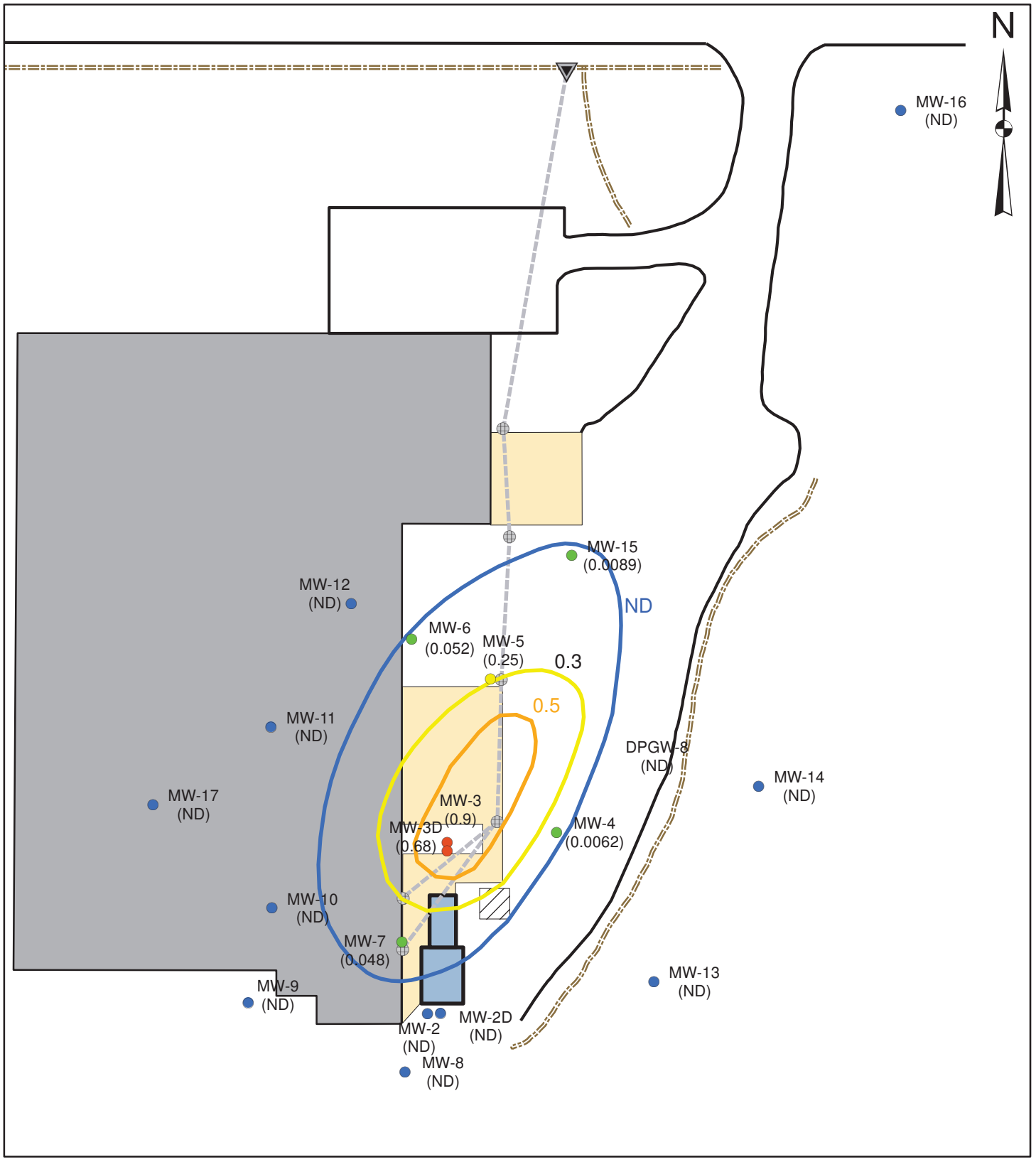


0 50 100
Feet

NOTE: [672.29] Elevation from MW-17 not used due to likely error in datum elevation.

- Potentiometric Surface Elevation (ft msl)
- Surface Drainage Ditch
- Transportation Area
- Subgrade Storm/Drain Lines
- AST Containment
- Facility
- Concrete Surface
- Propane Tanks

Capitol Adhesives
Groundwater Total Chlorinated Ethanes* (October 2010)



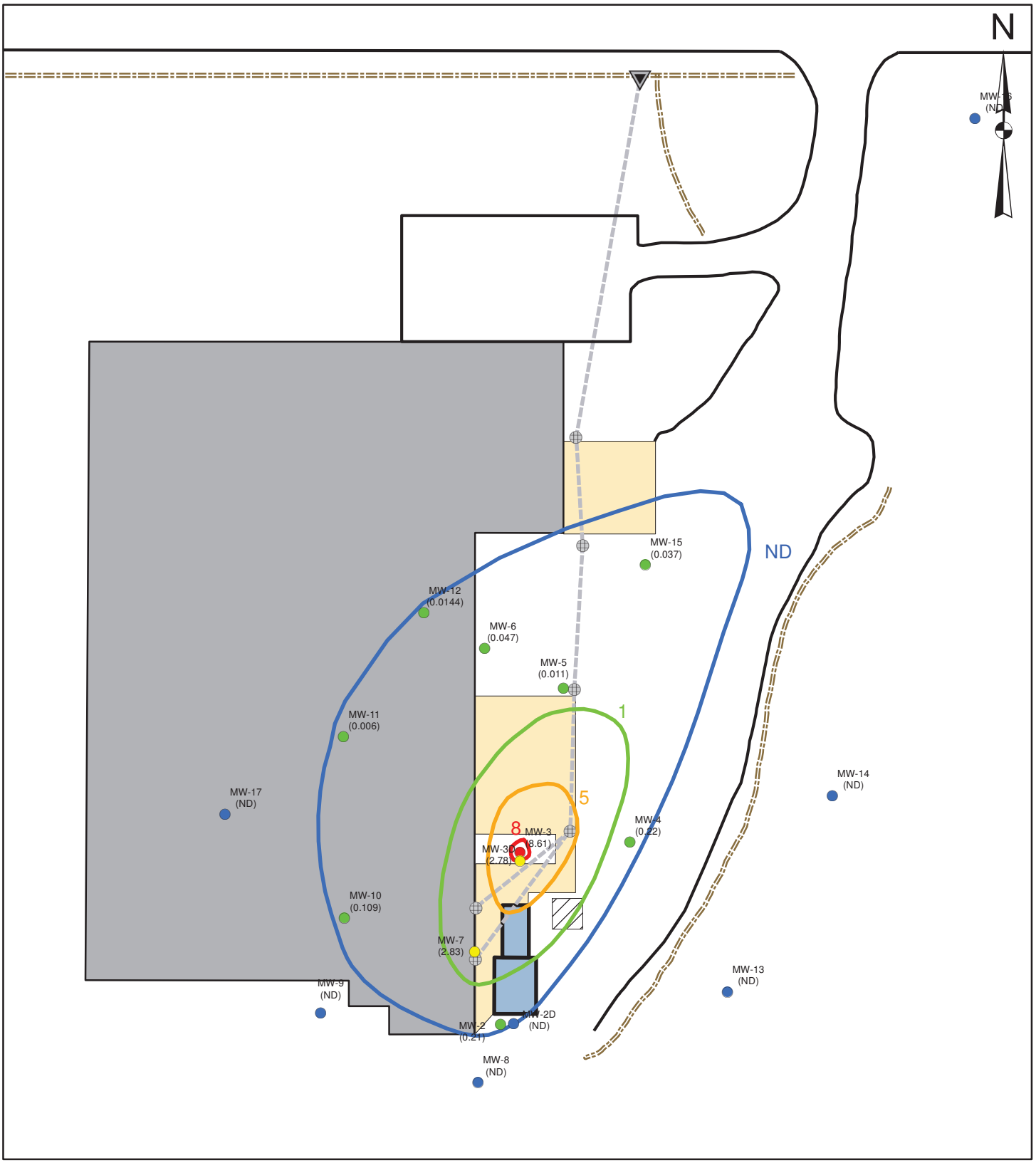
* Chlorinated ethanes = TCA, DCA, and CA

Environmental Planning Specialists, Inc.

G:\River Associates\Capitol Adhesives\VRP\GIS\Fig8_GWTCA.mxd

Figure No. 8

Capitol Adhesives
Groundwater Total Chlorinated Ethenes* (October 2010)



0 50 100
Feet

Total VOCs* (mg/L)

- ND
- < 1
- 1 - 3
- 3 - 5
- 5 - 8
- > 8

- Isopleth
- Surface Drainage Ditch
- Transportation Area
- Subgrade Storm/Drain Lines
- Open Drains
- Storm Water Outfall

- AST Containment
- Facility
- Concrete Surface
- Propane Tanks

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

Environmental Planning Specialists, Inc.
G:\River Associates\Capitol Adhesives\VRP\GIS\Fig9_GWPCE.mxd

Figure No. 9

Figure 10. MW-5 PCE Degradation Time Series

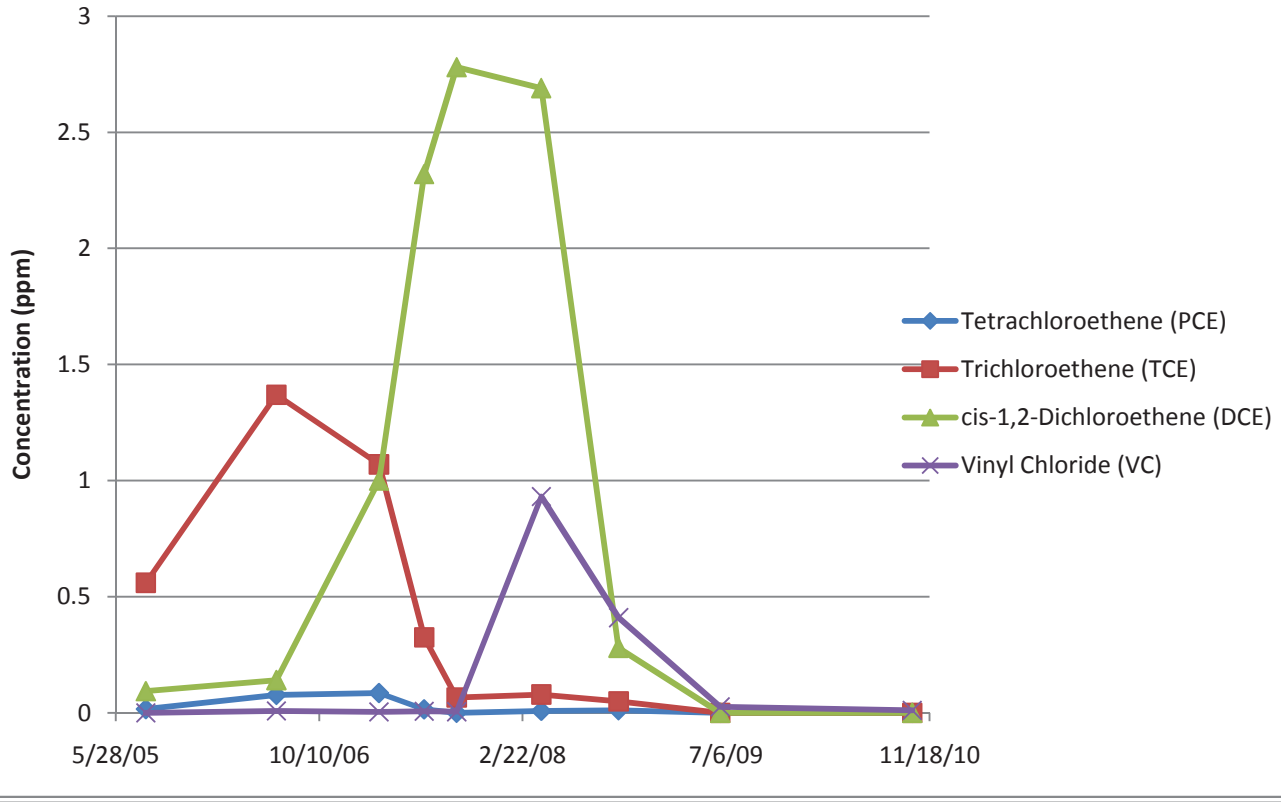
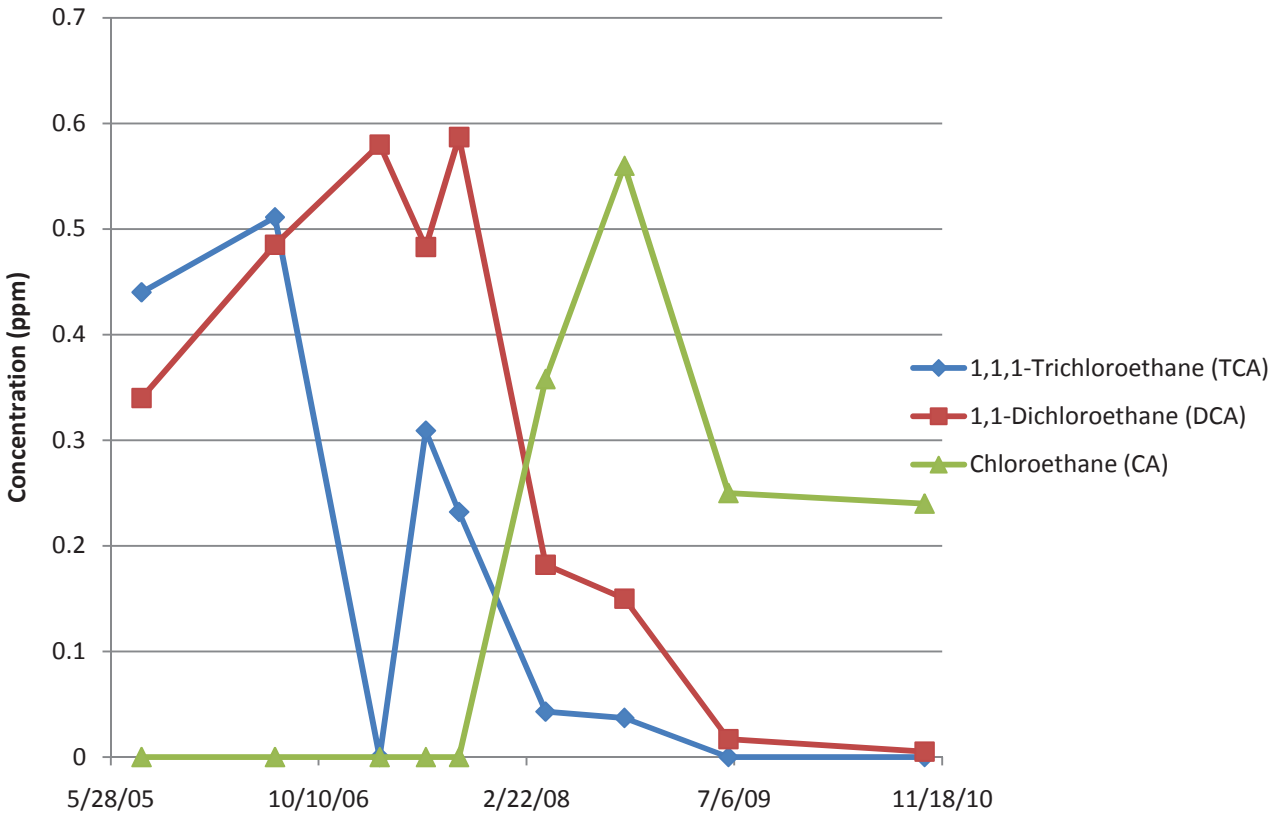
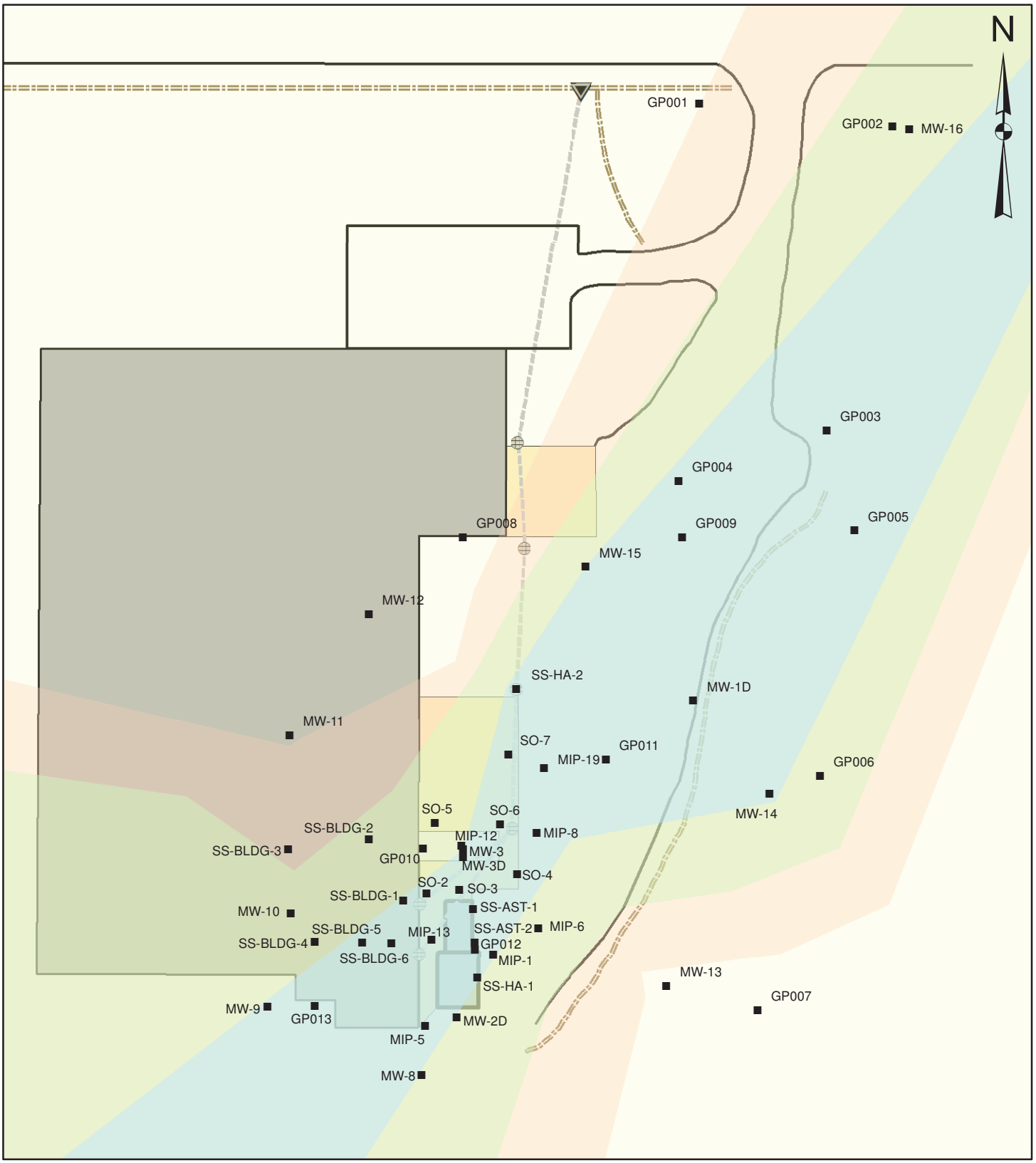


Figure 11. MW-5 TCA Degradation Time Series



Capitol Adhesives
Location of Solid Matrix Samples and Water Table Zones



0 50 100
Feet

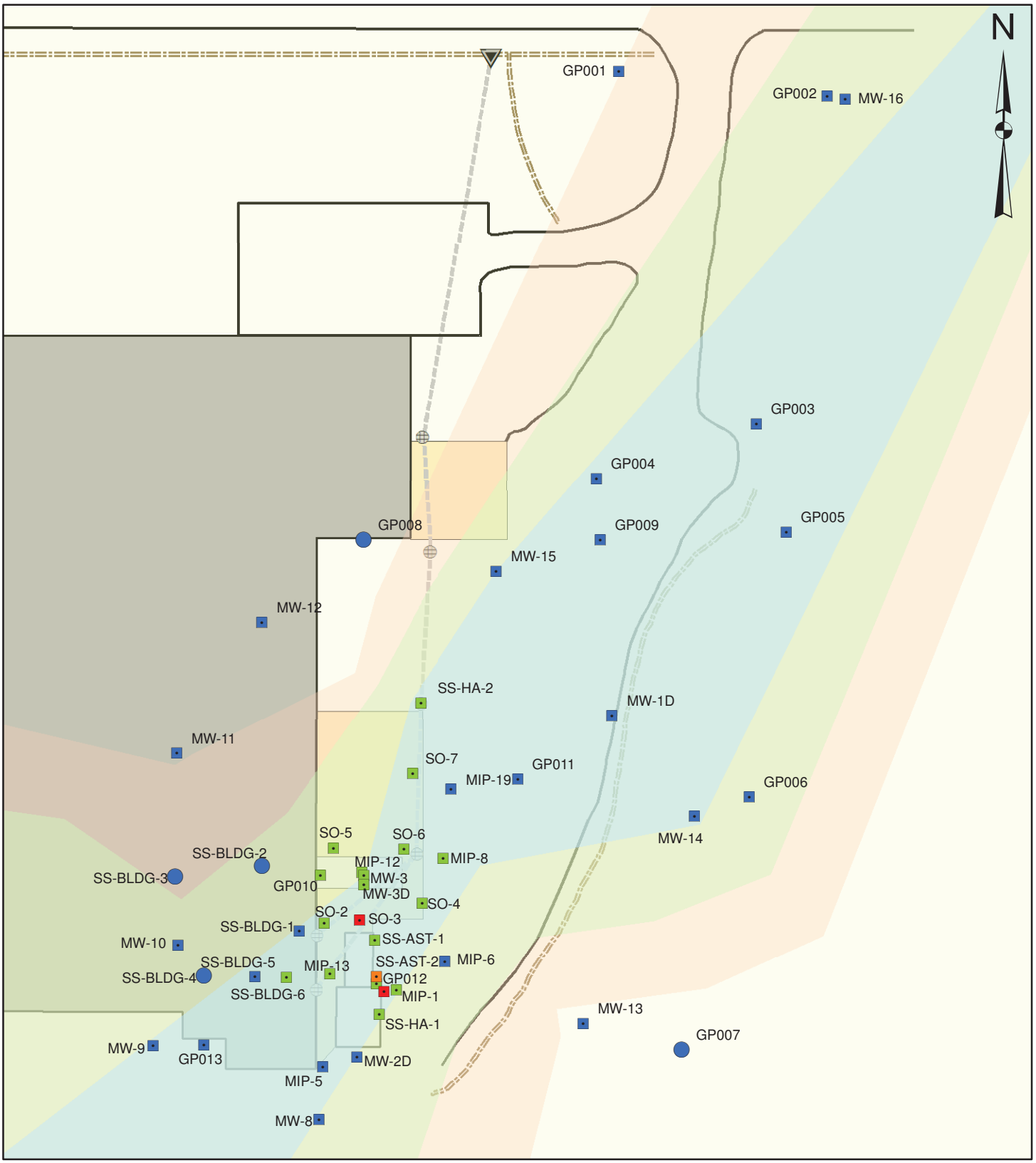
High Water Table Zone

- Artesian Zone
- 0-1' High Water Table Zone
- 1-2' High Water Table Zone
- >2' High Water Table Zone

- Surface Drainage Ditch
- Transportation Area
- Subgrade Storm/Drain Lines
- Open Drains
- Storm Water Outfall

- AST Containment
- Facility
- Concrete Surface

Capitol Adhesives
Total Chlorinated Ethanes* in Subsurface Solids



0 50 100
Feet

Total VOCs* (mg/kg)

- ND
- < 1
- 1 - 2.5
- 2.5 - 5.0
- > 5

High Water Table Zone

- Artesian Zone
- 0-1' High Water Table Zone
- 1-2' High Water Table Zone
- >2' High Water Table Zone

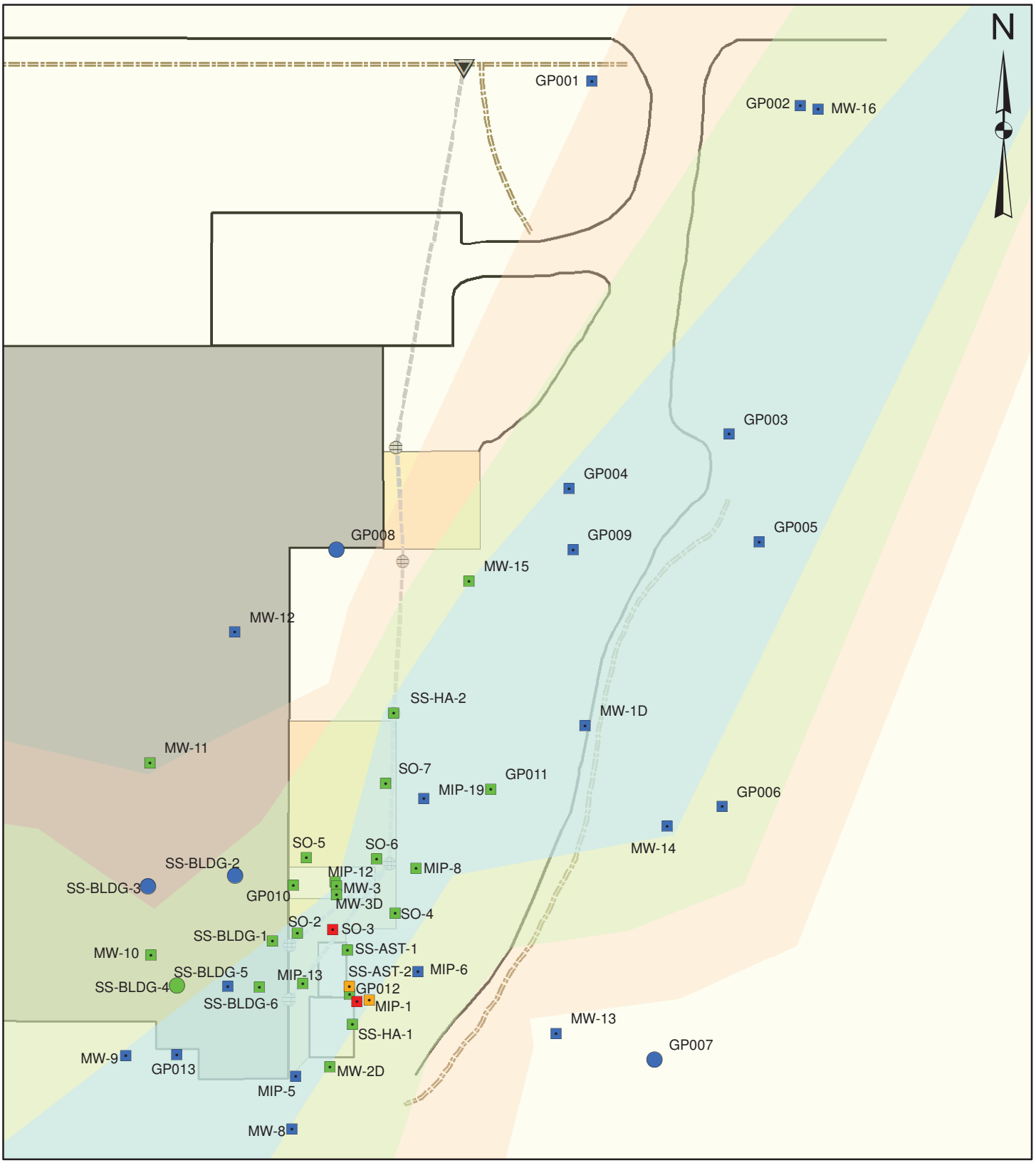
Squares represent solid aquifer matrix samples.
Circles represent vadose zone soil samples.

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

Environmental Planning Specialists, Inc.
G:\River Associates\Capitol Adhesives\VRP\GIS\Fig13_SolidTCA.mxd

Figure No. 13

Capitol Adhesives
Total Chlorinated Ethenes* in Subsurface Solids



Total VOCs* (mg/kg)

- ND
- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- > 60

High Water Table Zone

- Artesian Zone
- 0-1' High Water Table Zone
- 1-2' High Water Table Zone
- >2' High Water Table Zone

Squares represent solid aquifer matrix samples.
Circles represent vadose zone soil samples.

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

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G:\River Associates\Capitol Adhesives\VRP\GIS\Fig14_SolidPCE.mxd

Figure No. 14

APPENDIX D

Tables

Capitol Adhesives

Table 1. Depth to Groundwater Measurements Spring 2011

		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-2	4/22/2011	675.33	675.51	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0	Artesian	0
MW-2D	4/22/2011	674.79	675.36	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			6.00	674.19	1.17
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
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
MW-4	4/22/2011	671.38	671.85	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0	Artesian	0
MW-5	4/22/2011	670.88	670.13	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0	Artesian	0
MW-6	4/22/2011	674.92	675.28	2.42	672.5	2.78
	4/29/2011			3.82	671.1	4.18
	5/6/2011			3.01	671.91	3.37
MW-7	4/22/2011	675.63	674.71	0	Artesian	0
	4/29/2011			0.32	675.31	-0.6
	5/6/2011			0.87	674.76	-0.05
MW-8	4/22/2011	674.52	674.99	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0	Artesian	0
MW-9	4/22/2011	675.44	675.80	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0.51	-0.51	0.51
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
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
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
MW-13	4/22/2011	676.70	677.06	1.80	674.9	2.16
	4/29/2011			2.53	674.17	2.89
	5/6/2011			3.23	673.47	3.59

Capitol Adhesives
Table 1. Depth to Groundwater Measurements Spring 2011

		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	672.6	0.76
	5/6/2011			0.75	672.3	1.06
MW-15	4/22/2011	670.91	671.33	0	Artesian	0
	4/29/2011			0	Artesian	0
	5/6/2011			0	Artesian	0
MW-16	4/22/2011	669.70	670.24	0.13	669.575	0.665
	4/29/2011			0.45	669.25	0.99
	5/6/2011			0.69	669.01	1.23
MW-17	4/22/2011	676.26		0.72	675.54	
	4/29/2011			1.18	675.08	
	5/6/2011			1.50	674.76	

Table 2. Delineation Standards (Type 1 RRSs)
for Constituents Detected in Groundwater or Soil
Capitol Adhesives

Constituent	Groundwater Type 1 RRS (ppm)	Vadose Zone Soil Type 1 RRS (mg/kg)
1,1,1-Trichloroethane	0.2	20
1,1,2-Trichloroethane	0.005	0.5
Freon-113 (1,1,2-Trichloro-1,2,2-trifluoroethane)	1000	24039
1,1-Dichloroethane	4	400
1,1-Dichloroethene	0.007	0.7
1,2-Dichloroethane	0.005	0.5
1,2-Dichloropropane	0.005	0.5
1,4-Dioxane	0.07	7
2-Butanone (MEK)	2	200
Acetone	4	400
Benzene	0.005	0.5
Chloroethane	DL	0.17
Chloroform	0.08	3.9
cis-1,2-Dichloroethene	0.07*	0.53
Cyclohexane	DL	6466
Dichloromethane (Methylene chloride)	0.005	0.5
Ethyl benzene	0.7	70
Tetrachloroethene	0.005	0.5
Toluene	1	100
trans-1,2-Dichloroethene	0.1	10
Trichloroethene	0.005	0.5
Freon-11 (Trichlorofuoromethane)	2	200
Vinyl chloride	0.002	0.2

DL - detection limit
* Specified in CAP (WRS 2006)

Table 3. Analytical Results for Groundwater (mg/L)
Capitol Adhesives

Well	Date Sampled	Tetra chloro ethene	Trichloro ethene	cis-1,2-Dichloro ethene	Vinyl chloride	Total Chlorinated Ethenes	1,1,1-Trichloroethane	1,1-Dichloro ethane	Chloro ethane	Total Chlorinated Ethanes	1,1,2,2-Tetra chloro ethane	1,1,2-Trichloro ethane	1,1-Dichloro ethene	1,2,4-Trichloro benzene	1,2-Dibromo-3-chloro propane	1,2-Dibromo ethane	1,2-Dichloro benzene	1,2-Dichloro ethane	1,2-Dichloro propane	1,3-Dichloro benzene
Type 1 RRS or DL		0.005	0.005	0.07	0.002		0.2	4	DL		0.002	0.005	0.007	0.07	0.0002	0.00005	0.6	0.005	0.005	0.6
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	<0.005	**0.077**	<0.005	<0.005	<0.005	<0.005	**0.04**	<0.005	<0.005
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	<0.005	**0.22**	<0.005	<0.005	<0.005	<0.005	**0.33**	<0.005	<0.005
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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DPGW-7	3/10/09	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-2	7/15/04	**0.0424**	**0.0089**	ND	ND	0.0513	0.0039	ND	ND	0.0039		<0.005	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		
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		
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		
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		
MW-2	9/13/07				**0.022**	0.022				ND										
MW-2	4/8/08				**0.008**	0.008				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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-2	10/8/10	**0.069**	**0.096**	0.033	**0.0075**	0.2055	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<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		
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		
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		
MW-2D	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		
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		
MW-2D	9/13/07					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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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**		
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**		
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**		
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**		
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**		
MW-3	9/14/07	**2.88**	**5.87**	**0.58**	**0.003**	9.333	**1.43**	0.38		1.81		**0.023**	**2.55**					**0.781**		
MW-3	4/9/08	**2.41**	**4.1**	**0.636**	**0.011**	7.157	**0.7590001**	0.333		1.09		**0.021**	**1.78**					**0.781**		
MW-3	10/16/08	**3.9**	**5.9**	**1.1**	**0.032**	10.93	**0.9300001**	0.46	<0.01	1.39	<0.005	**0.021**	**3.1**	<0.005	<0.005	<0.005	<0.005	**0.7600001**	<0.005	<0.005
MW-3	6/23/09	**3.2**	**4.6**	**0.84**	**0.05**	8.69	**0.79**	0.31	<0.01	1.1	<0.005	**0.021**	**2.4**	<0.005	<0.005	<0.005	<0.005	**0.77**	<0.005	<0.005
MW-3	10/7/10	**3**	**4.5**	**1**	**0.11**	8.61	**0.59**	0.31	<0.01	0.9	<0.005	**0.023**	**1.7**	<0.005	<0.005	<0.005	<0.005	**0.74**	<0.005	<0.005
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**		
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**		
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**		
MW-3D	3/7/07	**0.9400001**	**1.22**	0.04	0.002	2.20	**1.74**	0.122	<0.01	1.862		<0.005	**0.19**					**0.103**		
MW-3D	6/26/07	**0.694**	**1.04**	0.09900001	**0.006**	1.84	**1.16**	0.151	<0.01	1.311		<0.005	**0.256**					**0.065**		
MW-3D	9/14/07	**0.675**	**0.9390001**	0.304	**0.005**	1.92	**1.12**	0.161		1.281			**0.292**					**0.087**		
MW-3D	4/9/08	**0.751**	**0.886**	**0.175**	**0.029**	1.841	**0.762**	0.161		0.923			**0.239**					**0.123**		
MW-3D	10/16/08	**1.1**	**1.3**	**0.37**	**0.12**	2.89	**0.8**	0.2	<0.01	1	<0.005	<0.005	**0.59**	<0.005	<0.005	<0.005	<0.005	**0.13**	<0.005	<0.005
MW-3D	6/23/09	**0.9300001**	**0.9400001**	**0.19**	**0.058**	2.12	**0.55**	0.13	<0.01	0.68	<0.005	<0.005	**0.31**	<0.005	<0.005	<0.005	<0.005	**0.13**	<0.005	<0.005
MW-3D	10/7/10	**1.1**	**1.3**	**0.3**	**0.077**	2.777	**0.53**	0.15	<0.01	0.68	<0.005	**0.0065**	**0.52**	<0.005	<0.005	<0.005	<0.005	**0.2**	<0.005	<0.005
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		
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		
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		
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		
MW-4	9/14/07		0.005	**0.846**	**0.055**	0.906		0.014		0.014			**0.034**					**0.009**		
MW-4	4/8/08	**0.01**	**0.018**	**0.244**	**0.022**	0.294				ND			0.006							
MW-4	10/15/08	**0.013**	**0.034**	**0.7600001**	**0.3**	1.11	<0.005	0.011	<0.01	0.011	<0.005	<0.005	**0.022**	<0.005	<0.005	<0.005	<0.005	**0.0069**	<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	<0.005	0.0054	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Table 3. Analytical Results for Groundwater (mg/L)
Capitol Adhesives

Well	Date Sampled	1,4-Dichloro benzene	1,4-Dioxane	2-Butanone (MEK)	2-Hexanone	4-Methyl-2-pentanone	Acetone	Benzene	Bromochloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane	cis-1,3-Dichloropropene	Cyclohexane	Dibromochloromethane	Dichlorobromomethane
Type 1 RRS or DL		0.075	0.07 DL	2	DL	2	4	0.005	DL	0.1	0.01	4	0.005	0.1	0.08	0.003	0.002	DL	0.1	0.1
DPGW-1	3/10/09	<0.005		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	0.061	<0.01	<0.005	<0.005	<0.005	<0.005
DPGW-2	3/10/09	<0.005		**3.9**	<0.01	<0.01	1.8	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	0.029	<0.01	<0.005	<0.005	<0.005	<0.005
DPGW-3	3/10/09	<0.005		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-2	7/15/04			<0.1			<0.1	ND	ND					ND	ND					
MW-2	8/10/05			<0.1			<0.1	<0.001						<0.001	<0.001					
MW-2	6/28/06			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-2	3/7/07			**4.84**			**4.23**	<0.005	<0.005					<0.005	<0.005					
MW-2	6/25/07			1.88			0.934	<0.005	<0.005					<0.005	<0.005					
MW-2	9/13/07																			
MW-2	4/8/08																			
MW-2	10/14/08	<0.005	<0.15	<0.05	<0.01	<0.01	0.71	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-2	6/22/09	<0.005		<0.05	<0.01	<0.01	0.11	<0.005		<0.005	<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	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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			<0.1			<0.1	ND	ND					ND	ND					
MW-2D	8/10/05			<0.1			<0.1	<0.001	<0.001					<0.001	<0.001					
MW-2D	6/28/06			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-2D	3/7/07			0.821			0.138	<0.005	<0.005					<0.005	<0.005					
MW-2D	6/25/07			0.235			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-2D	9/13/07																			
MW-2D	10/14/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	**17**	<0.005		<0.005	<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	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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			<0.1			<0.1	**0.0073**	**0.0124**					ND	**1.2**					
MW-3	8/10/05			<0.1			<0.1	<0.05	<0.05					<0.05	**0.64**					
MW-3	6/26/06			<0.1			<0.1	<0.005	**0.011**					<0.005	**0.643**					
MW-3	3/7/07			<0.1			<0.1	**0.006**	**0.011**					<0.005	**1.06**					
MW-3	6/25/07			0.235			<0.1	**0.008**	<0.005					<0.005	**1.14**					
MW-3	9/14/07							**0.007**							**0.964**					
MW-3	4/9/08							**0.006**							**0.758**					
MW-3	10/16/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	**0.0074**		<0.005	<0.005	<0.005	<0.005	<0.005	**1.1**	<0.01	<0.005	**0.014**	<0.005	<0.005
MW-3	6/23/09	<0.005		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	**0.9900001**	<0.01	<0.005	<0.005	<0.005	<0.005
MW-3	10/7/10	<0.005	**0.23**	<0.05	<0.01	<0.01	<0.05	**0.0068**		<0.005	<0.005	<0.005	<0.005	<0.005	**0.8800001**	<0.01	<0.005	**0.012**	<0.005	<0.005
MW-3D	7/19/04			<0.1			<0.1	0.0042	**0.0016**					0.001	**0.206**					
MW-3D	8/10/05			<0.1			<0.1	<0.02	<0.02					<0.02	**0.094**					
MW-3D	6/26/06			<0.1			<0.1	<0.005	<0.005					<0.005	**0.082**					
MW-3D	3/7/07			<0.1			<0.1	<0.005	<0.005					<0.005	**0.09**					
MW-3D	6/26/07			<0.1			<0.1	<0.005	<0.005					<0.005	**0.095**					
MW-3D	9/14/07														**0.086**					
MW-3D	4/9/08														**0.095**					
MW-3D	10/16/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	**0.13**	<0.01	<0.005	<0.005	<0.005	<0.005
MW-3D	6/23/09	<0.005		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	**0.13**	<0.01	<0.005	<0.005	<0.005	<0.005
MW-3D	10/7/10	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	**0.21**	<0.01	<0.005	<0.005	<0.005	<0.005
MW-4	8/10/05			<0.1			<0.1	<0.005	<0.005					<0.005	0.0056					
MW-4	6/27/06			<0.1			<0.1	<0.005	<0.005					<0.005	0.005					
MW-4	3/7/07			1.44			**6.3**	<0.005	<0.005					<0.005	<0.005					
MW-4	6/25/07			1.91			2.74	<0.005	<0.005					<0.005	<0.005					
MW-4	9/14/07																			
MW-4	4/8/08																			
MW-4	10/15/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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	<0.005		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005

Table 3. Analytical Results for Groundwater (mg/L)
Capitol Adhesives

Well	Date Sampled	Dichloro methane (Methylene chloride)	Ethyl benzene	Freon-11	Freon-113	Freon-12	Isopropyl benzene	m&p-Xylene	Methyl acetate	Methyl tertbutyl ether (MTBE)	Methyl cyclo hexane	o-Xylene	Styrene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Xylenes (total)
Type 1 RRS or DL		0.005	0.7	2	1000	1	DL	10	DL	DL	DL	10	0.1	1	0.1	0.002	10
DPGW-1	3/10/09	**0.063**	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	0.0055	<0.005	<0.005	<0.005	0.0072	<0.005	
DPGW-2	3/10/09	**0.07700001**	<0.005	<0.005	0.064	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.085	<0.005	
DPGW-3	3/10/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
DPGW-4	3/10/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
DPGW-5	3/10/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
DPGW-6	3/10/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
DPGW-7	3/10/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
DPGW-8	3/10/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-2	7/15/04	ND	ND	ND										ND	ND		ND
MW-2	8/10/05	<0.001	<0.001	<0.001										<0.001	<0.001		<0.001
MW-2	6/28/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-2	3/7/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-2	6/25/07	<0.005	<0.005	<0.005										0.005	<0.005		<0.005
MW-2	9/13/07													0.005			
MW-2	4/8/08													**1.09**			
MW-2	10/14/08	<0.005	0.0064	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	0.41	<0.005	<0.005	
MW-2	6/22/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-2	10/8/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-2D	7/19/04	ND	ND	ND										0.0041	ND		ND
MW-2D	8/10/05	<0.001	<0.001	<0.001										<0.001	<0.001		<0.001
MW-2D	6/28/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-2D	3/7/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-2D	6/25/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-2D	9/13/07																
MW-2D	10/14/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-2D	6/22/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-2D	10/8/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-3	7/15/04	**0.435**	ND	ND										0.0038	**0.116**		ND
MW-3	8/10/05	**0.45**	<0.05	<0.05										<0.005	0.093		<0.005
MW-3	6/26/06	**0.494**	<0.005	0.01										<0.005	0.1		<0.005
MW-3	3/7/07	**0.438**	<0.005	0.014										<0.005	**0.104**		<0.01
MW-3	6/25/07	**0.725**	<0.005	0.019										<0.005	**0.185**		<0.01
MW-3	9/14/07	**0.183**													**0.139**		
MW-3	4/9/08	**0.172**													**0.113**		
MW-3	10/16/08	**0.024**	<0.005	0.02	0.49	<0.01	<0.005	<0.01	<0.005	<0.005	**0.0089**	<0.005	<0.005	<0.005	0.099	<0.005	
MW-3	6/23/09	**0.066**	<0.005	0.01	0.31	<0.01	<0.005	<0.01	<0.005	<0.005	**0.0064**	<0.005	<0.005	<0.005	**0.14**	<0.005	
MW-3	10/7/10	**0.041**	<0.005	0.0057	0.22	<0.01	<0.005	<0.005	<0.005	<0.005	**0.0078**	<0.005	<0.005	<0.005	**0.12**	<0.005	
MW-3D	7/19/04	**0.038**	0.0014	0.0094										0.0829	0.0523		0.0125
MW-3D	8/10/05	<0.02	<0.02	<0.02										<0.02	<0.02		<0.02
MW-3D	6/26/06	<0.005	<0.005	<0.005										<0.005	0.017		<0.005
MW-3D	3/7/07	<0.005	<0.005	<0.005										<0.005	0.012		<0.01
MW-3D	6/26/07	<0.005	<0.005	<0.005										<0.005	0.02		<0.01
MW-3D	9/14/07														0.02		
MW-3D	4/9/08														0.018		
MW-3D	10/16/08	<0.005	<0.005	<0.005	0.097	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.033	<0.005	
MW-3D	6/23/09	<0.005	<0.005	<0.005	0.084	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.023	<0.005	
MW-3D	10/7/10	<0.005	<0.005	<0.005	0.07	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.031	<0.005	
MW-4	8/10/05	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-4	6/27/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-4	3/7/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.01
MW-4	6/25/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.01
MW-4	9/14/07																
MW-4	4/8/08																
MW-4	10/15/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-4	6/23/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-4	10/12/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	

Table 3. Analytical Results for Groundwater (mg/L)
Capitol Adhesives

Well	Date Sampled	Tetra chloro ethene	Trichloro ethene	cis-1,2-Dichloro ethene	Vinyl chloride	Total Chlorinated Ethenes	1,1,1-Trichloroethane	1,1-Dichloro ethane	Chloro ethane	Total Chlorinated Ethanes	1,1,2,2-Tetrachloro ethane	1,1,2-Trichloro ethane	1,1-Dichloro ethene	1,2,4-Trichloro benzene	1,2-Dibromo-3-chloro propane	1,2-Dibromo ethane	1,2-Dichloro benzene	1,2-Dichloro ethane	1,2-Dichloro propane	1,3-Dichloro benzene
Type 1 RRS or DL		0.005	0.005	0.07	0.002		0.2	4	DL		0.002	0.005	0.007	0.07	0.0002	0.00005	0.6	0.005	0.005	0.6
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**		
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**		
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**		
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**		
MW-5	9/13/07		**0.066**	**2.78**	**0.005**	2.851	**0.232**	0.587		0.819		**0.011**	**1.72**					**0.502**		
MW-5	4/8/08	**0.008**	**0.079**	**2.69**	**0.9310001**	3.708	0.043	0.182	**0.358**	0.583			**0.84**					**0.495**		
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	<0.005	**0.19**	<0.005	<0.005	<0.005	<0.005	**0.34**	<0.005	<0.005
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	<0.005	<0.005	<0.005	<0.005	<0.005	**0.085**	<0.005	<0.005
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	<0.005	<0.005	<0.005	<0.005	<0.005	**0.016**	<0.005	<0.005
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**		
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**		
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**		
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**		
MW-6	4/9/08		**0.006**			0.006	0.136	0.065		0.201			**0.208**					**0.075**		
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	<0.005	**0.27**	<0.005	<0.005	<0.005	<0.005	**0.035**	<0.005	<0.005
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	<0.005	**0.12**	<0.005	<0.005	<0.005	<0.005	**0.036**	<0.005	<0.005
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	<0.005	**0.076**	<0.005	<0.005	<0.005	<0.005	**0.014**	<0.005	<0.005
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**		
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**		
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**		
MW-7	9/14/07	**1.13**	**0.786**	**0.348**	**0.014**	2.278	**0.272**	0.082		0.354			**0.354**					**0.067**		
MW-7	4/8/08	**1.06**	**0.226**	**0.335**	**0.104**	1.725	0.039	0.024		0.063			**0.108**					**0.034**		
MW-7	10/15/08	**2**	**0.67**	**0.52**	**0.27**	3.46	0.18	0.095	<0.01	0.275	<0.005	<0.005	**0.47**	<0.005	<0.005	<0.005	<0.005	**0.078**	<0.005	<0.005
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	<0.005	**0.048**	<0.005	<0.005	<0.005	<0.005	**0.0091**	<0.005	<0.005
MW-7	10/8/10	**2.2**	**0.26**	**0.24**	**0.13**	2.83	0.016	0.032	<0.01	0.048	<0.005	<0.005	**0.042**	<0.005	<0.005	<0.005	<0.005	**0.016**	<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		
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		
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		
MW-8	9/13/07					ND				ND										
MW-8	4/8/08					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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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		
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		
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		
MW-9	6/29/07					ND				ND										
MW-9	9/13/07					ND				ND										
MW-9	4/8/08					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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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		
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		
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		
MW-10	9/14/07		**0.064**	0.015		0.079				ND										
MW-10	4/9/08		**0.039**	0.013		0.052				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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
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		
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		
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		
MW-11	9/14/07			0.005		0.005				ND										
MW-11	4/9/08			0.006		0.006				ND										
MW-11	10/16/08	<0.005	**0.0056**	0.008300001	<0.002	0.014	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Table 3. Analytical Results for Groundwater (mg/L)
Capitol Adhesives

Well	Date Sampled	1,4-Dichloro benzene	1,4-Dioxane	2-Butanone (MEK)	2-Hexanone	4-Methyl-2-pentanone	Acetone	Benzene	Bromochloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane	cis-1,3-Dichloropropene	Cyclohexane	Dibromochloromethane	Dichlorobromomethane
Type 1 RRS or DL		0.075	0.07 DL	2	DL	2	4	0.005	DL	0.1	0.01	4	0.005	0.1	0.08	0.003	0.002	DL	0.1	0.1
MW-5	8/10/05			<0.01			<0.01	<0.005	<0.005					<0.005	**0.34**					
MW-5	6/27/06			<0.01			<0.01	0.005	<0.005					<0.005	**0.361**					
MW-5	3/6/07			<0.01			<0.01	0.005	<0.005					<0.005	**0.527**					
MW-5	6/25/07			<0.01			<0.01	**0.006**	<0.005					<0.005	**0.332**					
MW-5	9/13/07							0.005							**0.252**					
MW-5	4/8/08							0.005							**0.252**					
MW-5	10/15/08	<0.005	<0.15	1.6	<0.01	<0.01	0.53	**0.006**		<0.005	<0.005	<0.005	<0.005	<0.005	0.039	<0.01	<0.005	<0.005	<0.005	<0.005
MW-5	6/22/09	<0.005		1.1	<0.01	<0.01	0.48	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-5	10/7/10	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-6	8/10/05			<0.01			<0.01	<0.001	<0.001					<0.001	<0.001					
MW-6	6/27/06			<0.01			<0.01	<0.005	<0.005					<0.005	0.057					
MW-6	3/6/07			<0.01			<0.01	<0.005	<0.005					<0.005	**0.107**					
MW-6	6/25/07			<0.01			<0.01	<0.005	<0.005					<0.005	0.078					
MW-6	4/9/08														**0.136**					
MW-6	10/15/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	**0.085**	<0.01	<0.005	<0.005	<0.005	<0.005
MW-6	6/23/09	<0.005		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	0.067	<0.01	<0.005	<0.005	<0.005	<0.005
MW-6	10/8/10	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	**0.025**	<0.01	<0.005	<0.005	<0.005	<0.005
MW-7	6/27/06			<0.01			<0.01	<0.005	<0.005					<0.005	0.026					
MW-7	3/7/07			<0.01			<0.01	<0.005	<0.005					<0.005	0.018					
MW-7	6/26/07			<0.01			<0.01	<0.005	<0.005					<0.005	0.018					
MW-7	9/14/07														**0.119**					
MW-7	4/8/08														0.067					
MW-7	10/15/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	**0.17**	<0.01	<0.005	<0.005	<0.005	<0.005
MW-7	6/23/09	<0.005		<0.05	<0.01	<0.01	0.15	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	0.021	<0.01	<0.005	<0.005	<0.005	<0.005
MW-7	10/8/10	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	**0.025**	<0.01	<0.005	<0.005	<0.005	<0.005
MW-8	6/28/06			<0.01			<0.01	<0.005	<0.005					<0.005	<0.005					
MW-8	3/6/07			<0.01			<0.01	<0.005	<0.005					<0.005	<0.005					
MW-8	6/25/07			<0.01			<0.01	<0.005	<0.005					<0.005	<0.005					
MW-8	9/13/07																			
MW-8	4/8/08																			
MW-8	10/14/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	0.19	<0.005		<0.005	<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	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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			<0.01			<0.01	<0.005	<0.005					<0.005	<0.005					
MW-9	3/6/07			<0.01			<0.01	<0.005	<0.005					<0.005	<0.005					
MW-9	6/25/07			<0.01			<0.01	<0.005	<0.005					<0.005	<0.005					
MW-9	6/29/07																			
MW-9	9/13/07																			
MW-9	4/8/08																			
MW-9	10/15/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-10	3/6/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-10	6/26/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-10	9/14/07																			
MW-10	4/9/08																			
MW-10	10/16/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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	<0.01	<0.01	<0.05	<0.005		<0.005	<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	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-11	7/8/06			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-11	3/7/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-11	6/26/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-11	9/14/07																			
MW-11	4/9/08																			
MW-11	10/16/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005

Table 3. Analytical Results for Groundwater (mg/L)
Capitol Adhesives

Well	Date Sampled	Dichloro methane (Methylene chloride)	Ethyl benzene	Freon-11	Freon-113	Freon-12	Isopropyl benzene	m&p-Xylene	Methyl acetate	Methyl tertbutyl ether (MTBE)	Methyl cyclo hexane	o-Xylene	Styrene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Xylenes (total)
Type 1 RRS or DL		0.005	0.7	2	1000	1	DL	10	DL	DL	DL	10	0.1	1	0.1	0.002	10
MW-5	8/10/05	<0.005	<0.005	<0.005										<0.005	0.051		<0.005
MW-5	6/27/06	<0.005	<0.005	<0.005										<0.005	0.086		<0.005
MW-5	3/6/07	<0.005	<0.005	<0.005										<0.005	0.084		<0.005
MW-5	6/25/07	<0.005	<0.005	<0.005										<0.005	**0.11**		<0.005
MW-5	9/13/07	**0.009**													0.097		
MW-5	4/8/08	**0.048**													0.076		
MW-5	10/15/08	**0.05**	<0.005	<0.005	0.076	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.1	<0.005	
MW-5	6/22/09	**0.028**	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.041	<0.005	
MW-5	10/7/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.018	<0.005	
MW-6	8/10/05	0.0017	<0.001	0.0012										<0.001	0.0014		<0.001
MW-6	6/27/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-6	3/6/07	<0.005	<0.005	<0.005										<0.005	0.005		<0.01
MW-6	6/25/07	<0.005	<0.005	<0.005										<0.005	0.006		<0.01
MW-6	4/9/08														0.01		
MW-6	10/15/08	<0.005	<0.005	<0.005	0.045	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.005	
MW-6	6/23/09	<0.005	<0.005	<0.005	0.035	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.005	
MW-6	10/8/10	<0.005	<0.005	<0.005	0.017	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0052	<0.005	
MW-7	6/27/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-7	3/7/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.01
MW-7	6/26/07	<0.005	<0.005	<0.005										0.004 J	<0.005		<0.01
MW-7	9/14/07													0.004	0.019		
MW-7	4/8/08	**0.007**													0.009		
MW-7	10/15/08	**0.026**	<0.005	<0.005	0.13	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.02	<0.005	
MW-7	6/23/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-7	10/8/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-8	6/28/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-8	3/6/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-8	6/25/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-8	9/13/07																
MW-8	4/8/08																
MW-8	10/14/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-8	6/22/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-8	10/7/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-9	6/29/2006	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-9	3/6/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-9	6/25/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-9	6/29/07																
MW-9	9/13/07																
MW-9	4/8/08																
MW-9	10/15/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-9	6/22/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-9	10/7/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-10	7/8/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-10	3/6/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-10	6/26/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-10	9/14/07																
MW-10	4/9/08																
MW-10	10/16/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-10	6/23/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-10	10/8/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-11	7/8/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.05
MW-11	3/7/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.05
MW-11	6/26/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.05
MW-11	9/14/07																
MW-11	4/9/08																
MW-11	10/16/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	

Table 3. Analytical Results for Groundwater (mg/L)
Capitol Adhesives

Well	Date Sampled	Tetra chloro ethene	Trichloro ethene	cis-1,2-Dichloro ethene	Vinyl chloride	Total Chlorinated Ethenes	1,1,1-Trichloroethane	1,1-Dichloro ethane	Chloro ethane	Total Chlorinated Ethanes	1,1,2,2-Tetrachloro ethane	1,1,2-Trichloro ethane	1,1-Dichloro ethene	1,2,4-Trichloro benzene	1,2-Dibromo-3-chloro propane	1,2-Dibromo ethane	1,2-Dichloro benzene	1,2-Dichloro ethane	1,2-Dichloro propane	1,3-Dichloro benzene
Type 1 RRS or DL		0.005	0.005	0.07	0.002		0.2	4	DL		0.002	0.005	0.007	0.07	0.0002	0.00005	0.6	0.005	0.005	0.6
MW-11	6/23/09	<0.005	**0.006**	0.009500001	<0.002	0.016	<0.005	<0.005	<0.01	ND	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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		
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		
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		
MW-12	9/14/07					ND				ND										
MW-12	4/9/08					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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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		
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		
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		
MW-13	9/13/07					ND				ND										
MW-13	4/8/08					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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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		
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		
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		
MW-14	9/13/07					ND				ND										
MW-14	4/8/08					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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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		
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		
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		
MW-15	9/13/07					ND				ND										
MW-15	4/9/08		0.005			0.005	0.006			0.006			**0.008**							
MW-15	10/15/08	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.01	ND	<0.005	<0.005	**0.0092**	<0.005	<0.005	<0.005	<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	<0.005	**0.016**	<0.005	<0.005	<0.005	<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	<0.005	**0.023**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
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		
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		
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		
MW-16	9/13/07					ND				ND										
MW-16	4/9/08					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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-17	3/6/07	<0.005	<0.005	<0.005	<0.002	ND	<0.005	<0.005	<0.01	ND		<0.005	<0.005					<0.005		
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		
MW-17	9/14/07					ND				ND										
MW-17	4/9/08					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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

ND: Not detected
DL: Detection limit

Note: Data from September 2007 and April 2008 was not available at the time of this application. Once obtained, it will be added in a future semi-annual status report.

Result greater than RRS, or DL if no RRS

Table 3. Analytical Results for Groundwater (mg/L)
Capitol Adhesives

Well	Date Sampled	1,4-Dichloro benzene	1,4-Dioxane	2-Butanone (MEK)	2-Hexanone	4-Methyl-2-pentanone	Acetone	Benzene	Bromochloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane	cis-1,3-Dichloropropene	Cyclohexane	Dibromochloromethane	Dichlorobromomethane
Type 1 RRS or DL		0.075	0.07 DL	2	DL	2	4	0.005	DL	0.1	0.01	4	0.005	0.1	0.08	0.003	0.002	DL	0.1	0.1
MW-11	6/23/09	<0.005		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-12	3/7/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-12	6/26/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-12	9/14/07																			
MW-12	4/9/08																			
MW-12	10/16/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-13	3/6/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-13	6/25/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-13	9/13/07																			
MW-13	4/8/08																			
MW-13	10/15/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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	<0.05	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-14	3/6/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-14	6/25/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-14	9/13/07																			
MW-14	4/8/08																			
MW-14	10/15/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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	<0.05	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-15	3/6/07			<0.1			<0.1	<0.005	<0.005					<0.005	0.005					
MW-15	6/25/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-15	9/13/07																			
MW-15	4/9/08														0.006					
MW-15	10/15/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	0.0064	<0.01	<0.005	<0.005	<0.005	<0.005
MW-15	10/12/10	<0.005	<0.05	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	0.0079	<0.01	<0.005	<0.005	<0.005	<0.005
MW-16	6/29/06			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-16	3/6/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-16	6/25/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-16	9/13/07																			
MW-16	4/9/08																			
MW-16	10/14/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
MW-17	3/6/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-17	6/26/07			<0.1			<0.1	<0.005	<0.005					<0.005	<0.005					
MW-17	9/14/07																			
MW-17	4/9/08																			
MW-17	10/16/08	<0.005	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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		<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<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	<0.15	<0.05	<0.01	<0.01	<0.05	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005

ND: Not detected
DL: Detection limit

Note: Data from September 2007 and April 2008 was not available at the time of this application. Once obtained, it will be added in a future semi-annual status report.

Result greater than RRS, or DL if no RRS

Table 3. Analytical Results for Groundwater (mg/L)
Capitol Adhesives

Well	Date Sampled	Dichloro methane (Methylene chloride)	Ethyl benzene	Freon-11	Freon-113	Freon-12	Isopropyl benzene	m&p-Xylene	Methyl acetate	Methyl tertbutyl ether (MTBE)	Methyl cyclo hexane	o-Xylene	Styrene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Xylenes (total)
Type 1 RRS or DL		0.005	0.7	2	1000	1	DL	10	DL	DL	DL	10	0.1	1	0.1	0.002	10
MW-11	6/23/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-11	10/8/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-12	7/8/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-12	3/7/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-12	6/26/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-12	9/14/07																
MW-12	4/9/08																
MW-12	10/16/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-12	6/23/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-12	10/8/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-13	6/28/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-13	3/6/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-13	6/25/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-13	9/13/07																
MW-13	4/8/08																
MW-13	10/15/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-13	6/22/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-13	10/12/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-14	6/29/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-14	3/6/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-14	6/25/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-14	9/13/07																
MW-14	4/8/08																
MW-14	10/15/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-14	6/22/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-14	10/12/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-15	6/29/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-15	3/6/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-15	6/25/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-15	9/13/07																
MW-15	4/9/08																
MW-15	10/15/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-15	6/22/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-15	10/12/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-16	6/29/06	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-16	3/6/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-16	6/25/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-16	9/13/07																
MW-16	4/9/08																
MW-16	10/14/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-16	6/22/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-16	10/8/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-17	3/6/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-17	6/26/07	<0.005	<0.005	<0.005										<0.005	<0.005		<0.005
MW-17	9/14/07																
MW-17	4/9/08																
MW-17	10/16/08	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-17	6/23/09	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW-17	10/8/10	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	

ND: Not detected
DL: Detection limit

Note: Data from September 2007 and April 2008 was not available at the time of this application. Once obtained, it will be added in a future semi-annual status report.

Result greater than RRS, or DL if no RRS

Table 4. Analytical Results for Subsurface Solids (mg/kg)
Capitol Adhesives

Sample ID	Depth (ft bgs)	Date Sampled	Tetrachloro ethene	Trichloro ethene	cis-1,2-Dichloro ethene	Vinyl chloride	Total Chlorinated Ethenes	1,1,1-Trichloro ethane	1,1-Dichloro ethane	Chloro ethane	Total Chlorinated Ethanes	1,1,2,2-Tetrachloro ethane	1,1,2-Trichloro ethane	1,1-Dichloro ethene	1,2,4-Trichloro benzene	1,2,4-Trimethyl benzene	1,2-Dibromo-3-chloro propane	1,2-Dibromo ethane	1,2-Dichloro benzene	1,2-Dichloro ethane	1,2-Dichloro propane	1,3,5-Trimethyl benzene
Solid Aquifer Matrix																						
GP001	6-8	8/9/05	<0.0054	<0.0054	<0.0054		ND	<0.0054			ND			<0.0054		<0.0054				<0.0054	<5.4	<0.0054
GP002	4-6	8/9/05	<0.0049	<0.0049	<0.0049		ND	<0.0049			ND			<0.0049		<0.0049				<0.0049	<4.9	<0.0049
GP003	2-4	8/9/05	<0.0048	<0.0048	<0.0048		ND	<0.0048			ND			<0.0048		<0.0048				<0.0048	<4.8	<0.0048
GP004	4-6	8/9/05	<0.004	<0.004	<0.004		ND	<0.004			ND			<0.004		<0.004				<0.004	<4	<0.004
GP005	4-6	8/9/05	<0.0045	<0.0045	<0.0045		ND	<0.0045			ND			<0.0045		<0.0045				<0.0045	<4.5	<0.0045
GP006	2-4	8/9/05	<0.0046	<0.0046	<0.0046		ND	<0.0046			ND			<0.0046		<0.0046				<0.0046	<4.6	<0.0046
GP009	2-4	8/10/05	<0.0043	<0.0043	<0.0043		ND	<0.0043			ND			<0.0043		<0.0043				<0.0043	<4.3	<0.0043
GP010	4-6	8/10/05	0.13	0.33	<0.067		0.46	0.15			0.15			0.093		<0.067				<0.067	<67	<0.067
GP011	2-4	8/10/05	0.13	0.63	<0.061		0.76	<0.061			ND			0.099		<0.061				<0.061	<61	<0.061
GP012	4-6	8/10/05	1.5	1.8	0.56		3.86	0.41			0.41			0.72		<0.063				0.15	150	<0.063
GP013	4-6	8/10/05	<0.0052	<0.0052	<0.0052		ND	<0.0052			ND			<0.0052		<0.0052				<0.0052	<5.2	<0.0052
MIP-1	2	10/16/08	15	12	2.2	0.025	29.225	0.2	0.18	<0.012	0.38	<0.006	0.029	0.35	<0.006	NA	<0.006	<0.006	<0.006	0.36	<0.006	NA
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	<0.0067	<0.0067	NA	<0.0067	<0.0067	<0.0067	<0.0067	<0.0067	NA
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	<0.0029	<0.0029	NA	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	NA
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	<0.0022	<0.0022	NA	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	NA
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	<0.008	<0.008	NA	<0.008	<0.008	<0.008	<0.008	<0.008	NA
MIP-8	2	10/16/08	0.37	2.4	0.068	0.04	2.878	0.014	0.031	<0.0026	0.045	<0.0013	0.0048	0.21	<0.0013	NA	<0.0013	<0.0013	<0.0013	0.14	<0.0013	NA
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	<0.007	<0.007	NA	<0.007	<0.007	<0.007	<0.007	<0.007	NA
MIP-12	12	10/16/08	0.73	0.38	<0.11	0.0056	1.1156	0.13	0.018	<0.0038	0.148	<0.0019	0.0022	0.21	<0.0019	NA	<0.0019	<0.0019	<0.0019	0.038	<0.0019	NA
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	<0.0069	<0.0069	NA	<0.0069	<0.0069	<0.0069	<0.0069	<0.0069	NA
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	<0.0076	<0.0076	NA	<0.0076	<0.0076	<0.0076	0.026	<0.0076	NA
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	<0.0038	<0.0038	NA	<0.0038	<0.0038	<0.0038	0.052	<0.0038	NA
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	<0.0027	0.047	<0.0027	NA	<0.0027	<0.0027	<0.0027	0.046	<0.0027	NA
MIP-13	6	10/16/08	1.5	2.6	2	0.66	6.76	0.42	0.44	0.03	0.89	<0.0027	0.017	1.8	<0.0027	NA	<0.0027	<0.0027	<0.0027	0.78	<0.0027	NA
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	<0.0059	<0.0059	NA	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	NA
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	<0.0071	<0.0071	NA	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	NA
MW-1D	8-10	7/13/04	<0.0019	<0.0019	<0.0019	<0.0019	ND	<0.0019	<0.0019	<0.0019	ND	<0.0019	<0.0019	<0.0019	<0.00184	<0.0019	<0.004	<0.00184	<0.0019	<0.0019	<1.9	<0.00184
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	<0.00171	<0.0017	<0.00428	<0.0017	<0.0017	<0.0017	<1.7	<0.0017
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	<0.0018	0.0025	<0.0018	<0.0018	<0.00448	<0.0018	<0.0018	0.0067	6.7	<0.0018
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	<0.336	<0.134	<0.134	<0.134	<134	<0.134
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	<0.005	<0.005	<0.005	<0.005	<5	<0.005
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	<0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005
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	<0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005
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	<0.008	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005
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	<0.009	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005
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	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005
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	<0.011	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005
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	<0.005	<0.012	0.215	<0.005	<0.005	<0.005	<0.005	<5	0.074
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	<0.013	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005
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	<0.0029	<0.0029	NA	<0.0029	<0.0029	<0.0029	0.0069	<0.0029	NA
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	<0.0029	0.23	<0.0029	NA	<0.0029	<0.0029	<0.0029	0.18	<0.0029	NA
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	<2.8	<2.8	NA	<2.8	<2.8	<2.8	<2.8	<2.8	NA
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	<2.4	<2.4	NA	<2.4	<2.4	<2.4	<2.4	<2.4	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	<0.0032	0.0033	0.44	<0.0032	NA	<0.0032	<0.0032	<0.0032	0.042	<0.0032	NA
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	<0.11	0.63	<0.11	NA	<0.11	<0.11	<0.11	<0.11	<0.11	NA
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	<0.003	0.21	<0.003	NA	<0.003	<0.003	<0.003	0.053	<0.003	NA
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	<0.0062	<0.0062	NA	<0.0062	<0.0062	<0.0062	<0.0062	<0.0062	NA
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	<0.0026	0.19	<0.0026	NA	<0.0026	<0.0026	<0.0026	0.077	<0.0026	NA
SO-7	3	3/10/09	1.9	2.4	0.015	<0.01	4.315	0.072	0.18	<0.01	0.252	<0.0052	0.0072	0.89	<0.0052	NA	<0.0052	<0.0052	<0.0052	0.13	<0.0052	NA
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	<0.00316	0.107	<0.00316	NA	<0.00316	<0.00316	<0.00316	0.0407	<0.00316	NA
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	<0.00266	0.197	0.59	<0.00266	NA	<0.00266	<0.00266	0.00713	1.69	<0.00266	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	<0.0024	<0.0024	NA	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	NA
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	<0.00284	<0.00284	NA	<0.00284	<0.00284	<0.00284	<0.00284	<0.00284	NA
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	<0.00349	<0.00349	NA	<0.00349	<0.00349	<0.00349	<0.00349	<0.00349	NA
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	<0.00247	<0.00247	NA	<0.00247	<0.00247	<0.00247	<0.00247	<0.00247	NA
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	<0.00246	0.0259	<0.00246	NA	<0.00246	<0.00246	<0.00246	<0.00246	<0.00246	NA
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	<0.00284	<0.00284	NA	<0.00284	<0.00284	<0.00284	0.00369	<0.00284	NA
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	<0.00325	0.00754	<0.00325	NA	<0.00325	<0.00325	<0.00325	0.00702	<0.00325	NA

Table 4. Analytical Results for Subsurface Solids (mg/kg)
Capitol Adhesives

Sample ID	Depth (ft bgs)	Date Sampled	1,3-Dichloro benzene	1,4-Dichloro benzene	1,4-Dioxane	2-Butanone (MEK)	2-Hexanone	4-Methyl-2-pentanone	Acetone	Benzene	Bromoform	Bromo methane	Carbon disulfide	Carbon tetra chloride	Chloro benzene	Chloroform	Chloro methane	cis/trans1,2-Dichloro ethene	cis-1,3-Dichloro propene	Cyclo hexane	Dibromo chloro methane	Dichloro bromo methane
Solid Aquifer Matrix																						
GP001	6-8	8/9/05														<0.0054		<0.0054				
GP002	4-6	8/9/05														<0.0049		<0.0049				
GP003	2-4	8/9/05														<0.0048		<0.0048				
GP004	4-6	8/9/05														<0.004		<0.004				
GP005	4-6	8/9/05														<0.0045		<0.0045				
GP006	2-4	8/9/05														<0.0046		<0.0046				
GP009	2-4	8/10/05														<0.0043		<0.0043				
GP010	4-6	8/10/05														<0.067		0.093				
GP011	2-4	8/10/05														0.064		0.099				
GP012	4-6	8/10/05														0.29		0.72				
GP013	4-6	8/10/05														<0.0052		<0.0052				
MIP-1	2	10/16/08	<0.006	<0.006	<8.40E-02	<0.06	<0.012	<0.012	<0.12	<0.006	<0.006	<0.006	<0.012	<0.006	<0.006	0.73	<0.012	NA	<0.006	<0.006	<0.006	<0.006
MIP-1	5	10/16/08	<0.0067	<0.0067	<0.2	<0.067	<0.013	<0.013	<0.13	<0.0067	<0.0067	<0.0067	<0.013	<0.0067	<0.0067	<0.0067	<0.013	NA	<0.0067	<0.0067	<0.0067	<0.0067
MIP-1	9	10/16/08	<0.0029	<0.0029	<8.80E-02	<0.029	<0.0058	<0.0058	<0.058	<0.0029	<0.0029	<0.0029	<0.0058	<0.0029	<0.0029	<0.0029	<0.0058	NA	<0.0029	<0.0029	<0.0029	<0.0029
MIP-5	3	10/16/08	<0.0022	<0.0022	<0.067	<0.022	<0.0045	<0.0045	<0.045	<0.0022	<0.0022	<0.0022	<0.0045	<0.0022	<0.0022	<0.0022	<0.0045	NA	<0.0022	<0.0022	<0.0022	<0.0022
MIP-6	6	10/16/08	<0.008	<0.008	<0.24	<0.08	<0.016	<0.016	<0.16	<0.008	<0.008	<0.008	<0.016	<0.008	<0.008	<0.008	<0.016	NA	<0.008	<0.008	<0.008	<0.008
MIP-8	2	10/16/08	<0.0013	<0.0013	<0.039	<0.013	<0.0026	<0.0026	0.54	<0.0013	<0.0013	<0.0013	<0.0026	<0.0013	<0.0013	0.069	<0.0026	NA	<0.0013	<0.0013	<0.0013	<0.0013
MIP-8	4	10/16/08	<0.007	<0.007	<0.21	<0.07	<0.014	<0.014	<0.14	<0.007	<0.007	<0.007	<0.014	<0.007	<0.007	<0.007	<0.014	NA	<0.007	<0.007	<0.007	<0.007
MIP-12	12	10/16/08	<0.0019	<0.0019	<0.056	<0.019	<0.0038	<0.0038	<0.038	<0.0019	<0.0019	<0.0019	<0.0038	<0.0019	<0.0019	0.12	<0.0038	NA	<0.0019	<0.0019	<0.0019	<0.0019
MIP-12	4	10/16/08	<0.0069	<0.0069	<0.21	<0.069	<0.014	<0.014	<0.14	<0.0069	<0.0069	<0.0069	<0.014	<0.0069	<0.0069	<0.0069	<0.014	NA	<0.0069	<0.0069	<0.0069	<0.0069
MIP-12	6	10/16/08	<0.0076	<0.0076	<0.23	<0.076	<0.015	<0.015	<0.15	<0.0076	<0.0076	<0.0076	<0.015	<0.0076	<0.0076	<0.0076	<0.015	NA	<0.0076	<0.0076	<0.0076	<0.0076
MIP-13	1	10/16/08	<0.0038	<0.0038	1.4	0.12	<0.0076	0.0098	<0.076	0.0071	<0.0038	<0.0038	<0.0076	<0.0038	<0.0038	<0.0038	<0.0076	NA	<0.0038	0.014	<0.0038	<0.0038
MIP-13	3	10/16/08	<0.0027	<0.0027	0.510	<0.027	<0.0053	<0.0053	<0.053	<0.0027	<0.0027	<0.0027	<0.0053	<0.0027	<0.0027	0.029	<0.0053	NA	<0.0027	<0.0027	<0.0027	<0.0027
MIP-13	6	10/16/08	<0.0027	<0.0027	0.64	<0.027	<0.0054	<0.0054	<0.054	0.0066	<0.0027	<0.0027	<0.0054	<0.0027	<0.0027	1.4	<0.0054	NA	<0.0027	<0.0027	<0.0027	<0.0027
MIP-19	1	10/16/08	<0.0059	<0.0059	<0.18	<0.059	<0.012	<0.012	<0.12	<0.0059	<0.0059	<0.0059	<0.012	<0.0059	<0.0059	<0.0059	<0.012	NA	<0.0059	<0.0059	<0.0059	<0.0059
MIP-19	3	10/16/08	<0.0071	<0.0071	<0.21	<0.071	<0.014	<0.014	<0.14	<0.0071	<0.0071	<0.0071	<0.014	<0.0071	<0.0071	<0.0071	<0.014	NA	<0.0071	<0.0071	<0.0071	<0.0071
MW-1D	8-10	7/13/04	<0.0019	<0.0019	NA	<0.0461	<0.00921	<0.00921	<0.0461	<0.0019	<0.0019	<0.0019	<0.00184	<0.0019	<0.0019	<0.0019	<0.0019	<0.0019	<0.0019	NA	<0.0019	NA
MW-2D	8-10	7/13/04	<0.0017	<0.0017	NA	<0.0428	<0.00856	<0.00856	<0.0428	<0.0017	<0.0017	<0.0017	<0.0171	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	NA	<0.0017	NA
MW-3	8-10	7/14/04	<0.0018	<0.0018	NA	<0.0448	<0.00895	<0.00895	<0.0448	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	0.0078	<0.0018	0.0025	<0.0018	NA	<0.0018	NA
MW-3D	13-15	7/14/04	<0.134	<0.134	NA	<3.36	<0.67	<0.67	<3.36	<0.134	<0.134	<0.134	<0.134	<0.134	<0.134	<0.134	<0.134	<0.134	<0.134	NA	<0.134	NA
MW-8	8-10	6/27/06	<0.005	<0.005	NA	<0.1	<0.05	<0.05	<0.1	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	NA	<0.005	NA
MW-9	8-10	6/27/06	<0.005	<0.005	NA	<0.1	<0.05	<0.05	<0.1	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	NA	<0.005	NA
MW-10	5-10	7/7/06	<0.005	<0.005	NA	<0.1	<0.05	<0.05	<0.1	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	NA	<0.005	NA
MW-11	5-10	7/6/06	<0.005	<0.005	NA	<0.1	<0.05	<0.05	<0.1	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	NA	<0.005	NA
MW-12	5-10	7/6/06	<0.005	<0.005	NA	<0.1	<0.05	<0.05	<0.1	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	NA	<0.005	NA
MW-13	13-15	6/27/06	<0.005	<0.005	NA	<0.1	<0.05	<0.05	<0.1	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	NA	<0.005	NA
MW-14	13-15	6/27/06	<0.005	<0.005	NA	<0.1	<0.05	<0.05	<0.1	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	NA	<0.005	NA
MW-15	8-10	6/28/06	<0.005	<0.005	NA	<0.1	<0.05	<0.05	<0.1	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	NA	<0.005	NA
MW-16	8-10	6/27/06	<0.005	<0.005	NA	<0.1	<0.05	<0.05	<0.1	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	NA	<0.005	NA
SO-2	1	3/10/09	<0.0029	<0.0029	NA	<0.029	<0.0059	<0.0059	<0.059	<0.0029	<0.0029	<0.0029	<0.0059	<0.0029	<0.0029	<0.0029	<0.0059	NA	<0.0029	0.0036	<0.0029	<0.0029
SO-2	3	3/10/09	<0.0029	<0.0029	NA	<0.029	<0.0059	<0.0059	<0.059	<0.0029	<0.0029	<0.0029	<0.0059	<0.0029	<0.0029	0.04	<0.0059	NA	<0.0029	0.14	<0.0029	<0.0029
SO-3	1	3/10/09	<2.8	<2.8	NA	<28	<5.7	<5.7	<57	<2.8	<2.8	<2.8	<5.7	<2.8	<2.8	<2.8	<5.7	NA	<2.8	8	<2.8	<2.8
SO-3	3	3/10/09	<2.4	<2.4	NA	<24	<4.8	<4.8	<48	<2.4	<2.4	<2.4	<4.8	<2.4	<2.4	2.5	<4.8	NA	<2.4	<2.4	<2.4	<2.4
SO-4	1	3/10/09	<0.0032	<0.0032	NA	<0.032	<0.0063	<0.0063	<0.063	<0.0032	<0.0032	<0.0032	<0.0063	<0.0032	<0.0032	0.06	<0.0063	NA	<0.0032	<0.0032	<0.0032	<0.0032
SO-4	3	3/10/09	<0.11	<0.11	NA	<1.1	<0.23	<0.23	<2.3	<0.11	<0.11	<0.11	<0.23	<0.11	<0.11	0.13	<0.23	NA	<0.11	<0.11	<0.11	<0.11
SO-5	5	3/10/09	<0.003	<0.003	NA	<0.03	<0.006	<0.006	<0.06	<0.003	<0.003	<0.003	<0.006	0.004	<0.003	0.12	<0.006	NA	<0.003	<0.003	<0.003	<0.003
SO-5	9	3/10/09	<0.0062	<0.0062	NA	<0.062	<0.012	<0.012	<0.12	<0.0062	<0.0062	<0.0062	<0.012	<0.0062	<0.0062	<0.0062	<0.012	NA	<0.0062	<0.0062	<0.0062	<0.0062
SO-6	5	3/10/09	<0.0026	<0.0026	NA	<0.026	<0.0052	<0.0052	<0.052	<0.0026	<0.0026	<0.0026	<0.0052	<0.0026	<0.0026	0.084	<0.0052	NA	<0.0026	<0.0026	<0.0026	<0.0026
SO-7	3	3/10/09	<0.0052	<0.0052	NA	<0.052	<0.01	<0.01	<0.1	<0.0052	<0.0052	<0.0052	<0.01	<0.0052	<0.0052	0.17	<0.01	NA	<0.0052	<0.0052	<0.0052	<0.0052
SS-AST-1	1	1/12/09	<0.00316	<0.00316	NA	<0.0316	<0.00632	<0.00632	<0.0632	<0.00316	<0.00316	<0.00316	<0.00632	<0.00316	<0.00316	0.0397	<0.00632	NA	<0.00316	0.0178	<0.00316	<0.00316
SS-AST-2	1	1/12/09	<0.00266	<0.00266	NA	<0.0266	<0.00532	0.0476	0.739	0.0147	<0.00266	<0.00266	0.0121	<0.00266	0.00319	1.31	<0.00532	NA	<0.00266	0.00707	<0.00266	<0.00266
SS-BLDG-1	1	1/12/09	<0.0024	<0.0024	NA	<0.024	<0.0048	<0.0048	<0.048	<0.0024	<0.0024	<0.0024	<0.0048	<0.0024	<0.0024	<0.0024	<0.0048	NA	<0.0024	<0.0024	<0.0024	<0.0024
SS-BLDG-1	5	1/12/09	<0.00284	<0.00284	NA	<0.0284	<0.00568	<0.00568	<0.0568	<0.00284	<0.00284	<0.00284	<0.00568	<0.00284	<0.00284	<0.00284	<0.00568	NA	<0.00284	<0.00284	<0.00284	<0.00284
SS-BLDG-2	5	1/12/09	<0.00349	<0.00349	NA	<0.0349	<0.00697	<0.00697	<0.0697	<0.00349	<0.00349	<0.00349	<0.00697	<0.00349	<0.00349	<0.00349	<0.00697	NA	<0.00349	<0.00349	<0.00349	<0.00349
SS-BLDG-5	1	1/12/09	<0.00247	<0.00247	NA	<0.0247	<0.00495	<0.00495	<0.0495	<0.00247	<0.00247	<0.00247	<0.00495	<0.00247	<0.00247	<0.00247	<0.00495	NA	<0.00247	<0.00247	<0.00247	<0.00247
SS-BLDG-6	1	1/12/09	<0.00246	<0.00246	NA	<0.0246	<0.00493	<0.00493	<0.0493	<0.00246	<0.00246	<0.00246	<0.00493	<0.00246	<0.00246	<0.00246	<0.00493	NA	<0.00246	<0.00246	<0.00246	<0.00246
SS-HA-1	1	1/12/09	<0.00284	<0.00284	NA	<0.0284	<0.00569	<0.00569	<0.0569	<0.00284	<0.00284	<0.00284	<0.00569	<0.00284	<0.00284	<0.00284	<0.00569	NA	<0.00284	<0.00284	<0.00284	<0.00284
SS-HA-2	1	1/12/09	<0.00325	<0.00325	NA	<0.0325	<0.0065	<0.0065	0.2	<0.00325	<0.00325	<0.00325	<0.0065	<0.00325	<0.00325	<0.00325	<0.0065	NA	<0.00325	0.00716	<0.00325	<0.00325

Table 4. Analytical Results for Subsurface Solids (mg/kg)
Capitol Adhesives

Sample ID	Depth (ft bgs)	Date Sampled	Dichloro methane (Methylene chloride)	Ethyl benzene	Freon-11 (Trichlorofl uoromethan e	Freon-113	Freon-12 (Dichlorodif luorometha ne)	Isopropyl benzene	m&p-Xylene	Methyl acetate	Methyl tertbutyl ether (MTBE)	Methyl cyclo hexane	Naphthalene	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	Toluene	trans-1,2-Dichloro ethene	trans-1,3-Dichloro propene
Solid Aquifer Matrix																				
GP001	6-8	8/9/05	<0.0054	<0.0054				<0.0054					<0.0054	<0.0054		<0.0054		<0.0054		
GP002	4-6	8/9/05	<0.0049	<0.0049				<0.0049					<0.0049	<0.0049		<0.0049		<0.0049		
GP003	2-4	8/9/05	<0.0048	<0.0048				<0.0048					<0.0048	<0.0048		<0.0048		<0.0048		
GP004	4-6	8/9/05	<0.004	<0.004				<0.004					<0.004	<0.004		<0.004		<0.004		
GP005	4-6	8/9/05	<0.0045	<0.0045				<0.0045					<0.0045	<0.0045		<0.0045		<0.0045		
GP006	2-4	8/9/05	<0.0046	<0.0046				<0.0046					<0.0046	<0.0046		<0.0046		<0.0046		
GP009	2-4	8/10/05	<0.0043	<0.0043				<0.0043					<0.0043	<0.0043		<0.0043		<0.0043		
GP010	4-6	8/10/05	<0.067	<0.067				<0.067					<0.067	<0.067		<0.067		<0.067		
GP011	2-4	8/10/05	<0.061	<0.061				<0.061					<0.061	<0.061		<0.061		<0.061		
GP012	4-6	8/10/05	0.29	<0.063				<0.063					<0.063	<0.063		<0.063		<0.063		
GP013	4-6	8/10/05	<0.0052	<0.0052				<0.0052					<0.0052	<0.0052		<0.0052		<0.0052		
MIP-1	2	10/16/08	<0.006	<0.006	<0.006	<0.012	<0.012	<0.006	<0.012	<0.006	<0.006	0.0094	NA	NA	<0.006	NA	<0.006	0.027	0.055	<0.006
MIP-1	5	10/16/08	<0.0067	<0.0067	<0.0067	<0.013	<0.013	<0.0067	<0.013	<0.0067	<0.0067	<0.0067	NA	NA	<0.0067	NA	<0.0067	<0.0067	<0.0067	<0.0067
MIP-1	9	10/16/08	<0.0029	<0.0029	<0.0029	<0.0058	<0.0058	<0.0029	<0.0058	<0.0029	<0.0029	<0.0029	NA	NA	<0.0029	NA	<0.0029	<0.0029	<0.0029	<0.0029
MIP-5	3	10/16/08	<0.0022	<0.0022	<0.0022	<0.0045	<0.0045	<0.0022	<0.0045	<0.0022	<0.0022	<0.0022	NA	NA	<0.0022	NA	<0.0022	<0.0022	<0.0022	<0.0022
MIP-6	6	10/16/08	<0.008	<0.008	<0.008	<0.016	<0.016	<0.008	<0.016	<0.008	<0.008	<0.008	NA	NA	<0.008	NA	<0.008	<0.008	<0.008	<0.008
MIP-8	2	10/16/08	0.11	<0.0013	<0.0013	<0.0026	<0.0026	<0.0013	<0.0026	<0.0013	<0.0013	0.015	NA	NA	<0.0013	NA	<0.0013	0.006	0.014	<0.0013
MIP-8	4	10/16/08	<0.007	<0.007	<0.007	<0.014	<0.014	<0.007	<0.014	<0.007	<0.007	<0.007	NA	NA	<0.007	NA	<0.007	0.0076	<0.007	<0.007
MIP-12	12	10/16/08	<0.0019	<0.0019	0.0027	<0.0038	<0.0038	<0.0019	<0.0038	<0.0019	<0.0019	<0.0019	NA	NA	<0.0019	NA	<0.0019	<0.0019	0.0077	<0.0019
MIP-12	4	10/16/08	<0.0069	<0.0069	<0.0069	<0.014	<0.014	<0.0069	<0.014	<0.0069	<0.0069	<0.0069	NA	NA	<0.0069	NA	<0.0069	<0.0069	<0.0069	<0.0069
MIP-12	6	10/16/08	<0.0076	<0.0076	<0.0076	<0.015	<0.015	<0.0076	<0.015	<0.0076	<0.0076	<0.0076	NA	NA	<0.0076	NA	<0.0076	<0.0076	<0.0076	<0.0076
MIP-13	1	10/16/08	0.12	<0.0038	<0.0038	0.073	<0.0076	<0.0038	<0.0076	<0.0038	<0.0038	0.18	NA	NA	<0.0038	NA	<0.0038	0.096	0.02	<0.0038
MIP-13	3	10/16/08	0.067	<0.0027	<0.0027	<0.0053	<0.0053	<0.0027	<0.0053	<0.0027	<0.0027	0.031	NA	NA	<0.0027	NA	<0.0027	0.02	0.011	<0.0027
MIP-13	6	10/16/08	1.9	<0.0027	0.0067	<0.0054	<0.0054	<0.0027	<0.0054	<0.0027	<0.0027	0.013	NA	NA	<0.0027	NA	<0.0027	0.017	0.058	<0.0027
MIP-19	1	10/16/08	<0.0059	<0.0059	<0.0059	<0.012	<0.012	<0.0059	<0.012	<0.0059	<0.0059	<0.0059	NA	NA	<0.0059	NA	<0.0059	<0.0059	<0.0059	<0.0059
MIP-19	3	10/16/08	<0.0071	<0.0071	<0.0071	<0.014	<0.014	<0.0071	<0.014	<0.0071	<0.0071	<0.0071	NA	NA	<0.0071	NA	<0.0071	<0.0071	<0.0071	<0.0071
MW-1D	8-10	7/13/04	<0.0046	<0.0019	<0.0019	NA	<0.0019	<0.00184	NA	NA	NA	NA	<0.00461	<0.00184	NA	<0.00184	<0.00184	<0.0019	<0.0019	<0.0019
MW-2D	8-10	7/13/04	<0.0043	<0.0017	<0.0017	NA	<0.0017	<0.00171	NA	NA	NA	NA	<0.00428	<0.00171	NA	<0.00171	<0.00171	0.0026	<0.0017	<0.0017
MW-3	8-10	7/14/04	<0.0045	<0.0018	<0.0018	NA	<0.0018	<0.0018	NA	NA	NA	NA	<0.0048	<0.0018	NA	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018
MW-3D	13-15	7/14/04	<0.336	<0.134	<0.134	NA	<0.134	<0.134	NA	NA	NA	NA	<0.366	<0.134	NA	<0.134	<0.134	<0.134	<0.134	<0.134
MW-8	8-10	6/27/06	<0.005	<0.005	<0.005	NA	<0.01	<0.005	<0.01	NA	NA	NA	<0.005	<0.005	<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	NA	<0.01	<0.005	<0.01	NA	NA	NA	<0.005	<0.005	<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	NA	<0.01	<0.005	<0.01	NA	NA	NA	<0.005	<0.005	<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	NA	<0.01	<0.005	<0.01	NA	NA	NA	<0.005	<0.005	<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	NA	<0.01	<0.005	<0.01	NA	NA	NA	<0.005	<0.005	<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	NA	<0.01	<0.005	<0.01	NA	NA	NA	<0.005	<0.005	<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	NA	<0.01	<0.005	<0.01	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
MW-15	8-10	6/28/06	<0.005	0.022	<0.005	NA	<0.01	0.005	0.085	NA	NA	NA	0.14	0.026	0.055	0.005	<0.005	0.027	<0.005	<0.005
MW-16	8-10	6/27/06	<0.005	<0.005	<0.005	NA	<0.01	<0.005	<0.01	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SO-2	1	3/10/09	<0.0029	<0.0029	<0.0029	<0.0059	<0.0059	<0.0029	<0.0059	<0.0029	<0.0029	<0.0029	NA	NA	<0.0029	NA	<0.0029	0.051	0.0047	<0.0029
SO-2	3	3/10/09	<0.0029	<0.0029	<0.0029	<0.0059	<0.0059	<0.0029	<0.0059	<0.0029	<0.0029	0.087	NA	NA	<0.0029	NA	<0.0029	0.05	0.026	<0.0029
SO-3	1	3/10/09	<2.8	<2.8	<2.8	<5.7	<5.7	<2.8	<5.7	<2.8	<2.8	130	NA	NA	<2.8	NA	<2.8	3.3	<2.8	<2.8
SO-3	3	3/10/09	4.5	<2.4	<2.4	<4.8	<4.8	<2.4	<4.8	<2.4	<2.4	<2.4	NA	NA	<2.4	NA	<2.4	<2.4	<2.4	<2.4
SO-4	1	3/10/09	<0.0032	<0.0032	<0.0032	<0.0063	<0.0063	<0.0032	<0.0063	<0.0032	<0.0032	0.032	NA	NA	<0.0032	NA	<0.0032	<0.0032	0.0055	<0.0032
SO-4	3	3/10/09	<0.11	<0.11	<0.11	<0.23	<0.23	<0.11	<0.23	<0.11	<0.11	<0.11	NA	NA	<0.11	NA	<0.11	<0.11	<0.11	<0.11
SO-5	5	3/10/09	<0.003	<0.003	<0.003	<0.006	<0.006	<0.003	<0.006	<0.003	<0.003	<0.003	NA	NA	<0.003	NA	<0.003	<0.003	0.015	<0.003
SO-5	9	3/10/09	<0.0062	<0.0062	<0.0062	<0.012	<0.012	<0.0062	<0.012	<0.0062	<0.0062	<0.0062	NA	NA	<0.0062	NA	<0.0062	<0.0062	<0.0062	<0.0062
SO-6	5	3/10/09	<0.0026	<0.0026	<0.0026	<0.0052	<0.0052	<0.0026	<0.0052	<0.0026	<0.0026	<0.0026	NA	NA	<0.0026	NA	<0.0026	<0.0026	0.017	<0.0026
SO-7	3	3/10/09	0.049	<0.0052	<0.0052	<0.01	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	NA	NA	<0.0052	NA	<0.0052	<0.0052	0.025	<0.0052
SS-AST-1	1	1/12/09	<0.00316	<0.00316	<0.00316	0.155	<0.00632	<0.00316	0.0156	<0.00316	<0.00316	0.0494	NA	NA	<0.00316	NA	<0.00316	0.0105	0.00856	<0.00316
SS-AST-2	1	1/12/09	3.8	0.012	<0.00266	<0.00532	<0.00532	<0.00266	0.0534	<0.00266	<0.00266	0.0123	NA	NA	0.021	NA	<0.00266	2.17	0.187	<0.00266
SS-BLDG-1	1	1/12/09	<0.0024	<0.0024	<0.0024	0.012	<0.0048	<0.0024	<0.0048	<0.0024	<0.0024	<0.0024	NA	NA	<0.0024	NA	<0.0024	<0.0024	<0.0024	<0.0024
SS-BLDG-1	5	1/12/09	<0.00284	<0.00284	<0.00284	0.0615	<0.00568	<0.00284	<0.00568	<0.00284	<0.00284	0.00426	NA	NA	<0.00284	NA	<0.00284	<0.00284	<0.00284	<0.00284
SS-BLDG-2	5	1/12/09	<0.00349	<0.00349	<0.00349	<0.00697	<0.00697	<0.00349	<0.00697	<0.00349	<0.00349	<0.00349	NA	NA	<0.00349	NA	<0.00349	<0.00349	<0.00349	<0.00349
SS-BLDG-5	1	1/12/09	<0.00247	<0.00247	<0.00247	<0.00495	<0.00495	<0.00247	<0.00495	<0.00247	<0.00247	<0.00247	NA	NA	<0.00247	NA	<0.00247	<0.00247	<0.00247	<0.00247
SS-BLDG-6	1	1/12/09	<0.00246	<0.00246	<0.00246	<0.00493	<0.00493	<0.00246	<0.00493	<0.00246	<0.00246	<0.00246	NA	NA	<0.00246	NA	<0.00246	<0.00246	<0.00246	<0.00246
SS-HA-1	1	1/12/09	<0.00284	<0.00284	<0.00284	<0.00569	<0.00569	<0.00284	<0.00569	<0.00284	<0.00284	0.00657	NA	NA	<0.00284	NA	<0.00284	0.00674	<0.00284	<0.00284
SS-HA-2	1	1/12/09	<0.00325	<0.00325	<0.00325	<0.0065	<0.0065	<0.00325	<0.0065	<0.00325	<0.00325	0.178	NA	NA	<0.00325	NA	<0.00325	0.00473	<0.00325	<0.00325

Table 4. Analytical Results for Subsurface Solids (mg/kg)
Capitol Adhesives

Sample ID	Depth (ft bgs)	Date Sampled	Tetrachloro ethene	Trichloro ethene	cis-1,2-Dichloro ethene	Vinyl chloride	Total Chlorinated Ethenes	1,1,1-Trichloro ethane	1,1-Dichloro ethane	Chloro ethane	Total Chlorinated Ethanes	1,1,2,2-Tetrachloro ethane	1,1,2-Trichloro ethane	1,1-Dichloro ethene	1,2,4-Trichloro benzene	1,2,4-Trimethyl benzene	1,2-Dibromo-3-chloro propane	1,2-Dibromo ethane	1,2-Dichloro benzene	1,2-Dichloro ethane	1,2-Dichloro propane	1,3,5-Trimethyl benzene
Vadose Zone Soil																						
GP007	2-4	8/9/05	<0.0045	<0.0045	<0.0045		ND	<0.0045			ND			<0.0045		<0.0045				<0.0045	<4.5	<0.0045
GP008	2-4	8/9/05	<0.0054	<0.0054	<0.0054		ND	<0.0054			ND			<0.0054		<0.0054				<0.0054	<5.4	<0.0054
SS-BLDG-2	1	1/12/09	<0.00268	<0.00268	<0.00268	<0.00536	ND	<0.00268	<0.00268	<0.00536	ND	<0.00268	<0.00268	<0.00268	<0.00268	NA	<0.00268	<0.00268	<0.00268	<0.00268	<0.00268	NA
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	<0.00301	<0.00301	NA	<0.00301	<0.00301	<0.00301	<0.00301	<0.00301	NA
SS-BLDG-4	1	1/12/09	<0.00299	0.161	<0.00299	<0.00598	0.161	<0.00299	<0.00299	<0.00598	ND	<0.00299	<0.00299	<0.00299	<0.00299	NA	<0.00299	<0.00299	<0.00299	<0.00299	<0.00299	NA
Other (sediment)																						
South Ditch	0-2	6/19/04	<0.0064	0.012	0.016		0.028	<0.0064			ND			<0.0064						<0.0064	<6.4	

NA: Not analyzed
ND: Not detected
Matrix:
Vadose Zone Soil - sample collected above or at the high water table mark
Solid Aquifer Matrix - sample collected below the high water table mark

Table 4. Analytical Results for Subsurface Solids (mg/kg)
Capitol Adhesives

Sample ID	Depth (ft bgs)	Date Sampled	1,3-Dichloro benzene	1,4-Dichloro benzene	1,4-Dioxane	2-Butanone (MEK)	2-Hexanone	4-Methyl-2-pentanone	Acetone	Benzene	Bromoform	Bromo methane	Carbon disulfide	Carbon tetra chloride	Chloro benzene	Chloroform	Chloro methane	cis/trans1,2-Dichloro ethene	cis-1,3-Dichloro propene	Cyclo hexane	Dibromo chloro methane	Dichloro bromo methane
Vadose Zone Soil																						
GP007	2-4	8/9/05														<0.0045		<0.0045				
GP008	2-4	8/9/05														<0.0054		<0.0054				
SS-BLDG-2	1	1/12/09	<0.00268	<0.00268	NA	<0.0268	<0.00536	<0.00536	<0.0536	<0.00268	<0.00268	<0.00268	<0.00536	<0.00268	<0.00268	<0.00268	<0.00536	NA	<0.00268	<0.00268	<0.00268	<0.00268
SS-BLDG-3	1	1/12/09	<0.00301	<0.00301	NA	<0.0301	<0.00602	<0.00602	<0.0602	<0.00301	<0.00301	<0.00301	<0.00602	<0.00301	<0.00301	<0.00301	<0.00602	NA	<0.00301	<0.00301	<0.00301	<0.00301
SS-BLDG-4	1	1/12/09	<0.00299	<0.00299	NA	<0.0299	<0.00598	<0.00598	<0.0598	<0.00299	<0.00299	<0.00299	<0.00598	<0.00299	<0.00299	<0.00299	<0.00598	NA	<0.00299	<0.00299	<0.00299	<0.00299
Other (sediment)																						
South Ditch	0-2	6/19/04														<0.0064		<0.0064				

NA: Not analyzed
ND: Not detected
Matrix:
Vadose Zone Soil - sample collected above or at the high water table mark
Solid Aquifer Matrix - sample collected below the high water table mark

Table 4. Analytical Results for Subsurface Solids (mg/kg)
Capitol Adhesives

Sample ID	Depth (ft bgs)	Date Sampled	Dichloro methane (Methylene chloride)	Ethyl benzene	Freon-11 (Trichlorofl uoromethan e	Freon-113	Freon-12 (Dichlorodif luorometha ne)	Isopropyl benzene	m&p-Xylene	Methyl acetate	Methyl tertbutyl ether (MTBE)	Methyl cyclo hexane	Naphthalene	n-Propyl benzene	o-Xylene	sec-Butyl benzene	Styrene	Toluene	trans-1,2-Dichloro ethene	trans-1,3-Dichloro propene
Vadose Zone Soil																				
GP007	2-4	8/9/05	<0.0045	<0.0045				<0.0045					<0.0045	<0.0045		<0.0045		<0.0045		
GP008	2-4	8/9/05	<0.0054	<0.0054				<0.0054					<0.0054	<0.0054		<0.0054		<0.0054		
SS-BLDG-2	1	1/12/09	<0.00268	<0.00268	<0.00268	<0.00536	<0.00536	<0.00268	<0.00536	<0.00268	<0.00268	<0.00268	NA	NA	<0.00268	NA	<0.00268	<0.00268	<0.00268	<0.00268
SS-BLDG-3	1	1/12/09	<0.00301	<0.00301	<0.00301	<0.00602	<0.00602	<0.00301	<0.00602	<0.00301	<0.00301	<0.00301	NA	NA	<0.00301	NA	<0.00301	<0.00301	<0.00301	<0.00301
SS-BLDG-4	1	1/12/09	<0.00299	<0.00299	<0.00299	<0.00598	<0.00598	<0.00299	<0.00598	<0.00299	<0.00299	<0.00299	NA	NA	<0.00299	NA	<0.00299	<0.00299	<0.00299	<0.00299
Other (sediment)																				
South Ditch	0-2	6/19/04	0.0082	<0.0064																

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

Capitol Adhesives

Table 5. Anaerobic Biodegradation Preliminary Screening

		Scoring	Plume				Sidegradient		Downgradient	Upgradient
Indicator Parameter	**Criterion**	**Value**	**MW-3**	**MW-3D**	**MW-4**	**MW-5**	**MW-12**	**MW-14**	**MW-16**	**MW-8**
Oxygen	< 0.5 mg/L	3	0.44	0.53	0.41	0.26	0.3	0.69	0.37	0.62
Nitrate	< 1 mg/L	2	0.019	0.017	0.016	0.015				1
Iron II	> 1 mg/L	3	0.1	0.6	0.5	3.4				
Total Iron	>10		0.791	0.549	7.15	7.46				
Sulfate	< 20 mg/L	2	11	8	5	5				6
Sulfide	> 1 mg/L	3	ND	ND	ND	ND				ND
Methane	<0.5 mg/L	0	1.5	0.27	4.3	8.1				0.004
	>0.5 mg/L	3								
ORP	< 50 mV	1	-54	-109	-57	-147	160	76	137	98
	< -100 mV	2								
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
Carbon Dioxide	> 2 x Bkg	1								
Alkalinity	> 2 x Bkg	1	181	160	233	915				126
Chloride	> 2 x Bkg	2	34	15	9.7	33				6.5
Hydrogen	> 1 nM	3								
Volatile Fatty Acids	> 0.1 mg/L	2								
TCE		2	4.5	1.3	0.086	<0.005	0.0068	<0.005	<0.005	<0.005
DCE		2	1	0.3	0.057	<0.005	0.0076	<0.005	<0.005	<0.005
VC		2	0.11	0.077	0.059	0.011	<0.002	<0.002	<0.002	<0.002
DCA		2	0.31	0.15	0.0062	0.0051	<0.005	<0.005	<0.005	<0.005
Chloroethane		2	<0.01	<0.01	<0.01	0.24	<0.01	<0.01	<0.01	<0.01
Ethene/Ethane	> 0.01 mg/L	2	0.055	ND	0.048	0.31				ND
	> 0.1 mg/L	3								
Score			28	24.5	26	31	12	7.5	8	12.5
Evidence for reductive dechlorination			Strong	Strong	Strong	Strong	Limited	Limited	Limited	Limited

Strong (>20) = Strong evidence for reductive dechlorination
Adequate (15-20) = Adequate evidence for reductive dechlorination
Limited (6-14) = Limited evidence for reductive dechlorination
Inadequate (0-5) = Inadequate evidence for reductive dechlorination

Data from October 2010

Meets criterion

Capitol Adhesives

Table 6. 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 7. 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

Capitol Adhesives
Table 8. Projected Milestone Schedule*

ID	Task Name	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Well Installation												
2	Groundwater Sampling		Annual		Semi-Annual		Annual		Semi-Annual				
3	Source Area Evaluation and Remedial Action	Evaluation		Implement									
4	Semi-Annual Status Reports		First Status Report		Second Status Report		Third Status Report						
5	Compliance Status Report (or Fourth Semi-Annual Report) including Vertical Delineation												

* This schedule is benchmarked (begins with) to acceptance into the VRP program.

APPENDIX E

Type 1 RRS Calculations

Table 1 - Physical and Chemical Parameters

CAS #	Parameter	Organic Carbon Partition Coefficient (K_{oc}) (cm^3/g)	Diffusivity in air (D_a) (cm^2/s)	Henry's Law Constant (H') (unitless)	Henry's Law Constant at reference temperature of 25C (H) ($atm\text{-}m^3/mol$)	Volatile?	Dei = Da x $E^{0.33}$	Kd = Koc x OC	Kas =(H/Kd) x 41	α	VF m^3/kg
71-55-6	1,1,1-Trichloroethane	4.39E+01	0.065	7.00E-01	1.72E-02	Y	4.60E-02	8.78E-01	8.03E-01	6.45E-03	1.54E+03
79-00-5	1,1,2-Trichloroethane	6.07E+01	0.067	3.40E-02	8.24E-04	Y	4.74E-02	1.21E+00	2.78E-02	2.66E-04	8.79E+03
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.97E+02	0.037566	2.15E+01	5.26E-01	Y	2.66E-02	3.94E+00	5.48E+00	1.40E-02	5.77E+02
75-34-3	1,1-Dichloroethane	3.18E+01	0.084	2.30E-01	5.62E-03	Y	5.94E-02	6.36E-01	3.62E-01	4.07E-03	2.11E+03
75-35-4	1,1-Dichloroethene	3.18E+01	0.086	1.07E+00	2.61E-02	Y	6.08E-02	6.36E-01	1.68E+00	1.55E-02	8.64E+02
107-06-2	1,2-Dichloroethane	3.96E+01	0.086	4.80E-02	1.18E-03	Y	6.08E-02	7.92E-01	6.11E-02	7.46E-04	5.22E+03
78-87-5	1,2-Dichloropropane	6.07E+01	0.07334	1.15E-01	2.82E-03	Y	5.19E-02	1.21E+00	9.52E-02	9.85E-04	4.51E+03
123-91-1	1,4-Dioxane	2.63E+00	0.087372	1.96E-04	4.80E-06						
78-93-3	2-Butanone (MEK)	4.51E+00	0.091	2.30E-03	5.69E-05	Y	6.44E-02	9.02E-02	2.59E-02	3.36E-04	7.82E+03
67-64-1	Acetone	2.36E+00	0.11	1.40E-03	3.50E-05	Y	7.78E-02	4.73E-02	3.04E-02	4.77E-04	6.56E+03
71-43-2	Benzene	1.46E+02	0.09	2.30E-01	5.55E-03	Y	6.36E-02	2.92E+00	7.80E-02	9.93E-04	4.50E+03
75-00-3	Chloroethane	2.17E+01	0.1	4.50E-01	1.11E-02	Y	7.07E-02	4.35E-01	1.05E+00	1.24E-02	1.07E+03
67-66-3	Chloroform	3.18E+01	0.077	1.50E-01	3.67E-03	Y	5.45E-02	6.36E-01	2.36E-01	2.50E-03	2.75E+03
156-59-2	cis-1,2-Dichloroethene	3.96E+01	0.088	1.70E-01	4.08E-03	Y	6.22E-02	7.92E-01	2.11E-01	2.56E-03	2.73E+03
110-82-7	Cyclohexane	145.8	8.00E-02	6.10E+00	0.15	Y	5.66E-02	2.92E+00	2.11E+00	1.70E-02	7.75E+02
75-09-2	Dichloromethane (Methylene chloride)	2.17E+01	0.1	1.30E-01	3.25E-03	Y	7.07E-02	4.35E-01	3.07E-01	4.15E-03	2.11E+03
100-41-4	Ethyl benzene	4.46E+02	0.068	3.20E-01	7.88E-03	Y	4.81E-02	8.92E+00	3.62E-02	3.51E-04	7.64E+03
127-18-4	Tetrachloroethene	9.49E+01	0.05	7.20E-01	1.77E-02	Y	3.54E-02	1.90E+00	3.82E-01	2.55E-03	2.65E+03
108-88-3	Toluene	2.34E+02	0.078	2.70E-01	6.64E-03	Y	5.52E-02	4.68E+00	5.82E-02	6.45E-04	5.61E+03
156-60-5	trans-1,2-Dichloroethene	3.96E+01	0.088	1.70E-01	4.08E-03	Y	6.22E-02	7.92E-01	2.11E-01	2.56E-03	2.73E+03
79-01-6	Trichloroethene	6.07E+01	0.069	4.00E-01	9.85E-03	Y	4.88E-02	1.21E+00	3.33E-01	3.09E-03	2.43E+03
75-69-4	Trichlorofluoromethane	4.39E+01	0.065	3.97E+00	9.70E-02	Y	4.60E-02	8.78E-01	4.53E+00	2.20E-02	5.06E+02
75-01-4	Vinyl chloride	2.17E+01	0.107119	1.14E+00	2.78E-02	Y	7.58E-02	4.35E-01	2.62E+00	2.63E-02	5.80E+02

Notes:

Physical/Chemical Parameters are from the May 2011 RSL Table unless otherwise noted.

$$\frac{(LS \times V \times DH)}{A} \times \frac{(\pi \times \alpha \times T)^{1/2}}{(2 \times D_{ei} \times E \times K_{as} \times 10^{-3}\ kg/g)}$$

LS =	45	m	length of side of contaminated area
V =	2.25	m/s	wind speed in mixing zone
DH =	2	m	diffusion height
A =	20300000	cm^2	area of contamination
π =	3.14		

$$\alpha = \frac{(D_{ei} \times E)}{E + \rho_s(1\text{-}E)/K_{as}}\ cm^2/s$$

$D_{ei} = D_i \times E^{0.33}$ cm^2/s — effective diffusivity

D_i =		Chemical specific	molecular diffusivity (cm^2/s)
E =	0.35		total soil porosity
ρ_s =	2.65	g/m^3	density of soil solids
Kas =	(H/Kd) x 41		soil/air partition coefficient (g soil/cm^3 air)
H =		Chemical specific	Henry's law constant ($atm\text{-}m^3/mol$)
Kd = Koc x OC			soil-water partition coefficient
Koc =		Chemical specific	organic carbon partition coefficient
OC =	0.02		soil organic carbon content fraction
T =	790000000	s	exposure interval

Table 2 - Toxicity Criteria

CAS	Parameter	NonCancer Toxicity Values			Cancer Toxicity Values			
		Oral RfD	Inhalation RFC	Inhalation RfD	Cancer Class	Oral CSF	Inhalation Unit Risk	Inhalation CSF
		mg/kg-day	mg/m3	mg/kg-day		per mg/kg-day	per ug/m3	per mg/kg-day
71-55-6	1,1,1-Trichloroethane	2	5.00E+00	1.43E+00	D	NA	NA	NA
79-00-5	1,1,2-Trichloroethane	0.004	2.00E-04	5.71E-05	C	5.70E-02	1.60E-05	5.60E-02
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	30	30	8.57E+00		NA	NA	NA
75-34-3	1,1-Dichloroethane	0.2	NA	NA	C	5.70E-03	1.60E-06	5.60E-03
75-35-4	1,1-Dichloroethene	0.05	2.00E-01	5.71E-02	C	NA	NA	NA
107-06-2	1,2-Dichloroethane	0.006	7.00E-03	2.00E-03	B2	9.10E-02	2.60E-05	9.10E-02
78-87-5	1,2-Dichloropropane	0.09	4.00E-03	1.14E-03	NA	3.60E-02	1.00E-05	3.50E-02
123-91-1	1,4-Dioxane	0.03	3.00E+00	8.57E-01		1.00E-01	7.70E-06	2.70E-02
78-93-3	2-Butanone (MEK)	0.6	5.00E+00	1.43E+00	NA	NA	NA	NA
67-64-1	Acetone	0.9	3.10E+01	8.86E+00	NA	NA	NA	NA
71-43-2	Benzene	0.004	3.00E-02	8.57E-03	A	5.50E-02	7.80E-06	2.73E-02
75-00-3	Chloroethane	NA	1.00E+01	2.86E+00	B	NA	NA	NA
67-66-3	Chloroform	0.01	9.80E-02	2.80E-02	B2	0.031	2.30E-05	8.05E-02
156-59-2	cis-1,2-Dichloroethene	0.002	NA	NA		NA	NA	NA
110-82-7	Cyclohexane	NA	6	1.71E+00	NA	NA	NA	NA
75-09-2	Dichloromethane (Methylene chloride)	0.06	1.00E+00	2.86E-01	B2	7.50E-03	4.70E-07	1.65E-03
100-41-4	Ethyl benzene	0.1	1.00E+00	2.86E-01	NA	1.10E-02	2.50E-06	8.75E-03
127-18-4	Tetrachloroethene	0.01	2.70E-01	7.71E-02	NA	5.40E-01	5.90E-06	2.07E-02
108-88-3	Toluene	0.08	5.00E+00	1.43E+00	unlikely	NA	NA	NA
156-60-5	trans-1,2-Dichloroethene	0.02	6.00E-02	1.71E-02	NA	NA	NA	NA
79-01-6	Trichloroethene	NA	0.01	2.86E-03		5.90E-03	2.00E-06	7.00E-03
75-69-4	Trichlorofluoromethane	0.3	7.00E-01	2.00E-01	NA			
75-01-4	Vinyl chloride	0.003	1.00E-01	2.86E-02	A	7.2E-01	4.40E-06	1.54E-02

Values are from the EPA Regional Screening Level Summary Table (May 2011)

Table 3 - Adult Resident Noncancer-Based Soil Screening Levels (SSLs)

Chemical	Oral RfD mg/kg-day	Inhalation RfD mg/kg-day	Volatile?	VF	Oral mg/kg	Inhalation mg/kg	RAGS Eqn. 7 mg/kg
1,1,1-Trichloroethane	2.00E+00	1.43E+00	Y	1544	1000000	10734	**10645**
1,1,2-Trichloroethane	4.00E-03	5.71E-05	Y	8786	2561	2.4	**2.4**
1,1,2-Trichloro-1,2,2-trifluoroethane	3.00E+01	8.57E+00	Y	577	20000000	24069	**24039**
1,1-Dichloroethane	2.00E-01	NA	Y	2105	128070	NA	**128070**
1,1-Dichloroethene	5.00E-02	5.71E-02	Y	864	32018	240	**238**
1,2-Dichloroethane	6.00E-03	2.00E-03	Y	5217	3842	51	**50**
1,2-Dichloropropane	9.00E-02	1.14E-03	Y	4509	57632	25	**25**
1,4-Dioxane	3.00E-02	8.57E-01	0	NA	19211	20000000000	**19211**
2-Butanone (MEK)	6.00E-01	1.43E+00	Y	7821	384211	54374	**47633**
Acetone	9.00E-01	8.86E+00	Y	6564	576316	282939	**189772**
Benzene	4.00E-03	8.57E-03	Y	4504	2561	188	**175**
Chloroethane	NA	2.86E+00	Y	1068	NA	14850	**14850**
Chloroform	1.00E-02	2.80E-02	Y	2754	6404	375	**355**
cis-1,2-Dichloroethene	2.00E-03	NA	Y	2733	1281	NA	**1281**
Cyclohexane	NA	1.71E+00	Y	775	NA	6466	**6466**
Dichloromethane (Methylene chloride)	6.00E-02	2.86E-01	Y	2108	38421	2931	**2723**
Ethyl benzene	1.00E-01	2.86E-01	Y	7639	64035	10622	**9111**
Tetrachloroethene	1.00E-02	7.71E-02	Y	2651	6404	995	**861**
Toluene	8.00E-02	1.43E+00	Y	5614	51228	39031	**22153**
trans-1,2-Dichloroethene	2.00E-02	1.71E-02	Y	2733	12807	228	**224**
Trichloroethene	NA	2.86E-03	Y	2430	NA	34	**34**
Trichlorofluoromethane	3.00E-01	2.00E-01	Y	506	192105	493	**491**
Vinyl chloride	3.00E-03	2.86E-02	Y	580	1921	81	**77**

$$\text{Oral C (mg/kg)} = \frac{\text{THI} \times \text{BW} \times \text{AT}}{\text{EF} \times \text{ED} \times (1/\text{RfDo} \times 10^{-6} \times \text{IRs})}$$

$$\text{Inhalation C (mg/kg)} = \frac{\text{THI} \times \text{BW} \times \text{AT}}{\text{EF} \times \text{ED} \times (1/\text{RfDi} \times \text{IRa} \times (1/\text{VF} + 1/\text{PEF}))}$$

$$\text{RAGS Eqn 7} = \frac{\text{THI} \times \text{BW} \times \text{AT}}{\text{EF} \times \text{ED} \times [(1/\text{RfDo} \times 10^{-6} \times \text{IRs}) + (1/\text{RfDi} \times \text{IRa} \times (1/\text{VF} + 1/\text{PEF}))]}$$

Parameter	Value	Source	Comment
Body Weight, Adult (kg)	70	1	
Exposure Frequency, Resident Adult (d/yr)	350	1	
Exposure Duration, Resident Adult (yr)	30	1	
Soil Ingestion, Resident Adult (mg/d)	114	1	
Water ingestion, Resident Adult (L/d)	2	1	
Inhalation Rate, Resident Adult (m^3/d)	15	1	
Averaging Time, Noncancer, Adult (d)	10950	1	Exposure Duration x 365 days
Target hazard quotient	1	1	
Water-to-air volatilization factor (L/m3)	0.5	1	
Particulate Emission Factor (m3/kg)	4630000000	1	

Notes:

Source 1 - GaEPD Reg 391-3-19 Appendix III, Table 3

Source 2 - HSRA Guidance http://www.georgiaepd.org/Documents/hsraguideCSRRRS.html

Table 4 - Adult Resident Cancer-Based Soil Screening Levels (SSLs)

Chemical	Oral CSF per mg/kg-day	Inhalation CSF per mg/kg-day	Class	Volatile?	VF	Oral SSL mg/kg	Inhalation SSL mg/kg	RAGS Eqn. 6 SSL mg/kg	SSL (adjusted for cancer class) mg/kg
1,1,1-Trichloroethane	NA	NA	D	Y	1544	NA	NA	NA	**NA**
1,1,2-Trichloroethane	0.057	5.60E-02	C	Y	8786	262	18	17	**170**
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	0	Y	577	NA	NA	NA	**NA**
1,1-Dichloroethane	0.0057	5.60E-03	C	Y	2105	2621	43	42	**420**
1,1-Dichloroethene	NA	NA	C	Y	864	NA	NA	NA	**NA**
1,2-Dichloroethane	0.091	9.10E-02	B2	Y	5217	164	6.5	6.3	**6.3**
1,2-Dichloropropane	0.036	3.50E-02	NA	Y	4509	415	15	14	**14**
1,4-Dioxane	0.1	2.70E-02	0	0	NA	149	20000000	149	**149**
2-Butanone (MEK)	NA	NA	NA	Y	7821	NA	NA	NA	**NA**
Acetone	NA	NA	NA	Y	6564	NA	NA	NA	**NA**
Benzene	0.055	2.73E-02	A	Y	4504	272	19	18	**18**
Chloroethane	NA	NA	B	Y	1068	NA	NA	NA	**NA**
Chloroform	0.031	8.05E-02	B2	Y	2754	482	3.9	3.9	**3.9**
cis-1,2-Dichloroethene	NA	NA	0	Y	2733	NA	NA	NA	**NA**
Cyclohexane	NA	NA	NA	Y	775	NA	NA	NA	**NA**
Dichloromethane (Methylene chloride)	0.0075	1.65E-03	B2	Y	2108	1992	146	136	**136**
Ethyl benzene	0.011	8.75E-03	NA	Y	7639	1358	99	92	**92**
Tetrachloroethene	0.54	2.07E-02	NA	Y	2651	28	15	9.5	**9.5**
Toluene	NA	NA	unlikely	Y	5614	NA	NA	NA	**NA**
trans-1,2-Dichloroethene	NA	NA	NA	Y	2733	NA	NA	NA	**NA**
Trichloroethene	0.0059	7.00E-03	0	Y	2430	2532	39	39	**39**
Trichlorofluoromethane			NA	Y	506	NA	NA	NA	**NA**
Vinyl chloride	7.2E-01	1.54E-02	A	Y	580	21	4.3	3.5	**3.5**

$$\text{Oral C (mg/kg)} = \frac{\text{TR x BW x AT}}{\text{EF x ED x (SFo x } 10^{-6} \text{ x IRs)}}$$

$$\text{Inhalation C (mg/kg)} = \frac{\text{TR x BW x AT}}{\text{EF x ED x (SFi x IRa x (1/VF + 1/PEF))}}$$

$$\text{RAGS Eqn 7} = \frac{\text{TR x BW x AT}}{\text{EF x ED x [(SFo x } 10^{-6} \text{ x IRs) + (SFi x IRa x (1/VF + 1/PEF))]}}$$

Parameter	Value	Source	Comment
Body Weight, Adult (kg)	70	1	
Exposure Frequency, Resident Adult (d/yr)	350	1	
Exposure Duration, Resident Adult (yr)	30	1	
Soil Ingestion, Resident Adult (mg/d)	114	1	
Water ingestion, Resident Adult (L/d)	2	1	
Inhalation Rate, Resident Adult (m^3/d)	15	1	
Averaging Time, Cancer, Adult (d)	25550	1	
Target Risk (high)	0.0001	1	for group C carcinogens
Target Risk (low)	0.00001	1	for group A and B carcinogens
Water-to-air volatilization factor (L/m3)	0.5	1	
Particulate Emission Factor (m3/kg)	4630000000	1	

Notes:

Source 1 - GaEPD Reg 391-3-19 Appendix III, Table 3

Source 2 - HSRA Guidance http://www.georgiaepd.org/Documents/hsraguideCSRRRS.html

Table 5 - Type 1 Soil RRS

CAS #	Parameter	Table 2 - Appendix III	Item 1 of Rule 391-3-19-.07(6)(c): Higher of (i) and (ii)			Item 2 RAGS Eqn.	Item 3 RAGS Eqn.	Least of Items 1 - 3	Type 1 Soil RRS
			(i): Appendix I (NC) - excl. [ ]	(ii): Type 1 GW x 100 factor	Higher of (i) and (ii)	Adult	Adult		
		TYPE 1 - SOIL (mg/kg)							
		Rule 391-3-19-.07(6)(c): Table 2 Appendix III, or if not listed, the the least of Items 1-3 (and if not calculable the higher of background and DL)							
71-55-6	1,1,1-Trichloroethane		5.44	20	20	10645	NA	20	**20**
79-00-5	1,1,2-Trichloroethane		0.5	0.5	0.5	2.4	170	0.5	**0.5**
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		6.92	100000	100000	24039	NA	24039	**24039**
75-34-3	1,1-Dichloroethane		0.03	400	400	128070	420	400	**400**
75-35-4	1,1-Dichloroethene		0.36	0.7	0.7	238	NA	0.7	**0.7**
107-06-2	1,2-Dichloroethane		0.02	0.5	0.5	50	6.3	0.5	**0.5**
78-87-5	1,2-Dichloropropane		0.02	0.5	0.5	25	14	0.5	**0.5**
123-91-1	1,4-Dioxane		DL	7	7	19211	149	7	**7**
78-93-3	2-Butanone (MEK)		0.79	200	200	47633	NA	200	**200**
67-64-1	Acetone		2.74	400	400	189772	NA	400	**400**
71-43-2	Benzene		0.02	0.5	0.5	175	18	0.5	**0.5**
75-00-3	Chloroethane		0.17	NA	0.17	14850	NA	0.17	**0.17**
67-66-3	Chloroform		0.68	8	8	355	3.9	3.9	**3.9**
156-59-2	cis-1,2-Dichloroethene		0.53	NA	0.53	1281	NA	0.53	**0.53**
110-82-7	Cyclohexane		[25]	NA	NA	6466	NA	6466	**6466**
75-09-2	Dichloromethane (Methylene chloride)		0.08	0.5	0.5	2723	136	0.5	**0.5**
100-41-4	Ethyl benzene		20	70	70	9111	92	70	**70**
127-18-4	Tetrachloroethene		0.18	0.5	0.5	861	9.5	0.5	**0.5**
108-88-3	Toluene		14.4	100	100	22153	NA	100	**100**
156-60-5	trans-1,2-Dichloroethene		0.53	10	10	224	NA	10	**10**
79-01-6	Trichloroethene		0.13	0.5	0.5	34	39	0.5	**0.5**
75-69-4	Trichlorofluoromethane		0.7	200	200	491	NA	200	**200**
75-01-4	Vinyl chloride		0.04	0.2	0.2	77	3.5	0.2	**0.2**

Table 6 - Type 1 RRS - Groundwater

		TYPE 1 GW RRS		
		Rule 391-3-19-.07(6)(b) and Guidance: The lesser of Table 1 App III and GA MCL (or where NA, the higher of DL or Bkg)		
CAS #	Parameter	Table 1, App III mg/L	GA MCL mg/L	Type 1 GW RRS mg/L
71-55-6	1,1,1-Trichloroethane	0.2		**0.2**
79-00-5	1,1,2-Trichloroethane	0.005		**0.005**
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1000		**1000**
75-34-3	1,1-Dichloroethane	4		**4**
75-35-4	1,1-Dichloroethene	0.007		**0.007**
107-06-2	1,2-Dichloroethane	0.005		**0.005**
78-87-5	1,2-Dichloropropane	0.005	0.005	**0.005**
123-91-1	1,4-Dioxane	0.07	1.005	**0.07**
78-93-3	2-Butanone (MEK)	2		**2**
67-64-1	Acetone	4		**4**
71-43-2	Benzene	0.005	0.005	**0.005**
75-00-3	Chloroethane	-		**Bkg/DL**
67-66-3	Chloroform	0.08		**0.08**
156-59-2	cis-1,2-Dichloroethene	-		**Bkg/DL**
110-82-7	Cyclohexane	-		**Bkg/DL**
75-09-2	Dichloromethane (Methylene chloride)	0.005	0.005	**0.005**
100-41-4	Ethyl benzene	0.7	0.7	**0.7**
127-18-4	Tetrachloroethene	0.005	0.005	**0.005**
108-88-3	Toluene	1	1	**1**
156-60-5	trans-1,2-Dichloroethene	0.1	1	**0.1**
79-01-6	Trichloroethene	0.005	0.005	**0.005**
75-69-4	Trichlorofluoromethane	2		**2**
75-01-4	Vinyl chloride	0.002	0.005	**0.002**

APPENDIX F

Boring Logs

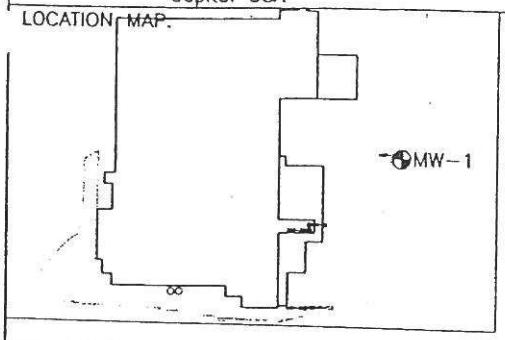
The following available boring logs are included in this appendix:

MW-1
MW-1D
MW-2
MW-2D
MW-3
MW-3D
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16

GP001
GP002
GP003
GP004
GP005
GP006
GP007
GP008
GP009
GP010
GP011
GP012
GP013

FACILITY NAME: Capitol USA	FACILITY ID: N/A	PROJECT #: 04330	BORING/WELL: MW-1	DRAWN BY: C.A.P.	PG 1 OF 1

LOCATION MAP:



START DATE & TIME: 07-14-04 09:50

COMP. DATE & TIME: 07-14-04 10:30

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri-State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

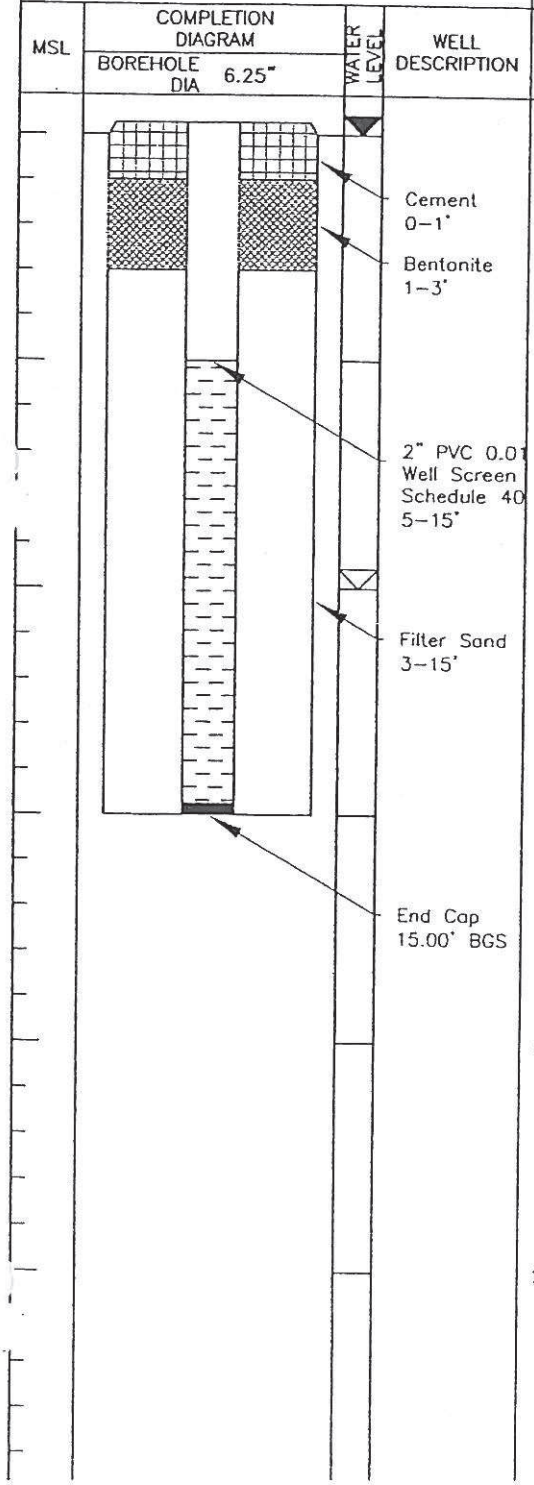
ELEV (MSL): 94.68' T.D. (MSL): 15.00'

WATER ENCOUNTERED (BGS): 10.00'

WATER LEVEL (BGS): Flowing

TRI-STATE TESTING & DRILLING, LLC

Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.

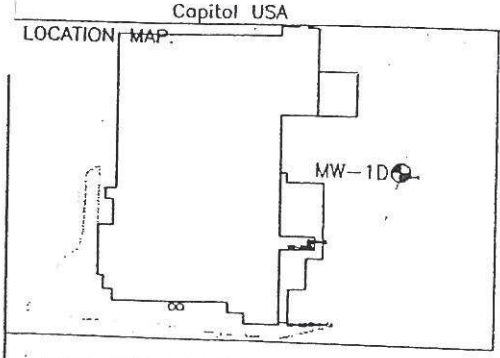


GRAPHIC LITHOLOGY	PENETRATION RATE/TIME	OVD (PPM)	SAMPLES & CORES TYPE	RECOV	ANAL	DESCRIPTION (COLOR, TEXTURES, STRUCTURE, ETC.)
						Drilled to 15.00' BGS and set well.

FACILITY NAME: Capitol USA

FACILITY ID: N/A | PROJECT #: 04330 | BORING/WELL: MW-1D | DRAWN BY: C.A.P. | PG 1 OF 2

LOCATION MAP:



START DATE & TIME: 07-13-04 09:30

COMP. DATE & TIME: 07-13-04 11:00

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri-State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

ELEV (MSL): 94.90' T.D. (MSL): 39.00'

WATER ENCOUNTERED (BGS): 10.00'

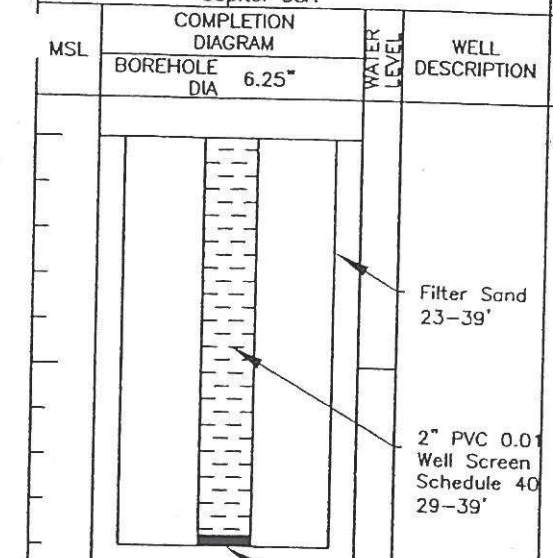
WATER LEVEL (BGS): Flowing

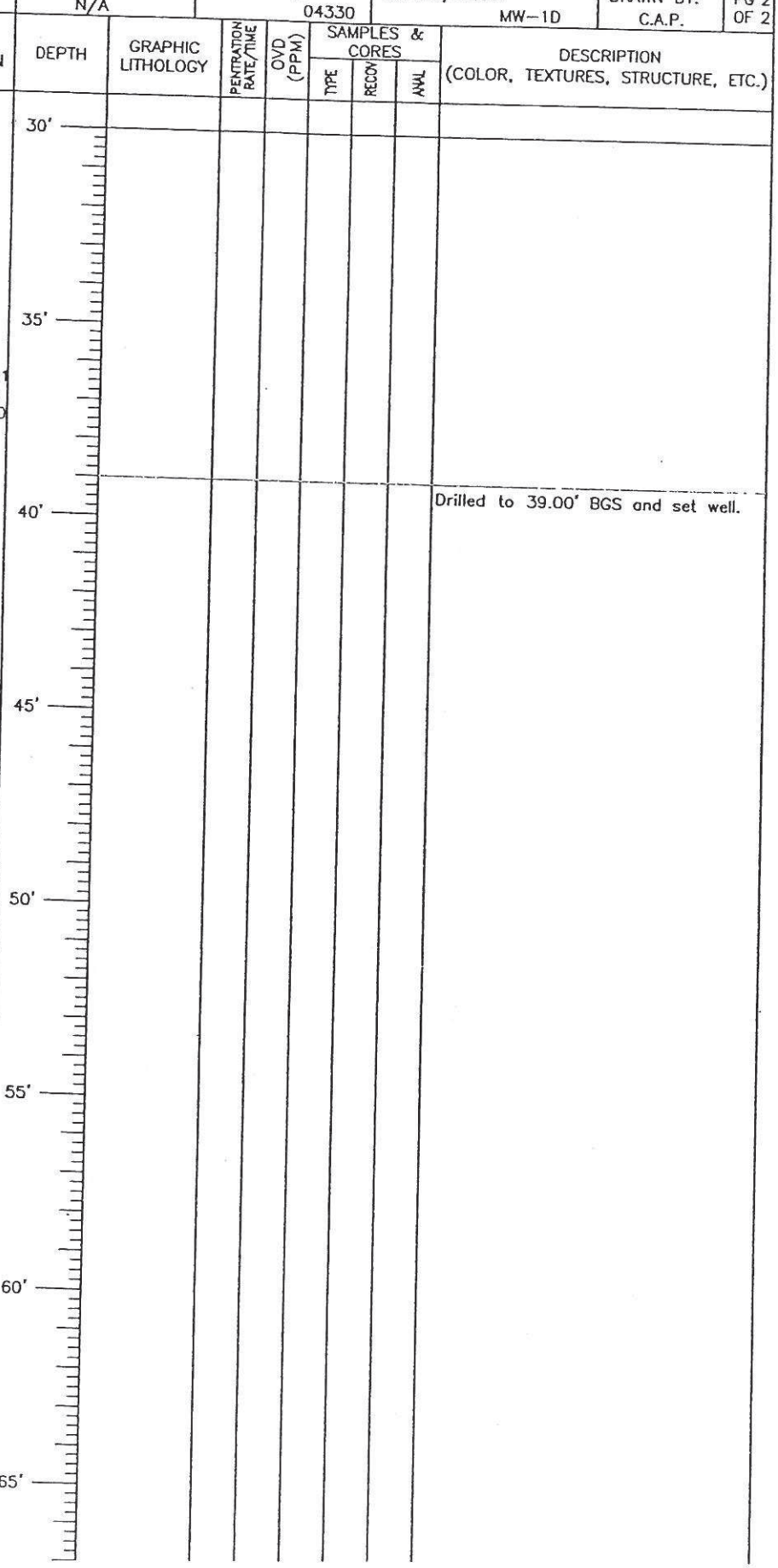
TRI-STATE TESTING & DRILLING, LLC

Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.

MSL	COMPLETION DIAGRAM (BOREHOLE DIA 6.25")	WATER LEVEL	WELL DESCRIPTION	DEPTH	GRAPHIC LITHOLOGY	PENETRATION RATE/TIME	OVD (PPM)	SAMPLES & CORES: TYPE	RECOV	ANAL	DESCRIPTION (COLOR, TEXTURES, STRUCTURE, ETC.)
			Cement 0-1'	0'							
				5'		09:32	7.8	SS	25		Clay; firm; plastic; mottled light greenish gray and brownish yellow (1GY 8/1, 10YR 7/8); moist; 5-10% 1-4mm sub rounded chert grains. Type CL.
				10'		09:50	8.3	SS	50	VOCs	Clay; soft to firm; fissile; non-plastic; mottled light greenish gray and brownish yellow (1GY 8/1, 10YR 7/8); moist; trace 1-10mm sub angular to sub rounded chert grains. Type CL.
			Annular Grout 1-21'	15'		10:10	9.2	SS	50		Weathered shale; fissile; brownish yellow and dark brownish yellow (10YR 6/8, 4/6); wet; approx. 70° bedding dip.
				20'							
			Bentonite 21-23'	25'							
			Filter Sand								

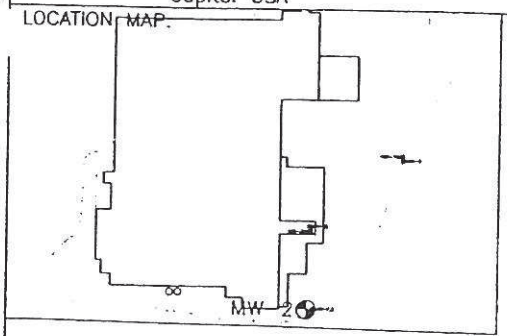
FACILITY NAME: Capitol USA	FACILITY ID: N/A	PROJECT #: 04330	BORING/WELL: MW-1D	DRAWN BY: C.A.P.	PG 2 OF 2





FACILITY NAME: Capitol USA	FACILITY ID: N/A	PROJECT #: 04330	BORING/WELL: MW-2	DRAWN BY: C.A.P.	PG 1 OF 1

LOCATION MAP:



START DATE & TIME: 07-14-04 07:05

COMP. DATE & TIME: 07-14-04 07:35

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri-State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

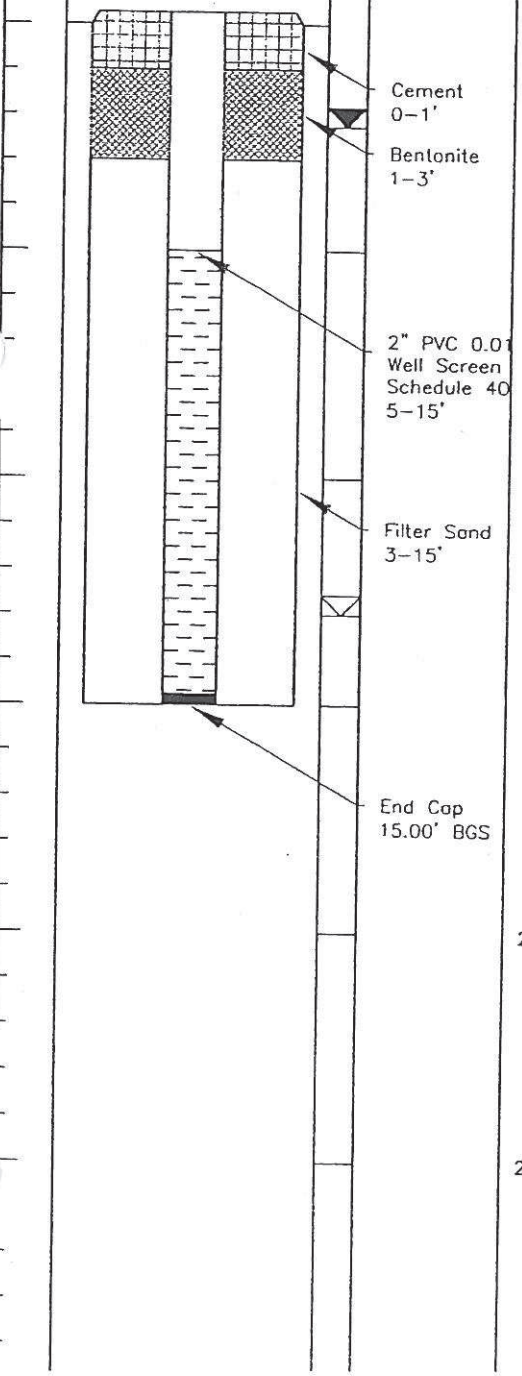
ELEV (MSL): 100.00' T.D. (MSL): 15.00'

WATER ENCOUNTERED (BGS): 13.00'

WATER LEVEL (BGS): 2.14' (07-19-04)

TRI-STATE TESTING & DRILLING, LLC

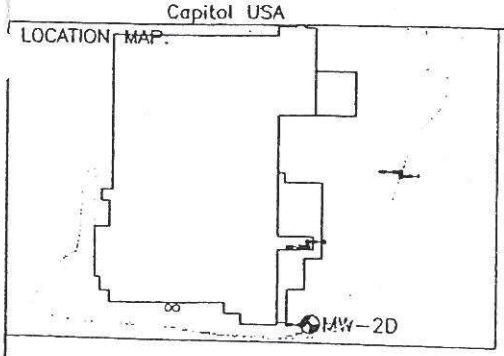
Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.



GRAPHIC LITHOLOGY	PENETRATION RATE/TIME	OVD (PPM)	SAMPLES & CORES TYPE	RECOV	ANAL	DESCRIPTION (COLOR, TEXTURES, STRUCTURE, ETC.)
						Drilled to 15.00' BGS and set well.

FACILITY NAME:	FACILITY ID:	PROJECT #:	BORING/WELL:	DRAWN BY:	PG 1 OF 1
Capitol USA	N/A	04330	MW–2D	C.A.P.	

LOCATION MAP:



START DATE & TIME: 07–13–04 13:00

COMP. DATE & TIME: 07–13–04 13:50

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri–State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

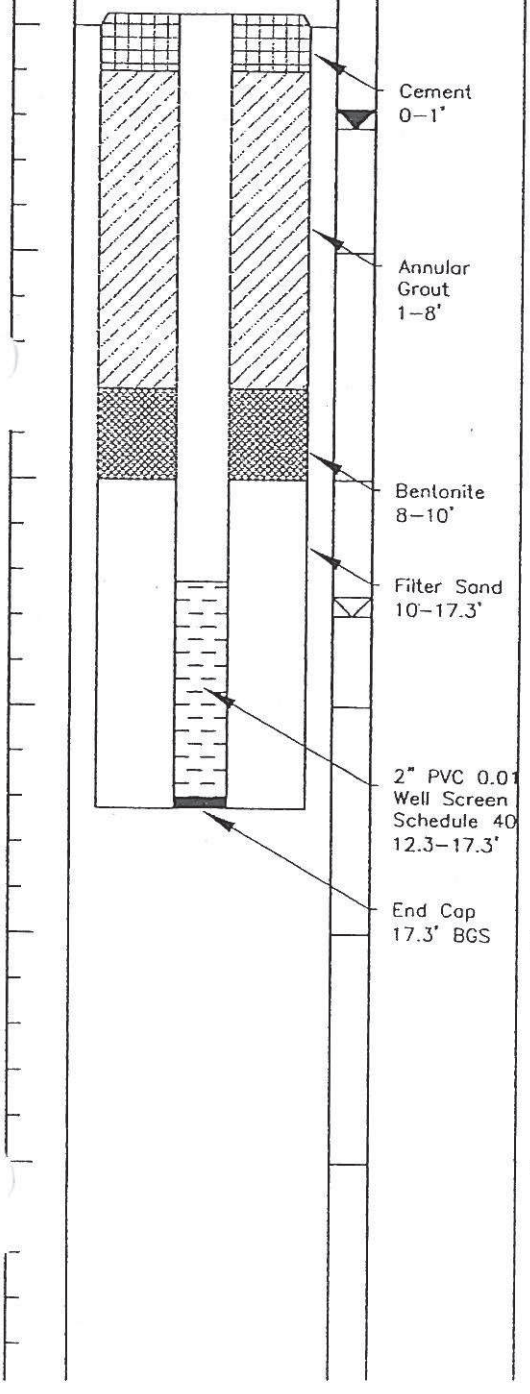
ELEV (MSL): 99.45' T.D. (MSL): 17.30'

WATER ENCOUNTERED (BGS): 13.00'

WATER LEVEL (BGS): 2.14' (07–19–04)

TRI–STATE TESTING & DRILLING, LLC

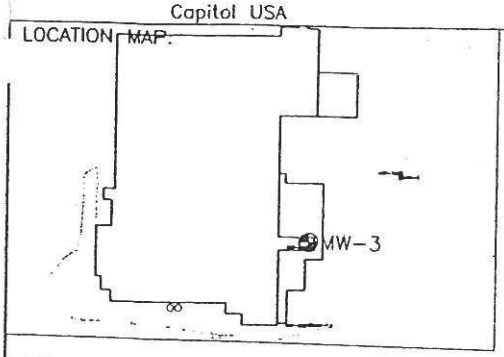
Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.



DEPTH	GRAPHIC LITHOLOGY	PENETRATION RATE/TIME	OVD (PPM)	SAMPLES & CORES TYPE	RECOV	ANAL	DESCRIPTION (COLOR, TEXTURES, STRUCTURE, ETC.)
0'							
		13:05	16.2	SS	25		Clay; fill(?); fissile; mod. plastic; reddish gray (10R 6/1); moist; 10–25% 1mm–3cm angular to sub rounded chert. Type CL.
5'							
		13:15	19.9	SS	50	VOCs	Shaly clay; stiff; fissile; slightly plastic; molted light gray and yellowish brown (1GY 7/1, 10YR 5/8); moist; 10–25% 1mm–3cm angular to sub rounded chert; approx. 70° bedding dip. Type CL.
10'							
		13:05	22.8	SS	25		Weathered shale; fissile; dark greenish gray and dark yellowish brown (1GY 4/1, 10YR 4/6); wet.
15'							
							Drilled to 17.30' BGS and set well.
20'							
25'							

FACILITY NAME:	FACILITY ID:	PROJECT #:	BORING/WELL:	DRAWN BY:	PG 1 OF 1
Capitol USA	N/A	04330	MW-3	C.A.P.	

LOCATION MAP:



START DATE & TIME: 07-14-04 07:50

COMP. DATE & TIME: 07-14-04 08:20

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri-State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

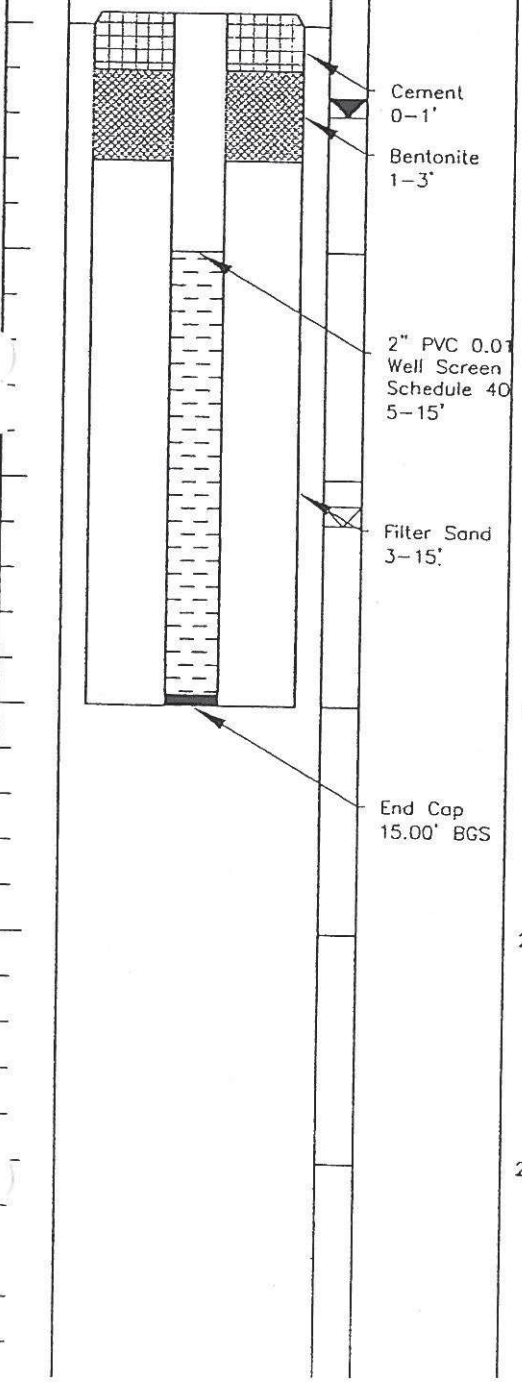
ELEV (MSL): 98.43' T.D. (MSL): 15.00'

WATER ENCOUNTERED (BGS): 11.00'

WATER LEVEL (BGS): 2.00' (07-20-04)

TRI-STATE TESTING & DRILLING, LLC

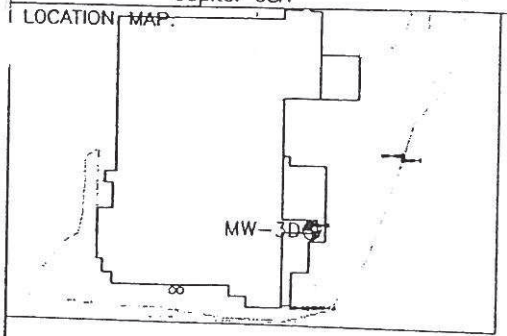
Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.



DEPTH	GRAPHIC LITHOLOGY	PENETRATION RATE/TIME	OVD (PPM)	SAMPLES & CORES TYPE	RECOV	ANAL	DESCRIPTION (COLOR, TEXTURES, STRUCTURE, ETC.)
0'							
		08:00	23.2	SS	75		Shaly clay; stiff; mod. plastic; mottled light greenish gray and yellowish brown (1GY 8/1, 10YR 5/8); moist; relief shaly structure with approx. 70° bedding dip; trace Mn deposits on bedding. Type CL
5'							
		08:07	53.7	SS	100	VOCs	Shaly clay; firm; fissile; mod. plastic; light olive brown and very dark brown (2.5Y 5/4, 10YR 2/2); moist; relief shaly structure with approx. 70° bedding dip; trace Mn deposits on bedding. Type CL
10'							
		08:10	81.1	SS	50	VOCs	Weathered shale; soft; fissile; non-plastic; greenish gray (1G 5/1); wet; distinctive color change observed.
15'							Drilled to 15.00' BGS and set well.
20'							
25'							

FACILITY NAME:	FACILITY ID:	PROJECT #:	BORING/WELL:	DRAWN BY:	PG 1 OF 1
Capitol USA	N/A	04330	MW-3D	C.A.P.	

LOCATION MAP:



START DATE & TIME: 07-13-04 15:05

COMP. DATE & TIME: 07-13-04 15:45

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri-State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

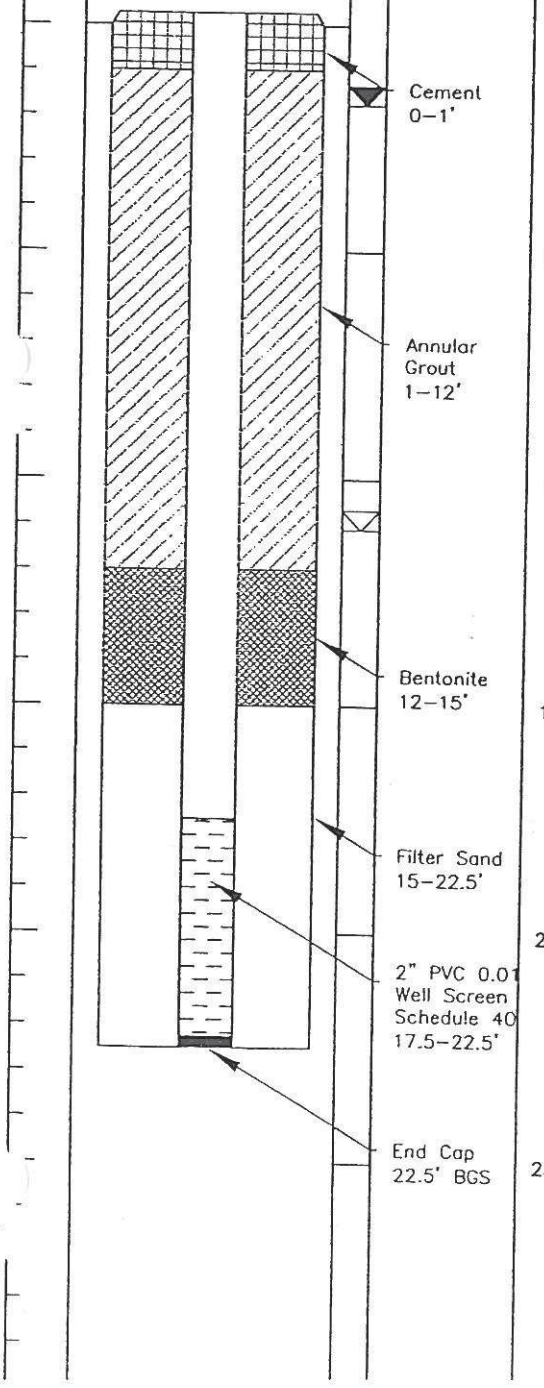
ELEV (MSL): 98.47' T.D. (MSL): 22.50'

WATER ENCOUNTERED (BGS): 11.00'

WATER LEVEL (BGS): 1.81' (07-20-04)

TRI-STATE TESTING & DRILLING, LLC

Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.



DEPTH	GRAPHIC LITHOLOGY	PENETRATION RATE/TIME	OVD (PPM)	SAMPLES & CORES TYPE	RECOV	ANAL	DESCRIPTION (COLOR, TEXTURES, STRUCTURE, ETC.)
0'							
				SS	0		No recovery
5'							
				SS	0		No recovery
10'							
				SS	0		No recovery
15'							
20'							Drilled to 22.50' BGS and set well.
25'							

WRS Infrastructure & Environment, Inc.

BORING LOG

Borehole No.: MW-008

Project: Capital Adhesives
Project No.: 106004
Client: CEA, LLC
Location: Dalton, Georgia

Driller: Kilman Brothers
Logged by: Brian Fredo
Date: 6/27/06

Total depth: 15 ft bgs.
Water depth on boring date: 4 ' bgs
Approx. borehole diam 6"

Elev. (ft)	Depth (ft) bgs.	% Recov.	SPT Blows/0.5 ft	OVA (ppm)	USCS	Sample Description
						USCS (Unified Soil Classification System) is only field-estimated
						Fill - fine to coarse sandy gravel
						Fill - fine to coarse gravelly sand
			10			
			11			
	5		8			Light Brown fine to coarse sandy clay with gravel; non-plastic
			9			
			13			
			10			
	10		9			Orange and gray fine to coarse sandy clay with gravel; non-plastic; weathered shale
			13			
			10			
			23			
	15		32			Green-grey and dark brown weathered shale
			50/3			Boring terminated @ 15' bgs
	20					
	25					
	30					

Remarks:

Recovery was > 90 % unless indicated

WRS Infrastructure & Environment, Inc.

BORING LOG

Borehole No.: MW-009

Project: Capital Adhesives
Project No.: 106004
Client: CEA, LLC
Location: Dalton, Georgia

Driller: Kilman Brothers
Logged by: Brian Fredo
Date: 6/27/06

Total depth: 17 ft bgs.
Water depth on boring date: 5 ' bgs
Approx. borehole diam 6"

Elev. (ft)	Depth (ft) bgs.	% Recov.	SPT Blows/0.5 ft	OVA (ppm)	USCS	Sample Description
						USCS (Unified Soil Classification System) is only field-estimated
						Fill - fine to coarse sandy gravel
						Fill - fine to coarse gravelly sand
			8			
			8			
	5		10			
			12			
			6			
			5			
	10		10			Green-Gray clay;non-plastic
			11			
			3			
			3			
	15		7			Red, Brown and Gray weathered shale
			11			
						Boring terminated @ 17' bgs
	20					
	25					
	30					

Remarks:

Recovery was > 90 % unless indicated

WRS Infrastructure & Environment, Inc.

BORING LOG

Borehole No.: MW-010

Project: Capital Adhesives
Project No.: 106004
Client: CEA, LLC
Location: Dalton, Georgia

Driller: ESN-Southeast
Logged by: Brian Fredo
Date: 7/07/06

Total depth: 20 ft bgs.
Water depth on boring date: 6 ' bgs
Approx. borehole diam 6"

Elev. (ft)	Depth (ft) bgs.	% Recov.	SPT Blows/0.5 ft	OVA (ppm)	USCS	Sample Description
						USCS (Unified Soil Classification System) is only field-estimated
				0.3		Fill - Brown fine to coarse clayey sand
						Red and gray fine sandy clay; stiff
	5					
				0.0		Gray weathered shale lens with brown clayey coarse sandy gravel
						Brown fine sandy clay; loose; non-plastic
	10					Green-gray and brown and orange fine to coarse sandy clay w/ trace gravel; moist
				0.0		
	15					Weathered shale; gray and orange clayey sandy gravel; very wet 17.5 to 18.0' bgs
				0.0		Green weathered shale; clayey fine to coarse sand with gravels
	20					
						Boring terminated @ 20' bgs
	25					
	30					

Remarks:

Lithology gathered with continous direct push

WRS Infrastructure & Environment, Inc.

BORING LOG **Borehole No.: MW-011**

Project: Capital Adhesives Project No.: 106004

Client: CEA, LLC Location: Dalton, Georgia

Driller: ESN-Southeast Logged by: Brian Fredo Date: 7/07/06

Total depth: 20 ft bgs. Water depth on boring date: 6 ' bgs

Approx. borehole diam 6"

Elev. (ft)	Depth (ft) bgs.	% Recov.	SPT Blows/0.5 ft	OVA (ppm)	USCS	Sample Description
						USCS (Unified Soil Classification System) is only field-estimated
				0.0		Fill - Brown clay with gravel
	5					Light gray silty fine sand
						Brown clayey fine to coarse sand with gravel
	10					Orange brown and gray fine to coarse sandy clay with trace gravel; wet @12' bgs
	15			0.0		
	20			0.0		Weathered shale; fine to very coarse clayey sandy gravel; very wet @18.5' bgs
	25					Boring terminated @ 20' bgs
	30					

Remarks:

Lithology gathered with continous direct push

WRS Infrastructure & Environment, Inc.

BORING LOG

Borehole No.: MW-012

Project: Capital Adhesives
Project No.: 106004
Client: CEA, LLC
Location: Dalton, Georgia

Driller: ESN-Southeast
Logged by: Brian Fredo
Date: 7/07/06

Total depth: 20 ft bgs.
Water depth on boring date: 7 ' bgs
Approx. borehole diam 6"

Elev. (ft)	Depth (ft) bgs.	% Recov.	SPT Blows/0.5 ft	OVA (ppm)	USCS	Sample Description
						USCS (Unified Soil Classification System) is only field-estimated
				0.7		Fill - Brown fine to coarse sandy clay with gravel; plastic
	5					Gray fine sandy clay; stiff
				0.9		Brown to dark gray fine to coarse sandy clay; stiff
	10					
				1.1		Brown fine to coarse sandy clay with gravels of brown shale
						Green-grey clay
						Brown clayey fine to coarse sand with trace gravels of weathered shale
	15					Brown fine to coarse sandy clay; non-plastic
				1.5		Weathered shale - Brown clayey fine to coarse sand with gravels
	20					Brown clayey sandy gravel; stiff; hard
						Boring terminated @ 20' bgs
	25					
	30					

Remarks:

Lithology gathered with continous direct push

WRS Infrastructure & Environment, Inc.

BORING LOG

Borehole No.: MW-013

Project: Capital Adhesives
Project No.: 106004
Client: CEA, LLC
Location: Dalton, Georgia

Driller: Kilman Brothers
Logged by: Brian Fredo
Date: 6/27/06

Total depth: 25 ft bgs.
Water depth on boring date: 7 ' bgs
Approx. borehole diam 6"

Elev. (ft)	Depth (ft) bgs.	% Recov.	SPT Blows/0.5 ft	OVA (ppm)	USCS	Sample Description
						USCS (Unified Soil Classification System) is only field-estimated
						Fill - fine to coarse silty sandy clay with trace gravel
	5		4,6,6,8			Orange and gray clay; plastic
	10		5,6,6,7			Light brown and orange clay; plastic
	15		5,5,10,11			Weathered shale; Red and orange brown clayey fine to coarse sandy gravel
	20		6,7,12,13			
	25		3,4,6,13			
						Boring terminate @ 25' bgs
	30					

Remarks:

Recovery was > 90 % unless indicated

WRS Infrastructure & Environment, Inc.

BORING LOG

Borehole No.: MW-014

Project: Capital Adhesives
Project No.: 106004
Client: CEA, LLC
Location: Dalton, Georgia

Driller: Kilman Brothers
Logged by: Brian Fredo
Date: 6/27/06

Total depth: 26 ft bgs.
Water depth on boring date: 5 ' bgs
Approx. borehole diam 6"

Elev. (ft)	Depth (ft) bgs.	% Recov.	SPT Blows/0.5 ft	OVA (ppm)	USCS	Sample Description
						USCS (Unified Soil Classification System) is only field-estimated
						Fill - fine to coarse silty sandy clay
			4			
			6			Light brown and orange clay; plastic
	5		6			
			8			
			5			moist @ 8' bgs
			6			
	10		6			
			7			
			5			
			5			
	15		10			Weathered shale - red and orange brown clayey fine to coarse sand with gravel
			11			
			6			
			7			
	20		12			
			13			
			3			
			4			
	25		6			
			13			Boring terminate @ 25' bgs
	30					

Remarks:

Recovery was > 90 % unless indicated

WRS Infrastructure & Environment, Inc.

BORING LOG

Borehole No.: MW-015

Project: Capital Adhesives
Project No.: 106004
Client: CEA, LLC
Location: Dalton, Georgia

Driller: Kilman Brothers
Logged by: Brian Fredo
Date: 6/28/06

Total depth: 26 ft bgs.
Water depth on boring date: 3 ' bgs
Approx. borehole diam 6"

Elev. (ft)	Depth (ft) bgs.	% Recov.	SPT Blows/0.5 ft	OVA (ppm)	USCS	Sample Description
						USCS (Unified Soil Classification System) is only field-estimated
						Fill - fine to coarse silty sandy clay
			5			
			8			Dark gray fine sandy clay; plastic
	5		8			
			7			
			6			
			2			Weathered shale - brown silty clayey sand with gravels
	10		5			
			6			
			4			
			4			
	15		3			
			8			
			2			
			2			
	20		5			Weathered shale - Brown sandy silty clayey with abundant gravel; wet
			9			
			4			
			9			
	25		16			Brown shale
			19			Boring terminate @ 25' bgs
	30					

Remarks:

Recovery was > 90 % unless indicated

WRS Infrastructure & Environment, Inc.

BORING LOG

Borehole No.: MW-016

Project: Capital Adhesives
Project No.: 106004
Client: CEA, LLC
Location: Dalton, Georgia

Driller: Kilman Brothers
Logged by: Brian Fredo
Date: 6/27/06

Total depth: 26 ft bgs.
Water depth on boring date: 3 ' bgs
Approx. borehole diam 6"

Elev. (ft)	Depth (ft) bgs.	% Recov.	SPT Blows/0.5 ft	OVA (ppm)	USCS	Sample Description
						USCS (Unified Soil Classification System) is only field-estimated
						Fill - fine to coarse silty sandy clay
			3			
			4			Weathered shale - Orange and gray sandy clay
	5		5			
			9			
			2			
			3			
	10		5			
			3			
			4			
			6			
	15		11			Weathered shale - dark brown clayey fine to coarse sand with gravel
			12			
			1			
			4			
	20		4			
			4			
			1			
			4			
	25		8			
			12			Boring terminate @ 25' bgs
	30					

Remarks:

Recovery was > 90 % unless indicated

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number: — — — — — — — —	Boring Number: GP001
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08 / 09 / 05 (MM / DD / YY)	Date Drilling Completed: 08 / 09 / 05 (MM / DD / YY)
		Drilling Method: Geoprobe 4' Macro
Common Well Name	Final Static Water Level: _____ Feet MSL	Surface Elevation: _____ Feet MSL
		Borehole Diameter: 2.0 inches
Boring Location: State Plane _____ N. _____ E S/C/N; __ of __ 1/4 of Section __ T __ N, R __ E	Lat — — —; Long — — —	Local Grid Location (If Applicable): _____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W
County: Whitfield	County Code: ____ ____	Civil Town / City / or Village: Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
1	48/43		1–3	Top 3" – Topsoil, Silt, light brown, grass, dry Next 13" - Silt, light brown, few organics, trace sand, clay, dry Bottom 27" – Clay, grey, little gravel, silt, brown mottling, moist										
2	48/44		4–7	Top 3" – Same as above: Clay, grey, little gravel, silt, brown mottling, moist Next 23" – Gravel, orange/brown, clayey, much silt, little sand, clay, moist Bottom 18" – Silt, grey brown, clayey, much gravel, little sand, stiff, moist										
5 3	48/42		8–12	Top 6" – Same as above : Silt, grey brown, clayey, much gravel, little sand, stiff, moist Next 36" – Shale, grey brown/brown grey, weathered, much clay, silt, trace gravel, moist to wet, grades to brown											Approx 8' to water
4	48/40		13–14	Shale, dark brown, weathered, little silt and clay, silt, trace gravel, dry to moist, grades to light brown										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____ Firm ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives	— — — — — — — —	GP001

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 09 / 05 MM / DD / YY	08 / 09 / 05 MM / DD / YY	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
	_____ Feet MSL	_____ Feet MSL	2.0 inches

Boring Location	Local Grid Location (If Applicable)
State Plane _____ N. _____ E S/C/N __ of _ 1/4 of Section __ T __ N, R __ E Lat — — — Long — — —	_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

County	County Code	Civil Town / City / or Village
Whitfield	____ ____	Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	ROD/Comments
			15	Shale, dark brown, weathered, little silt and clay, silt, trace gravel, dry to moist, grades to light brown and dry to moist										
5	48/40		16 17 18 19	Top 32" - Shale, brown, weathered, little silt and clay, silt, trace gravel, dry to moist Bottom 8" – Shale, dark brown, not as weathered as above, hard, moist										
5			20 21 22 23 24 25 26 27 28	EOB 20'. Temporary piezometer GP001 set with 10' screen.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
[signature]	ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number:	Boring Number: GP002
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08 / 09 / 05 (MM / DD / YY)	Date Drilling Completed: 08 / 09 / 05 (MM / DD / YY)
Drilling Method: Geoprobe 4' Macro	Common Well Name:	Final Static Water Level: ____ Feet MSL
Surface Elevation: ____ Feet MSL	Borehole Diameter: 2.0 inches	
Boring Location: State Plane ____ N. ____ E S/C/N; ____ of ____ 1/4 of Section ____ T ____ N, R ____ E	Lat — — —; Long — — —	Local Grid Location (If Applicable): ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W
County: Whitfield	County Code:	Civil Town / City / or Village: Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
1	48/30		1 2 3	Top 2" – Topsoil, Silt, dark brown, grass, trace gravel, sand, dry Next 12" - Silt, brown, gravelly, little clay, sand, dry Next 15" – Silt, grey, few organics, clayey, little sand, trace gravel, moist to wet Bottom 1" – Gravel, brown, clayey, grey, much silt, little sand, moist										
2	48/30		4 5 6 7	Top 20" – Gravel, brown, clayey, grey, much silt, little sand, moist Bottom 10" – Gravel, brown, sandy, much silt, little clay, wet, greenish coloration in areas of clay										Approx 6' to water
5 3	48/38		8 9 10 11 12	Top 2" – Gravel, brown, sandy, much silt, little clay, wet, greenish coloration in areas of clay Bottom 36" – Shale, brown, weathered, much clay, silt, trace gravel, moist to wet, grades to brown										
4	48/40		13 14	Shale, dark brown, weathered, little silt and clay, silt, trace gravel, dry to moist, grades to light brown and dry to moist										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: [signature] Firm: ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives	— — — — — — — —	GP002

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 09 / 05 MM / DD / YY	08 / 09 / 05 MM / DD / YY	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
	Feet MSL	Feet MSL	2.0 inches

Boring Location	Local Grid Location (If Applicable)
State Plane ____ N. ____ E S/C/N __ of _ 1/4 of Section __ T __ N, R __ E Lat — — — Long — — —	☐ N ☐ E ____ Feet ☐ S ____ Feet ☐ W

County	County Code	Civil Town / City / or Village
Whitfield		Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
			15	Shale, dark brown, weathered, little silt and clay, silt, trace gravel, dry to moist, grades to light brown and dry to moist										
5	48/40		16 17 18 19	Top 32" - Shale, brown, weathered, little silt and clay, silt, trace gravel, dry to moist Bottom 8" – Shale, dark brown, not as weathered as above, hard, moist										
5			20 21 22 23 24 25 26 27 28	EOB 20'. Temporary piezometer GP002 set with 10' screen.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives		GP003

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 09 / 05 (MM / DD / YY)	08 / 09 / 05 (MM / DD / YY)	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
	Feet MSL	Feet MSL	2.0 inches

Boring Location	Local Grid Location (If Applicable)
State Plane N. E S/C/N Lat Long __ of __ 1/4 of Section __ T __ N, R __ E	☐ N ☐ E Feet ☐ S Feet ☐ W

County	County Code	Civil Town / City / or Village
Whitfield		Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	ROD/Comments
1	48/30		1 2 3	Top 2" – Topsoil, Silt, dark brown, grass, trace gravel, sand, dry Next 12" - Silt, brown, gravelly, little clay, sand, dry Next 15" – Silt, grey, few organics, clayey, little sand, trace gravel, moist to wet Bottom " – Gravel, brown, clayey, grey, much silt, little sand, moist										
2	48/30		4 5 6 7	Top 20" – Gravel, brown, clayey, grey, much silt, little sand, moist Bottom 10" – Gravel, brown, sandy, much silt, little clay, wet, greenish coloration in areas of clay										
5 3	48/38		8 9 10 11	Top 2" – Gravel, brown, sandy, much silt, little clay, wet, greenish coloration in areas of clay Bottom 36" – Shale, brown, weathered, silty, much clay, wet, grades to less clay										Approx 10' to water
4	48/40		12 13 14	Shale, dark brown / brown, weathered, wet										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives	— — — — — — — —	GP003

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 09 / 05 MM / DD / YY	08 / 09 / 05 MM / DD / YY	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
	_____ Feet MSL	_____ Feet MSL	2.0 inches

Boring Location	Local Grid Location (If Applicable)
State Plane _____ N. _____ E S/C/N __ of _ 1/4 of Section __ T __ N, R __ E Lat — — — Long — — —	_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

County	County Code	Civil Town / City / or Village
Whitfield		Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
			15	Shale, brown, little silt, soft, very friable, moist										
			16											
			17											
			18											
			19											
			20											
			21											
			22	EOB 16'. Temporary piezometer GP003 set with 5' screen.										
			23											
5			24											
			25											
			26											
			27											
			28											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
[signature]	ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number:	Boring Number: GP004
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08 / 09 / 05 (MM / DD / YY)	Date Drilling Completed: 08 / 09 / 05 (MM / DD / YY)
Drilling Method: Geoprobe 4' Macro		
Common Well Name:	Final Static Water Level: ____ Feet MSL	Surface Elevation: ____ Feet MSL
Borehole Diameter: 2.0 inches		
Boring Location: State Plane ____ N. ____ E S/C/N; ____ of ____ 1/4 of Section ____ T ____ N, R ____ E	Lat — — —; Long — — —	Local Grid Location (If Applicable): ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W
County: Whitfield	County Code:	Civil Town / City / or Village: Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
1	48/48		1–3	Top 3" – Topsoil, Silt, dark brown, grass, few organics, trace gravel, sand, dry Next 24" - Silt, grey, little gravel, sand, clay, few organics, dry Next 12" – Clay, grey with brown mottling, trace gravel, sand, soft, moist Bottom 9" – Silt, grey with brown, gravelly, much clay, little sand, stiff, moist										
2	48/48		4–7	Top 44" – Silt, grey with brown, gravelly, much clay, little sand, stiff, moist Bottom 4" – Silt, brown with grey, clayey, little gravel, sand, moist										
5 3	48/48		8–11	Top 45" – Silt, brown with grey, clayey, little gravel, sand, moist Bottom 3" – Shale, brown, weathered, clayey, much silt, trace gravel, moist to wet										Approx 10' to water
4	48/48		12–14	Top 6" - Shale, brown, weathered, clayey, much silt, trace gravel, moist to wet										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: [signature] Firm: ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives	— — — — — — — —	GP004

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 09 / 05 MM / DD / YY	08 / 09 / 05 MM / DD / YY	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
	____ Feet MSL	____ Feet MSL	2.0 inches

Boring Location	Local Grid Location (If Applicable)
State Plane ____ N. ____ E S/C/N __ of __ 1/4 of Section __ T __ N, R __ E Lat — — — Long — — —	____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W

County	County Code	Civil Town / City / or Village
Whitfield		Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (In)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
			15	Bottom 42" - Shale, brown, clayey, much silt, friable, moist										
5	48/40		16 17 18 19	Shale, brown, clayey, much silt, friable, moist										
5			20 21 22 23 24 25 26 27 28	EOB 19.5' - refusal. Temporary piezometer GP004 set with 5' screen.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
[signature]	ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives		GP005

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 09 / 05 (MM / DD / YY)	08 / 09 / 05 (MM / DD / YY)	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
	Feet MSL	Feet MSL	2.0 inches

Boring Location	Lat / Long	Local Grid Location (If Applicable)
State Plane ____ N. ____ E S/C/N __ of __ 1/4 of Section __ T __ N, R __ E	Lat — — — Long — — —	____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W

County	County Code	Civil Town / City / or Village
Whitfield		Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	ROD/Comments
1	48/48		1–3	Top 3" – Topsoil, Silt, dark brown, grass, few organics, trace gravel, sand, dry Next 24" - Silt, grey, little gravel, sand, clay, few organics, dry Next 12" – Clay, grey with brown mottling, trace gravel, sand, soft, moist Bottom 9" – Silt, grey with brown, gravelly, much clay, little sand, stiff, moist										
2	48/48		4–7	Top 44" – Silt, grey with brown, gravelly, much clay, little sand, stiff, moist Bottom 4" – Silt, brown with grey, clayey, little gravel, sand, moist										
5 3	48/48		8–11	Top 45" – Silt, brown with grey, clayey, little gravel, sand, moist Bottom 3" – Shale, brown, weathered, clayey, much silt, trace gravel, moist to wet										Approx 10' to water
4	48/48		12–14	Top 6" - Shale, brown, weathered, clayey, much silt, trace gravel, moist to wet										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives	— — — — — — — —	GP005

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 09 / 05 MM / DD / YY	08 / 09 / 05 MM / DD / YY	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
	_____ Feet MSL	_____ Feet MSL	2.0 inches

Boring Location	Lat / Long	Local Grid Location (If Applicable)
State Plane _____ N. _____ E S/C/N __ of _ 1/4 of Section __ T __ N, R __ E	Lat — — — Long — — —	_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

County	County Code	Civil Town / City / or Village
Whitfield		Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
			15	Bottom 42" - Shale, brown, clayey, much silt, friable, moist										
5	48/40		16 17 18 19	Shale, brown, clayey, much silt, friable, moist										
5			20 21 22 23 24 25 26 27 28	EOB 16' - refusal. Temporary piezometer GP005 set with 5' screen.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
9.11.06	ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives	— — — — — — — —	GP006

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 09 / 05 MM DD YY	08 / 09 / 05 MM DD YY	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
[redacted]	_____ Feet MSL	_____ Feet MSL	2.0 inches

Boring Location	Local Grid Location (If Applicable)
State Plane _____ N. _____ E S/C/N __ of _ 1/4 of Section __ T __ N, R __ E Lat — — — Long — — —	_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

County	County Code	Civil Town / City / or Village
Whitfield	____ ____	Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	ROD/Comments
1	48/36		1 2 3	Top 3" – Topsoil, Silt, brown, trace gravel, sand, grass and organics, dry Next 12" - Silt, grey/brown, clayey, little sand, trace gravel, moist to wet Bottom 21" – Silt, brown / grey, little clay, sand, trace gravel, moist to wet										
2	48/16		4 5 6 7	Top 6" – Silt, brown / grey, little clay, sand, trace gravel, moist to wet Bottom 10" – Silt, grey with brown, sand, much gravel, trace clay, moist										
5 3	48/48		8 9 10 11 12	Top 12" – Silt, grey with brown, sand, much gravel, trace clay, moist Next 4" – Sand, grey, med grained, trace gravel, moist Next 4" – Clay, brown / grey, silty, trace gravel, moist Bottom 28" – Shale, brown, silty weathered, much clay, soft, more competent at depth, wet										Approx 10' to water
4	48/48		13 14	Shale, brown, silty, weathered, much clay, hard, wet										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
[signature]	ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number:	Boring Number: GP006
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08 / 09 / 05 (MM / DD / YY)	Date Drilling Completed: 08 / 09 / 05 (MM / DD / YY)
Drilling Method: Geoprobe 4' Macro	Common Well Name:	Final Static Water Level: ____ Feet MSL
Surface Elevation: ____ Feet MSL	Borehole Diameter: 2.0 inches	
Boring Location: State Plane ____ N. ____ E S/C/N; __ of _ 1/4 of Section __ T __ N, R __ E	Lat — — —; Long — — —	Local Grid Location (If Applicable): ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W
County: Whitfield	County Code:	Civil Town / City / or Village: Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
			15	Shale, grey, clayey, much silt, soft, wet										
			16											
			17											
			18											
			19											
			20											
			21											
			22	EOB 16' - refusal. Temporary piezometer GP006 set with 5' screen.										
			23											
5			24											
			25											
			26											
			27											
			28											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number:		Boring Number: GP007
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08/09/05 (MM/DD/YY)	Date Drilling Completed: 08/09/05 (MM/DD/YY)	Drilling Method: Geoprobe 4' Macro
Common Well Name:	Final Static Water Level: ____ Feet MSL	Surface Elevation: ____ Feet MSL	Borehole Diameter: 2.0 inches
Boring Location: State Plane ____ N. ____ E S/C/N; ____ of ____ 1/4 of Section ____ T ____ N, R ____ E	Lat ____ Long ____	Local Grid Location (If Applicable): ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W	
County: Whitfield	County Code:	Civil Town / City / or Village: Dalton, Georgia	

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
1	48/48		1–3	Top 3" – Topsoil, Silt, brown, trace gravel, sand, grass and organics, moist to wet Next 6" - Silt, brown, clayey, much gravel, trace sand, moist Bottom 39" – Silt, brown, little clay, sand, trace gravel, moist										
2	48/48		4–7	Top 4" – Silt, brown, little clay, sand, trace gravel, moist Bottom 44" – Silt, orange brown, gravelly, little sand, clay dry to moist										
5 3	48/42		8–12	Top 22" – Silt, orange brown, gravelly, little sand, clay dry to moist Next 6" – Silt, grey brown, clayey, trace gravel, sand, moist Bottom 14" – Shale, brown, silty weathered, hard, moist											Approx 10' to water
4	48/48		13–14	Shale, brown, silty, weathered, hard, moist										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: [signature] Firm: ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives	— — — — — — — —	GP007

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 09 / 05 MM DD YY	08 / 09 / 05 MM DD YY	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
[redacted]	_____ Feet MSL	_____ Feet MSL	2.0 inches

Boring Location	Lat / Long	Local Grid Location (If Applicable)
State Plane _____ N. _____ E S/C/N __ of _ 1/4 of Section __ T __ N, R __ E	Lat — — — Long — — —	_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

County	County Code	Civil Town / City / or Village
Whitfield		Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
			15	Shale, brown, silty, weathered, hard, moist										
			16											
			17											
			18											
			19											
			20											
			21											
			22	EOB 16' - refusal. Temporary piezometer GP007 set with 5' screen.										
			23											
5			24											
			25											
			26											
			27											
			28											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
[signature]	ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives	— — — — — — — —	GP008

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 9 / 05 MM DD YY	08 / 9 / 05 MM DD YY	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
	Feet MSL	Feet MSL	2.0 inches

Boring Location	Local Grid Location (If Applicable)
State Plane ____ N. ____ E S/C/N __ of _ 1/4 of Section __ T __ N, R __ E Lat — — — Long — — —	____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W

County	County Code	Civil Town / City / or Village
Whitfield		Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (In)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	ROD/Comments
1	48/46		1–3	Top 3" – Gravel – Fill for parking area Next 6" – Sand, brown, gravelly, silty, moist Bottom 37" – Silt, grey, little clay, trace gravel, sand, few organics, moist to wet										
2	48/32		4–8	Top 4" – Silt, grey, little clay, trace gravel, sand, few organics, moist to wet Next 12" – Silt, orange brown, gravelly, much sand, little clay, 1' Sand seam, grey, med grained, dry, Bottom 15" – Clay, grey with brown mottling, silty, trace gravel, organics, moist to wet										
5 3	48/45		9–12	Top 24" – Clay, grey with brown mottling, silty, trace gravel, organics, moist to wet Bottom 21" – Shale, orange brown, silty little clay, weathered, wet										Approx 10' to water
4	48/48		13–14	Shale, orange brown, silty little clay, weathered, wet										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives	— — — — — — — —	GP008

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 9 / 05 MM DD YY	08 / 9 / 05 MM DD YY	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
	____ Feet MSL	____ Feet MSL	2.0 inches

Boring Location	Lat / Long	Local Grid Location (If Applicable)
State Plane ____ N. ____ E S/C/N __ of _ 1/4 of Section __ T __ N, R __ E	Lat — — — Long — — —	☐ N ☐ E ____ Feet ☐ S ____ Feet ☐ W

County	County Code	Civil Town / City / or Village
Whitfield		Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	ROD/Comments
			15	Shale, grey, silty, weathered, little clay, hard, moist to wet										
5	48/46		16 17 18 19	Top 22" - Shale, grey, silty, weathered, little clay, hard, moist to wet Bottom 26" – Shale, grey green, little silt, hard, moist										
6	48/36		20 21 22 23	Top 24" – Shale, grey green, little silt, hard, moist grading to Bottom 12" – Shale, grey, little silt, hard, moist										
5			24 25 26 27 28	EOB 24' - refusal. Temporary piezometer GP008 set with 5' screen.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____ Firm ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number: — — — — — — — —	Boring Number: GP009
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08 / 10 / 05 (MM / DD / YY)	Date Drilling Completed: 08 / 10 / 05 (MM / DD / YY)
Drilling Method: Geoprobe 4' Macro	Common Well Name: — — — — — — — —	Final Static Water Level: _____ Feet MSL
Surface Elevation: _____ Feet MSL	Borehole Diameter: 2.0 inches	
Boring Location: State Plane _____ N. _____ E S/C/N; __ of __ 1/4 of Section __ T __ N, R __ E	Lat — — —; Long — — —	Local Grid Location (If Applicable): _____ Feet ☐ N ☐ S; _____ Feet ☐ E ☐ W
County: Whitfield	County Code: — —	Civil Town / City / or Village: Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	ROD/Comments
1	48/46		1–3	Top 3" – Gravel – Fill for parking area Next 6" – Sand, brown, gravelly, silty, moist Bottom 37" – Silt, grey, little clay, trace gravel, sand, few organics, moist to wet										
2	48/32		4–8	Top 4" – Silt, grey, little clay, trace gravel, sand, few organics, moist to wet Next 12" – Silt, orange brown, gravelly, much sand, little clay, 1' Sand seam, grey, med grained, dry, Bottom 15" – Clay, grey with brown mottling, silty, trace gravel, organics, moist to wet										
5 3	48/45		9–12	Top 24" – Clay, grey with brown mottling, silty, trace gravel, organics, moist to wet Bottom 21" – Shale, orange brown, silty little clay, weathered, wet										Approx 10' to water
4	48/48		13–14	Shale, orange brown, silty little clay, weathered, wet										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____ Firm ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives		GP009

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 10 / 05 (MM / DD / YY)	08 / 10 / 05 (MM / DD / YY)	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
	____ Feet MSL	____ Feet MSL	2.0 inches

Boring Location	Local Grid Location (If Applicable)
State Plane ____ N. ____ E S/C/N __ of _ 1/4 of Section __ T __ N, R __ E	Lat — — — Long — — —
	____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W

County	County Code	Civil Town / City / or Village
Whitfield		Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	ROD/Comments
			15	Shale, orange brown, silty little clay, weathered, wet										
5	48/48		16 17 18 19	Shale, orange brown, silty little clay, weathered, wet										
5			20 21 22 23 24 25 26 27 28	EOB 19.5' - refusal. Temporary piezometer GP009 set with 5' screen.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number:	Boring Number: GP010
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08 / 10 / 05 (MM / DD / YY)	Date Drilling Completed: 08 / 10 / 05 (MM / DD / YY)
Drilling Method: Geoprobe 4' Macro	Common Well Name:	Final Static Water Level: ____ Feet MSL
Surface Elevation: ____ Feet MSL	Borehole Diameter: 2.0 inches	
Boring Location: State Plane ____ N. ____ E S/C/N; ____ of ____ 1/4 of Section ____ T ____ N, R ____ E	Lat ___ ___ ___ Long ___ ___ ___	Local Grid Location (If Applicable): ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W
County: Whitfield	County Code:	Civil Town / City / or Village: Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	ROD/Comments
1	48/48		1–3	Top 3" – Gravel and Sand, fill, grey, little silt, dry Next 14" – Silt, grey with brown mottling, much clay, trace gravel, sand, moist Bottom 31" – Silt, brown, gravelly, little clay, sand, dry to moist										
2	48/48		4–7	Top 20" – Silt, brown, gravelly, little clay, sand, dry to moist Bottom 28" – Clay, grey brown, silty, trace gravel, soft, grades to clayey silt, moist to wet										
3	48/40		8–12	Top 30" – Clay, grey with brown mottling, silty, trace gravel, organics, moist to wet Bottom 10" – Shale, brown, silty little clay, weathered, wet										Approx 10' to water
4	48/46		13–14	Top 16" - Shale, brown, silty little clay, weathered, wet grades to competent green grey shale										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number:	Boring Number: GP010
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08 / 10 / 05 (MM / DD / YY)	Date Drilling Completed: 08 / 10 / 05 (MM / DD / YY)
Drilling Method: Geoprobe 4' Macro	Common Well Name:	Final Static Water Level: Feet MSL
Surface Elevation: Feet MSL	Borehole Diameter: 2.0 inches	
Boring Location: State Plane N. E S/C/N; Lat; Long; __ of __ 1/4 of Section __ T __ N, R __ E	Local Grid Location (If Applicable): Feet N S, Feet E W	
County: Whitfield	County Code:	Civil Town / City / or Village: Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
			15	Shale, green grey, somewhat friable, wet										
5	48/20		16 17 18	Shale, green grey, somewhat friable, wet										
5			19 20 21 22 23 24 25 26 27 28	EOB 18' - refusal. Temporary piezometer GP010 set with 5' screen.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number: — — — — — — — —	Boring Number: GP011
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08 / 10 / 05 (MM / DD / YY)	Date Drilling Completed: 08 / 10 / 05 (MM / DD / YY)
Drilling Method: Geoprobe 4' Macro	Common Well Name:	Final Static Water Level: ____ Feet MSL
Surface Elevation: ____ Feet MSL	Borehole Diameter: 2.0 inches	
Boring Location: State Plane ____ N. ____ E S/C/N; ____ of ____ 1/4 of Section ____ T ____ N, R ____ E	Lat — — — Long — — —	Local Grid Location (If Applicable): ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W
County: Whitfield	County Code: ____ ____	Civil Town / City / or Village: Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
1	48/43		1 2 3	Top 3" – Gravel for parking area Next 22" – Silt, orange brown, gravelly, little sand, clay, dry Bottom 18" – Silt, grey with brown mottling, much clay, little gravel, moist										
2	48/48		4 5 6 7	Top 26" – Silt, grey with brown mottling, much clay, little gravel, moist Bottom 22" – Shale, brown, silty, little clay, weathered, moist										
5 3	48/48		8 9 10 11 12	Shale, brown, silty, little clay, weathered, moist to wet										Approx 10' to water
			13 14	Boring refusal at 31.5' with screened groundwater sampler after 12'. No additional boring samples collected after 12'. Water sample at 31.5'.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: [signature] Firm: ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number: — — — — — — — —	Boring Number: GP012
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08 / 10 / 05 (MM / DD / YY)	Date Drilling Completed: 08 / 10 / 05 (MM / DD / YY)
		Drilling Method: Geoprobe 4' Macro
Common Well Name	Final Static Water Level: ____ Feet MSL	Surface Elevation: ____ Feet MSL
		Borehole Diameter: 2.0 inches
Boring Location: State Plane ____ N. ____ E S/C/N; __ of __ 1/4 of Section __ T __ N, R __ E	Lat — — — Long — — —	Local Grid Location (If Applicable): ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W
County: Whitfield	County Code: ____	Civil Town / City / or Village: Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
1	48/40		1 2 3	Top 8" – Sand and Gravel, fill, grey, little silt, dry Next 24" – Silt, grey with brown mottling, much clay, little gravel, moist Bottom 8" – Silt, brown with grey mottling, gravelly, much sand, little clay, sand, dry										
2	48/48		4 5 6 7	Top 34" – Silt, brown with grey mottling, gravelly, much sand, little clay, dry Bottom 14" – Silt, grey brown, little clay, trace gravel, sand, with weathered shale. moist										
5 3	48/48		8 9 10 11 12	Top 20" – Silt, grey brown, little clay, trace gravel, sand, with weathered shale, moist Bottom 28" – Shale, brown, silty little clay, weathered, moist to wet.										Approx 10' to water
4	48/48		13 14	Top 4" - Shale, brown, silty little clay, weathered, moist to wet										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: [signature] Firm: ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name	License/Permit/Monitoring Number	Boring Number
Capitol Adhesives	— — — — — — — —	GP012

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Atlas Geo-Sampling Company Jim Fineis	08 / 10 / 05 MM / DD / YY	08 / 10 / 05 MM / DD / YY	Geoprobe 4' Macro

Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
	____ Feet MSL	____ Feet MSL	2.0 inches

Boring Location	Local Grid Location (If Applicable)
State Plane ____ N. ____ E S/C/N __ of _ 1/4 of Section __ T __ N, R __ E Lat — — — Long — — —	____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W

County	County Code	Civil Town / City / or Village
Whitfield		Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plastic Limit	Soil Properties: P 200	ROD/Comments
			15	Bottom 44" – Shale, brown, silty, little clay, weathered, moist, grades to grey shale, friable, dry to moist										
5			16 17 18 19 20 21 22 23 24 25 26 27 28	EOB 16' - refusal. Temporary piezometer GP012 set with 5' screen.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number: — — — — — — — —	Boring Number: GP013
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08 / 10 / 05 (MM / DD / YY)	Date Drilling Completed: 08 / 10 / 05 (MM / DD / YY)
Drilling Method: Geoprobe 4' Macro	Common Well Name:	Final Static Water Level: ____ Feet MSL
Surface Elevation: ____ Feet MSL	Borehole Diameter: 2.0 inches	
Boring Location: State Plane ____ N. ____ E S/C/N; ____ of ____ 1/4 of Section ____ T ____ N, R ____ E	Lat — — — Long — — —	Local Grid Location (If Applicable): ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W
County: Whitfield	County Code:	Civil Town / City / or Village: Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
1	48/40		1–4	Silt, orange brown, gravelly, little clay, dry to moist, several 1-2" grey white interbedded, med grained dry sand seams										
2	48/42		5–8	Top 8" – Silt, orange brown, gravelly, little clay, dry to moist Bottom 34" – Shale, brown, much silt, little clay, weathered, moist										
5 3	48/36		9–12	Shale, brown, much silt, little clay, weathered, moist										Approx 10' to water
4	48/34		13–14	Shale, brown, much silt, little clay, weathered, moist										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: [signature] Firm: ELM Consulting, L.L.C., Milwaukee, WI

SOIL BORING LOG INFORMATION

Facility / Project Name: Capitol Adhesives	License/Permit/Monitoring Number:	Boring Number: GP013
Boring Drilled By (Firm name and name of crew chief): Atlas Geo-Sampling Company, Jim Fineis	Date Drilling Started: 08 / 10 / 05 (MM / DD / YY)	Date Drilling Completed: 08 / 10 / 05 (MM / DD / YY)
Drilling Method: Geoprobe 4' Macro	Common Well Name:	Final Static Water Level: ____ Feet MSL
Surface Elevation: ____ Feet MSL	Borehole Diameter: 2.0 inches	
Boring Location: State Plane ____ N. ____ E S/C/N; __ of _ 1/4 of Section __ T __ N, R __ E	Lat — — —; Long — — —	Local Grid Location (If Applicable): ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W
County: Whitfield	County Code:	Civil Town / City / or Village: Dalton, Georgia

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts (N)	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/Comments
			15	Shale, brown, much silt, little clay, weathered, moist										
5	48/34		16 17 18 19	Shale, brown, much silt, little clay, weathered, grades to brown grey, top 20' saturated, then moist to wet										
6	48/34		20 21	Shale, grey, little silt, friable, dry										
5			22 23 24 25 26 27 28	EOB 21.5' - refusal. Temporary piezometer GP013 set with 5' screen.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: [signature] Firm: ELM Consulting, L.L.C., Milwaukee, WI

APPENDIX G

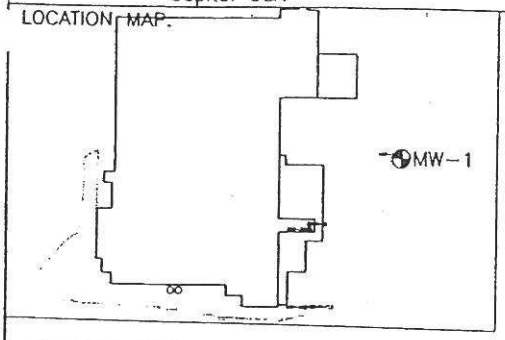
Well Construction Diagrams

Well Construction Diagrams Not Included:

MW-4
MW-5
MW-6
MW-7

FACILITY NAME: Capitol USA	FACILITY ID: N/A	PROJECT #: 04330	BORING/WELL: MW-1	DRAWN BY: C.A.P.	PG 1 OF 1

LOCATION MAP:



START DATE & TIME: 07-14-04 09:50

COMP. DATE & TIME: 07-14-04 10:30

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri-State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

ELEV (MSL): 94.68' T.D. (MSL): 15.00'

WATER ENCOUNTERED (BGS): 10.00'

WATER LEVEL (BGS): Flowing

TRI-STATE TESTING & DRILLING, LLC

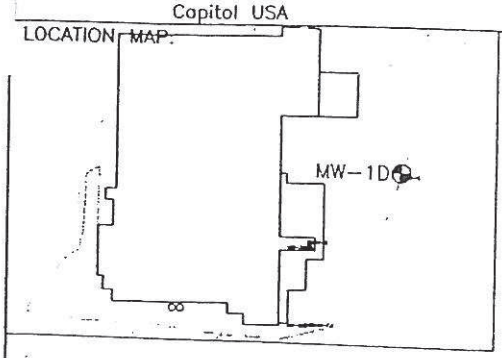
Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.

MSL	COMPLETION DIAGRAM (BOREHOLE DIA 6.25")	WATER LEVEL	WELL DESCRIPTION	DEPTH	GRAPHIC LITHOLOGY	PENETRATION RATE/TIME	OVD (PPM)	SAMPLES & CORES: TYPE	SAMPLES & CORES: RECOV	SAMPLES & CORES: ANAL	DESCRIPTION (COLOR, TEXTURES, STRUCTURE, ETC.)
				0'							
			Cement 0-1'								
			Bentonite 1-3'								
				5'							
			2" PVC 0.01 Well Screen Schedule 40 5-15'								
				10'							
			Filter Sand 3-15'								
				15'							Drilled to 15.00' BGS and set well.
			End Cap 15.00' BGS								
				20'							
				25'							

FACILITY NAME: Capitol USA

FACILITY ID: N/A | PROJECT #: 04330 | BORING/WELL: MW-1D | DRAWN BY: C.A.P. | PG 1 OF 2

LOCATION MAP:



START DATE & TIME: 07-13-04 09:30

COMP. DATE & TIME: 07-13-04 11:00

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri-State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

ELEV (MSL): 94.90' | T.D. (MSL): 39.00'

WATER ENCOUNTERED (BGS): 10.00'

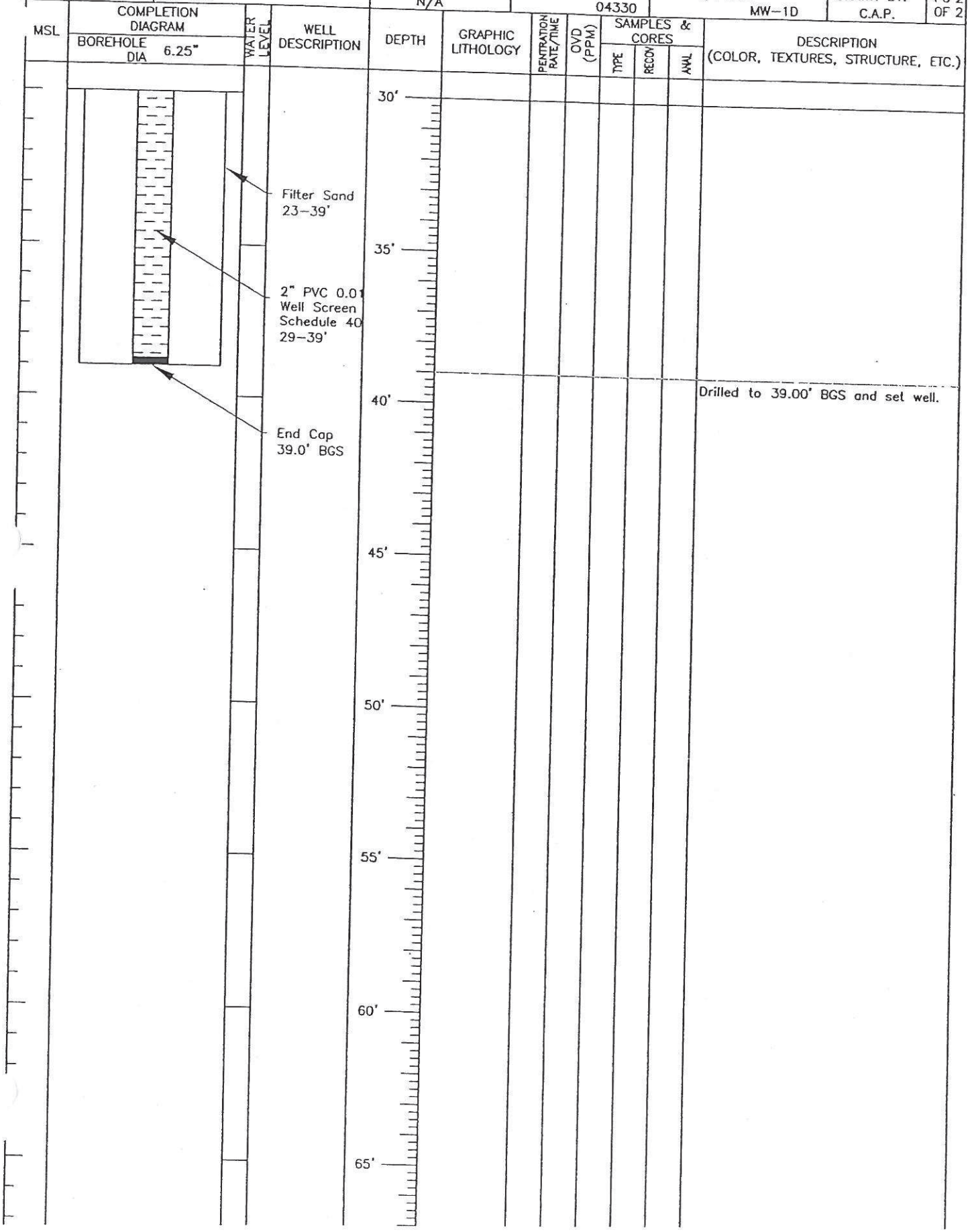
WATER LEVEL (BGS): Flowing

TRI-STATE TESTING & DRILLING, LLC

Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.

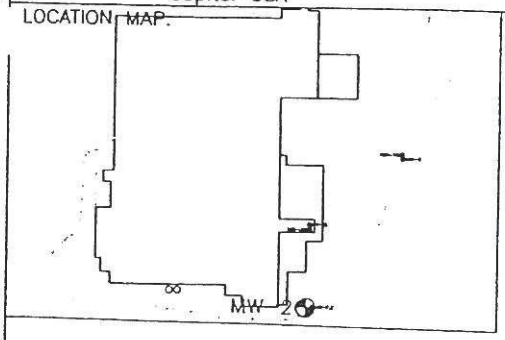
MSL	COMPLETION DIAGRAM (BOREHOLE DIA 6.25")	WATER LEVEL	WELL DESCRIPTION	DEPTH	GRAPHIC LITHOLOGY	PENETRATION RATE/TIME	OVD (PPM)	SAMPLES & CORES: TYPE	RECOV	ANAL	DESCRIPTION (COLOR, TEXTURES, STRUCTURE, ETC.)
			Cement 0-1'	0'							
				5'		09:32	7.8	SS	25		Clay; firm; plastic; mottled light greenish gray and brownish yellow (1GY 8/1, 10YR 7/8); moist; 5-10% 1-4mm sub rounded chert grains. Type CL.
				10'		09:50	8.3	SS	50	VOCs	Clay; soft to firm; fissile; non-plastic; mottled light greenish gray and brownish yellow (1GY 8/1, 10YR 7/8); moist; trace 1-10mm sub angular to sub rounded chert grains. Type CL.
			Annular Grout 1-21'	15'		10:10	9.2	SS	50		Weathered shale; fissile; brownish yellow and dark brownish yellow (10YR 6/8, 4/6); wet; approx. 70° bedding dip.
				20'							
			Bentonite 21-23'	25'							
			Filter Sand								

FACILITY NAME: Capitol USA	FACILITY ID: N/A	PROJECT #: 04330	BORING/WELL: MW-1D	DRAWN BY: C.A.P.	PG 2 OF 2



FACILITY NAME: Capitol USA	FACILITY ID: N/A	PROJECT #: 04330	BORING/WELL: MW-2	DRAWN BY: C.A.P.	PG 1 OF 1

LOCATION MAP:



START DATE & TIME: 07-14-04 07:05

COMP. DATE & TIME: 07-14-04 07:35

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri-State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

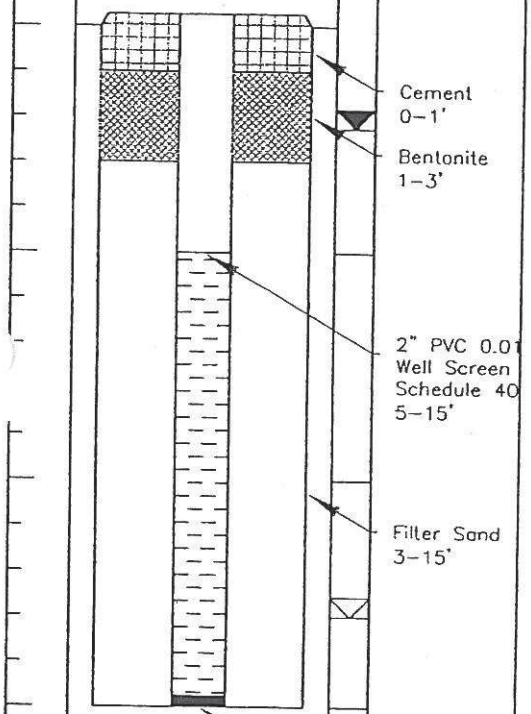
ELEV (MSL): 100.00' T.D. (MSL): 15.00'

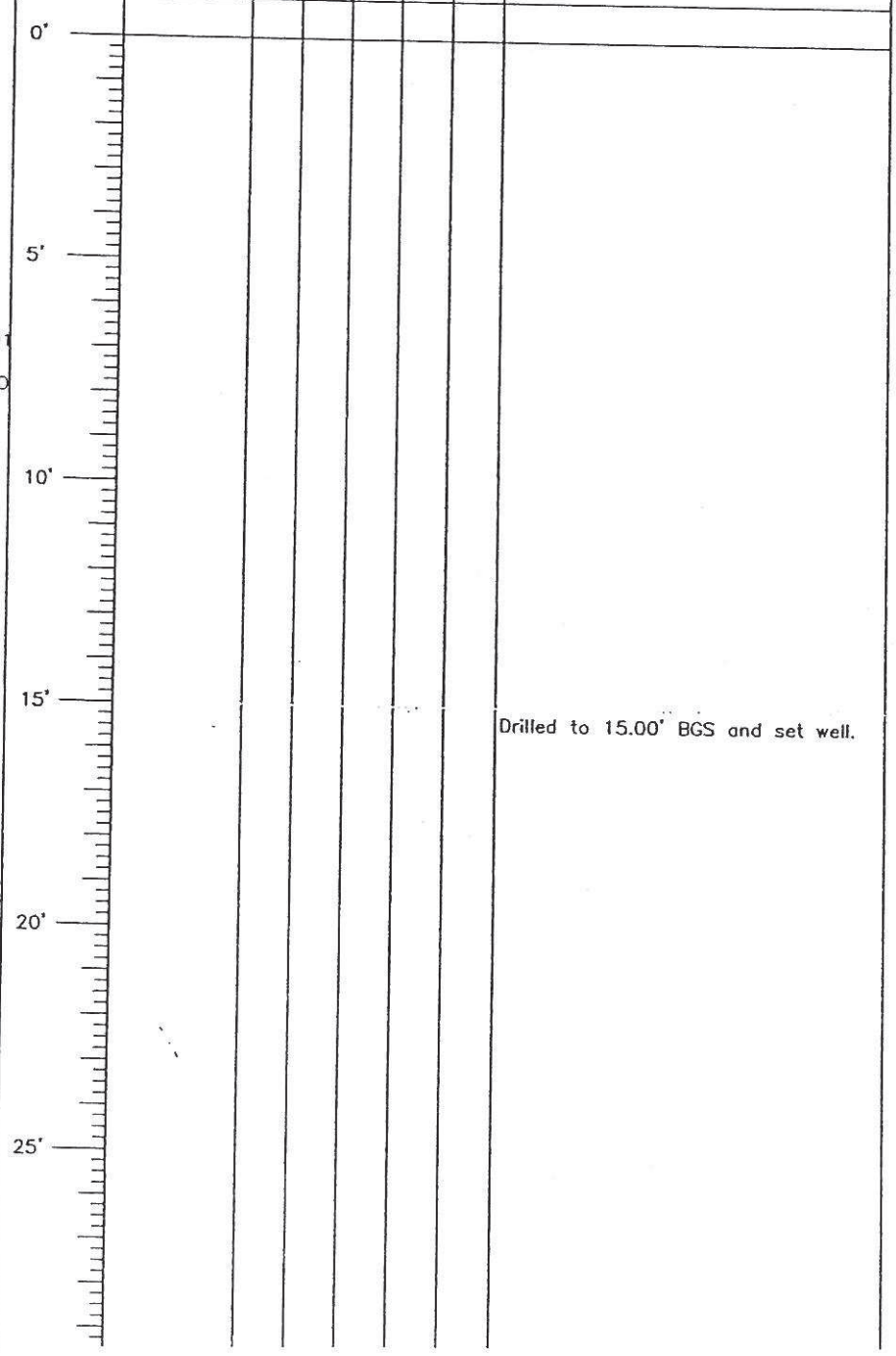
WATER ENCOUNTERED (BGS): 13.00'

WATER LEVEL (BGS): 2.14' (07-19-04)

TRI-STATE TESTING & DRILLING, LLC

Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.

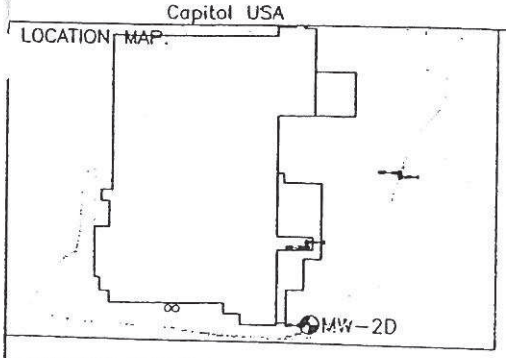




FACILITY NAME: Capitol USA

FACILITY ID: N/A | PROJECT #: 04330 | BORING/WELL: MW-2D | DRAWN BY: C.A.P. | PG 1 OF 1

LOCATION MAP:



START DATE & TIME: 07-13-04 13:00

COMP. DATE & TIME: 07-13-04 13:50

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri-State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

ELEV (MSL): 99.45' | T.D. (MSL): 17.30'

WATER ENCOUNTERED (BGS): 13.00'

WATER LEVEL (BGS): 2.14' (07-19-04)

TRI-STATE TESTING & DRILLING, LLC

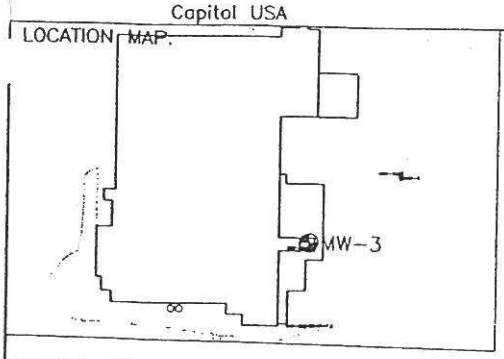
Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.

MSL	COMPLETION DIAGRAM (BOREHOLE DIA 6.25")	WATER LEVEL	WELL DESCRIPTION	DEPTH	GRAPHIC LITHOLOGY	PENETRATION RATE/TIME	OVD (PPM)	SAMPLES & CORES: TYPE	RECOV	ANAL	DESCRIPTION (COLOR, TEXTURES, STRUCTURE, ETC.)
			Cement 0-1'	0'							
			Annular Grout 1-8'	5'		13:05	16.2	SS	25		Clay; fill(?); fissile; mod. plastic; reddish gray (10R 6/1); moist; 10-25% 1mm-3cm angular to sub rounded chert. Type CL.
			Bentonite 8-10'	10'		13:15	19.9	SS	50	VOCs	Shaly clay; stiff; fissile; slightly plastic; molted light gray and yellowish brown (1GY 7/1, 10YR 5/8); moist; 10-25% 1mm-3cm angular to sub rounded chert; approx. 70° bedding dip. Type CL.
			Filter Sand 10-17.3'	15'		13:05	22.8	SS	25		Weathered shale; fissile; dark greenish gray and dark yellowish brown (1GY 4/1, 10YR 4/6); wet.
			2" PVC 0.01 Well Screen Schedule 40 12.3-17.3'	20'							Drilled to 17.30' BGS and set well.
			End Cap 17.3' BGS	25'							

FACILITY NAME: Capitol USA

FACILITY ID: N/A | PROJECT #: 04330 | BORING/WELL: MW-3 | DRAWN BY: C.A.P. | PG 1 OF 1

LOCATION MAP:



START DATE & TIME: 07-14-04 07:50

COMP. DATE & TIME: 07-14-04 08:20

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri-State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

ELEV (MSL): 98.43' T.D. (MSL): 15.00'

WATER ENCOUNTERED (BGS): 11.00'

WATER LEVEL (BGS): 2.00' (07-20-04)

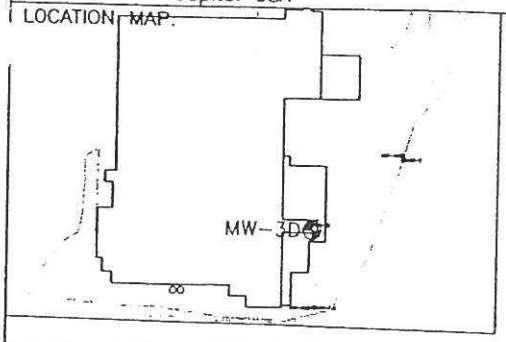
TRI-STATE TESTING & DRILLING, LLC

Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.

MSL	COMPLETION DIAGRAM (BOREHOLE DIA 6.25")	WATER LEVEL	WELL DESCRIPTION	DEPTH	GRAPHIC LITHOLOGY	PENETRATION RATE/TIME	OVD (PPM)	SAMPLES & CORES: TYPE	RECOV	ANAL	DESCRIPTION (COLOR, TEXTURES, STRUCTURE, ETC.)
			Cement 0-1'	0'							
			Bentonite 1-3'								
				5'		08:00	23.2	SS	75		Shaly clay; stiff; mod. plastic; mottled light greenish gray and yellowish brown (1GY 8/1, 10YR 5/8); moist; relief shaly structure with approx. 70° bedding dip; trace Mn deposits on bedding. Type CL
			2" PVC 0.01 Well Screen Schedule 40 5-15'								
				10'		08:07	53.7	SS	100	VOCs	Shaly clay; firm; fissile; mod. plastic; light olive brown and very dark brown (2.5Y 5/4, 10YR 2/2); moist; relief shaly structure with approx. 70° bedding dip; trace Mn deposits on bedding. Type CL
			Filter Sand 3-15'								
				15'		08:10	81.1	SS	50	VOCs	Weathered shale; soft; fissile; non-plastic; greenish gray (1G 5/1); wet; distinctive color change observed.
			End Cap 15.00' BGS								Drilled to 15.00' BGS and set well.
				20'							
				25'							

FACILITY NAME:	FACILITY ID:	PROJECT #:	BORING/WELL:	DRAWN BY:	PG 1 OF 1
Capitol USA	N/A	04330	MW-3D	C.A.P.	

LOCATION MAP:



START DATE & TIME: 07-13-04 15:05

COMP. DATE & TIME: 07-13-04 15:45

LOGGED BY: HSW LIC#: 1360

DRILLER: Tri-State Testing & Drilling

DRILLING METHOD: Hollow Stem Auger

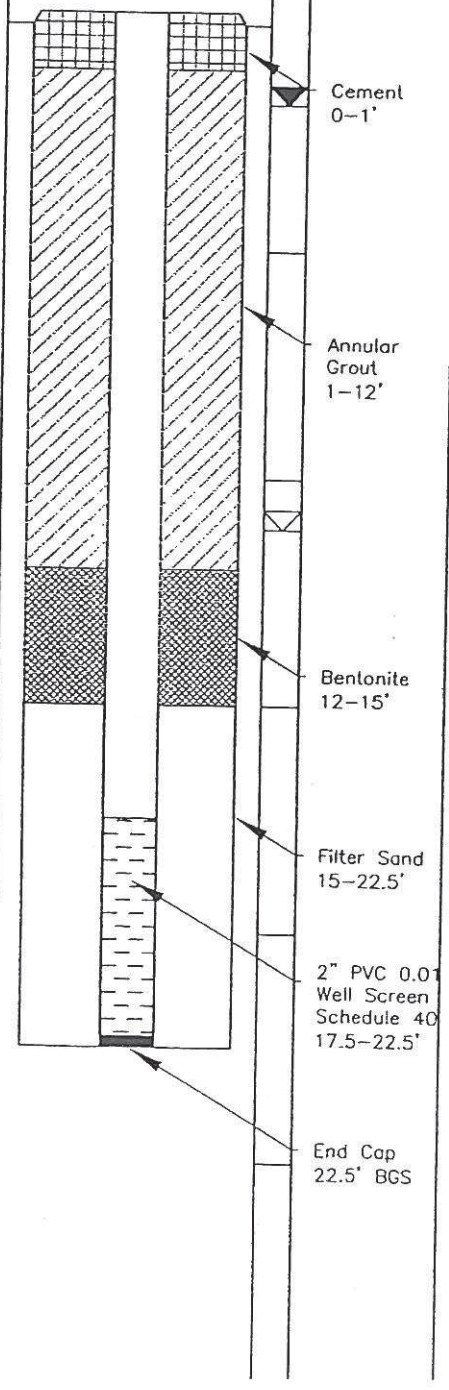
ELEV (MSL): 98.47' T.D. (MSL): 22.50'

WATER ENCOUNTERED (BGS): 11.00'

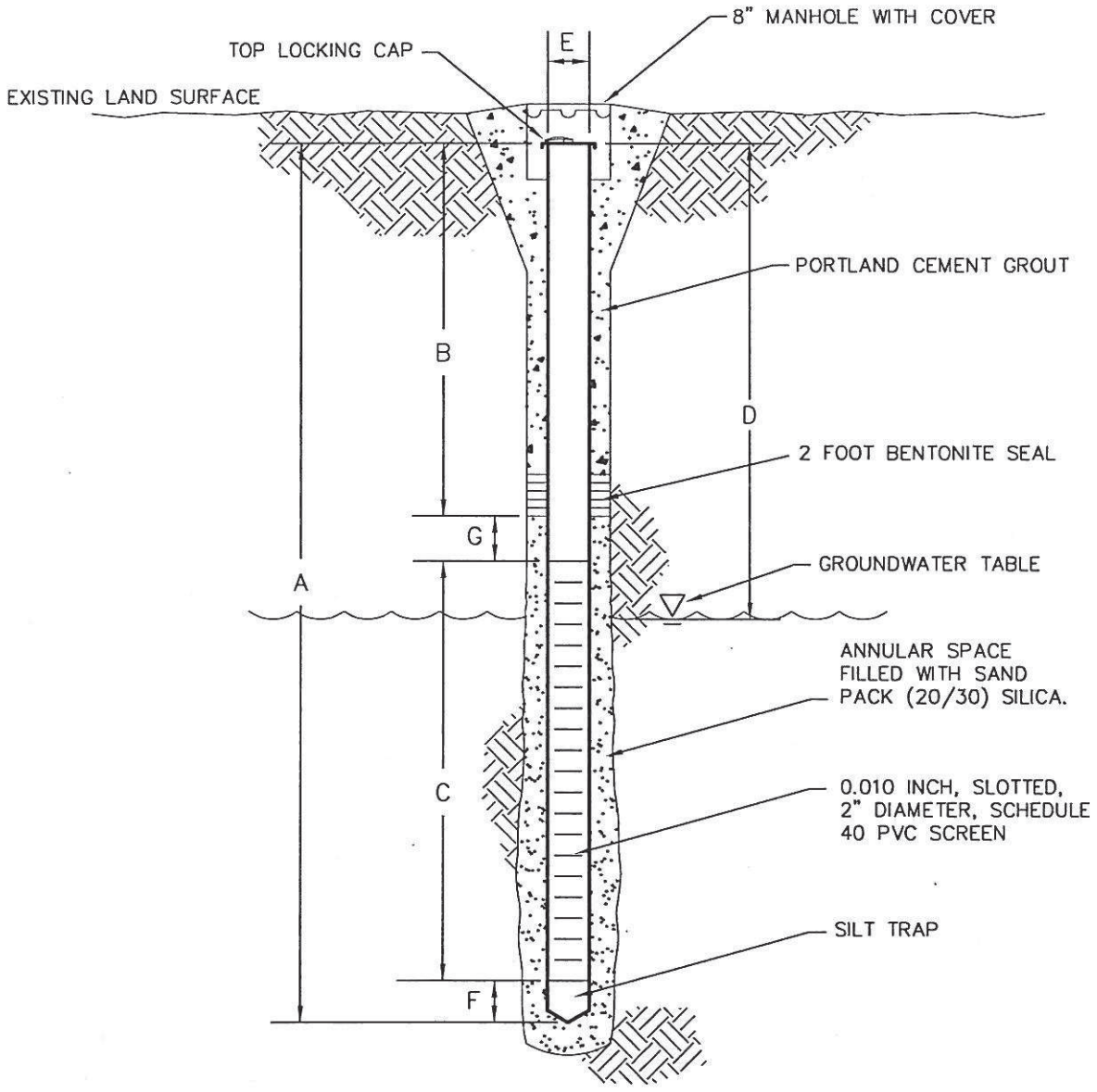
WATER LEVEL (BGS): 1.81' (07-20-04)

TRI-STATE TESTING & DRILLING, LLC

Comments: All intervals pushed. Grain Sizes and relative percentages approximate. Munsell color descriptions indicate predominant colors in descending order. No contaminant odors detected unless noted.



DEPTH	GRAPHIC LITHOLOGY	PENETRATION RATE/TIME	OVD (PPM)	SAMPLES & CORES TYPE	RECOV	AVAL	DESCRIPTION (COLOR, TEXTURES, STRUCTURE, ETC.)
0'							
				SS	0		No recovery
5'							
				SS	0		No recovery
10'							
				SS	0		No recovery
15'							
20'							
							Drilled to 22.50' BGS and set well.
25'							



DIMENSION TABLE						
A	B	C	D	E	F	G
15'	3'	10'	4'	2"	0.5'	2'

DRAWING STATUS | DRAFT | | FINAL | X

PROJECT NO. : 106004			PROJECT MANAGER: BRIAN FREDO		
SCALE: NOT TO SCALE		CADD ID: 1060048005	PLOT DATE: 07/13/06	CHK BY: B.F.	CHK DATE: 07/13/06
REVISION NO.: 0	REV DATE:	DRN BY: A.R.W.	DRN DATE: 07/13/06	APPVD BY: B.F.	APPVD DATE: 07/13/06

WRS Infrastructure & Environment, Inc.
221 HOBBS STREET, SUITE 108, TAMPA, FLORIDA, 33619
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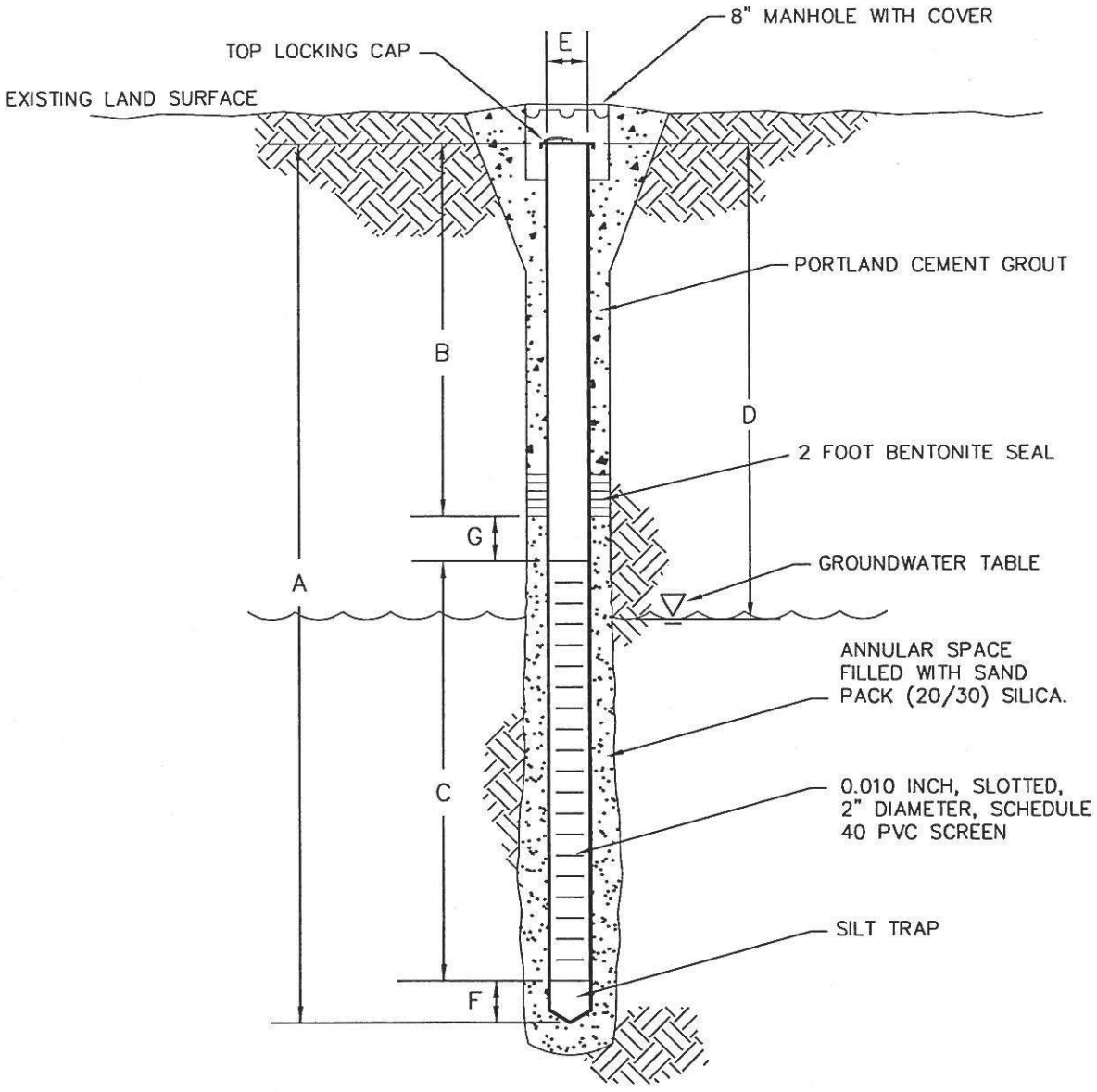
MW-008
CONSTRUCTION DETAIL
CAPITAL ADHESIVES
DALTON, WHITFIELD COUNTY, GEORGIA



DIMENSION TABLE						
A	B	C	D	E	F	G
17'	5'	10'	4.7'	2"	0.5'	2'

DRAWING STATUS	DRAFT		FINAL	X		
PROJECT NO. : 106004			PROJECT MANAGER: BRIAN FREDO			
SCALE: NOT TO SCALE		CADD ID: 106004B006	PLOT DATE: 07/13/06	CHK BY: B.F.	CHK DATE: 07/13/06	
REVISION NO.: 0	REV DATE:	DRN BY: A.R.W.	DRN DATE: 07/13/06	APPVD BY: B.F.	APPVD DATE: 07/13/06	

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MW-009
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CAPITAL ADHESIVES
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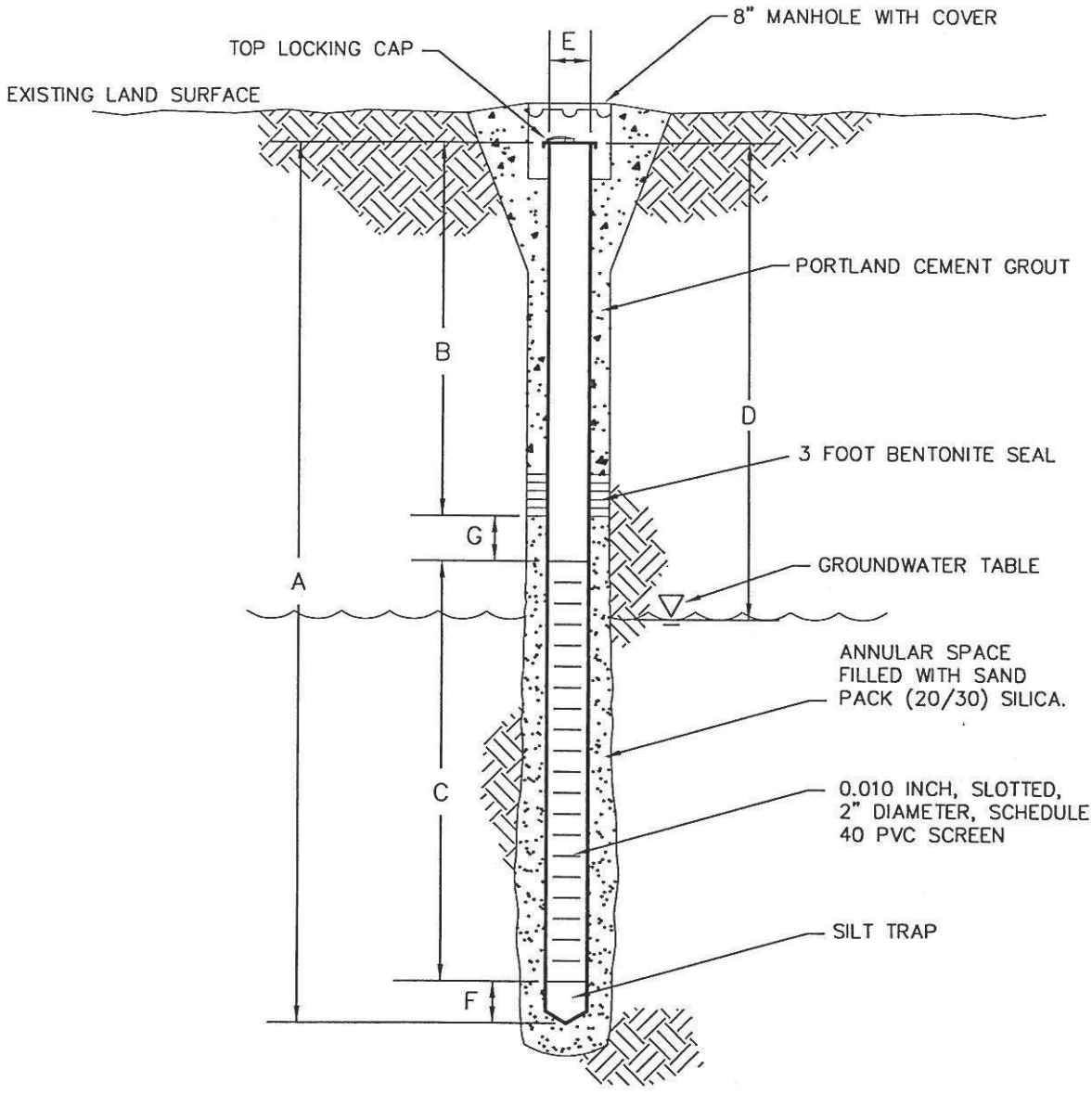

DIMENSION TABLE						
A	B	C	D	E	F	G
20'	8'	10'	5.7'	2"	0.5'	2'

DRAWING STATUS	DRAFT		FINAL	X		
PROJECT NO. : 106004			PROJECT MANAGER: BRIAN FREDO			
SCALE: NOT TO SCALE		CADD ID: 106004B007	PLOT DATE: 07/13/06	CHK BY: B.F.	CHK DATE: 07/13/06	
REVISION NO.: 0	REV DATE:	DRN BY: A.R.W.	DRN DATE: 07/13/06	APPVD BY: B.F.	APPVD DATE: 07/13/06	

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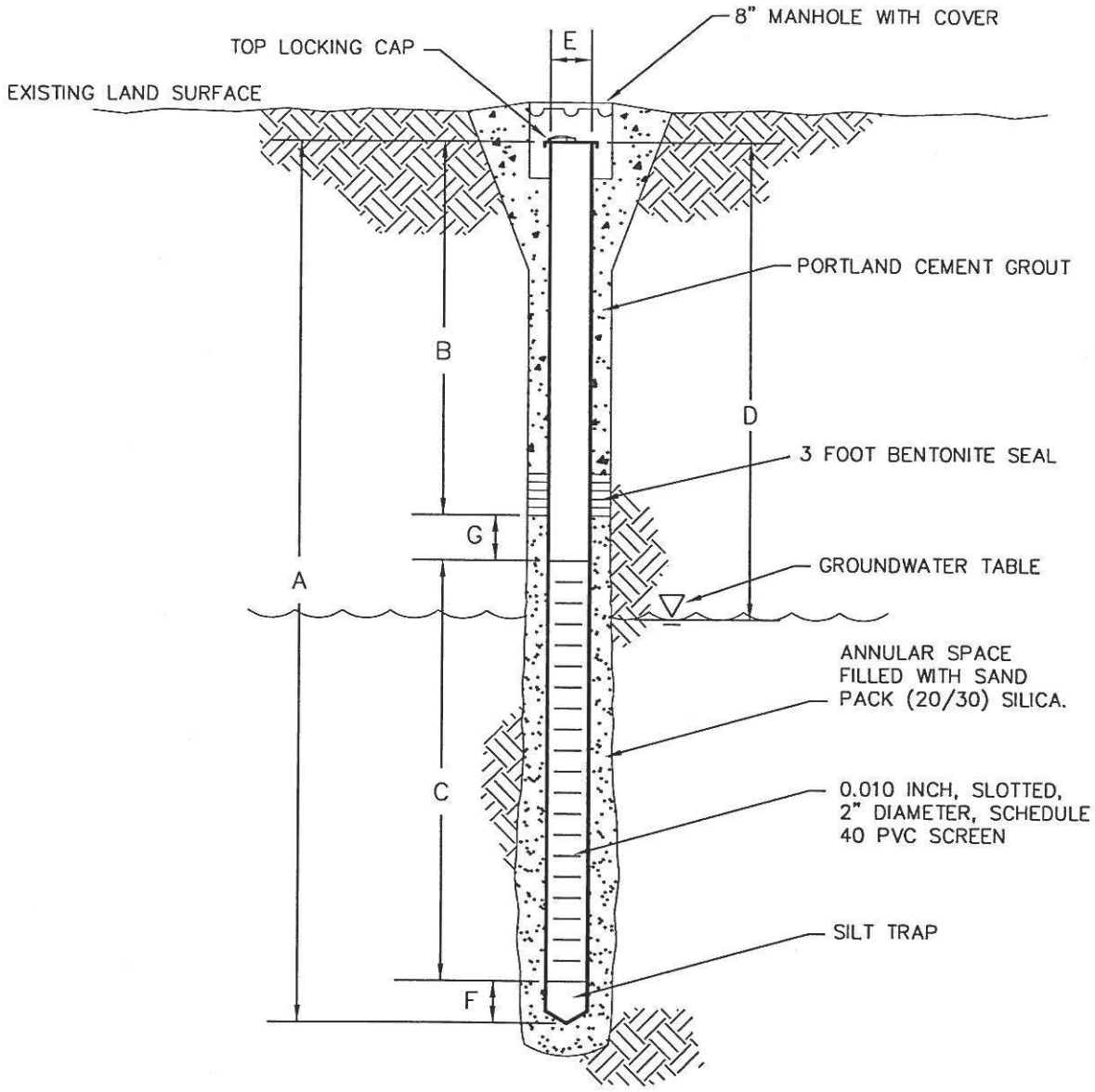

DIMENSION TABLE						
A	B	C	D	E	F	G
20'	8'	10'	6.0'	2"	0.5'	2'

DRAWING STATUS	DRAFT		FINAL	☒		
PROJECT NO. : 106004				PROJECT MANAGER: BRIAN FREDO		
SCALE: NOT TO SCALE		CADD ID: 106004B008		PLOT DATE: 07/13/06	CHK BY: B.F.	CHK DATE: 07/13/06
REVISION NO.: 0	REV DATE:	DRN BY: A.R.W.		DRN DATE: 07/13/06	APPVD BY: B.F.	APPVD DATE: 07/13/06

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MW-011
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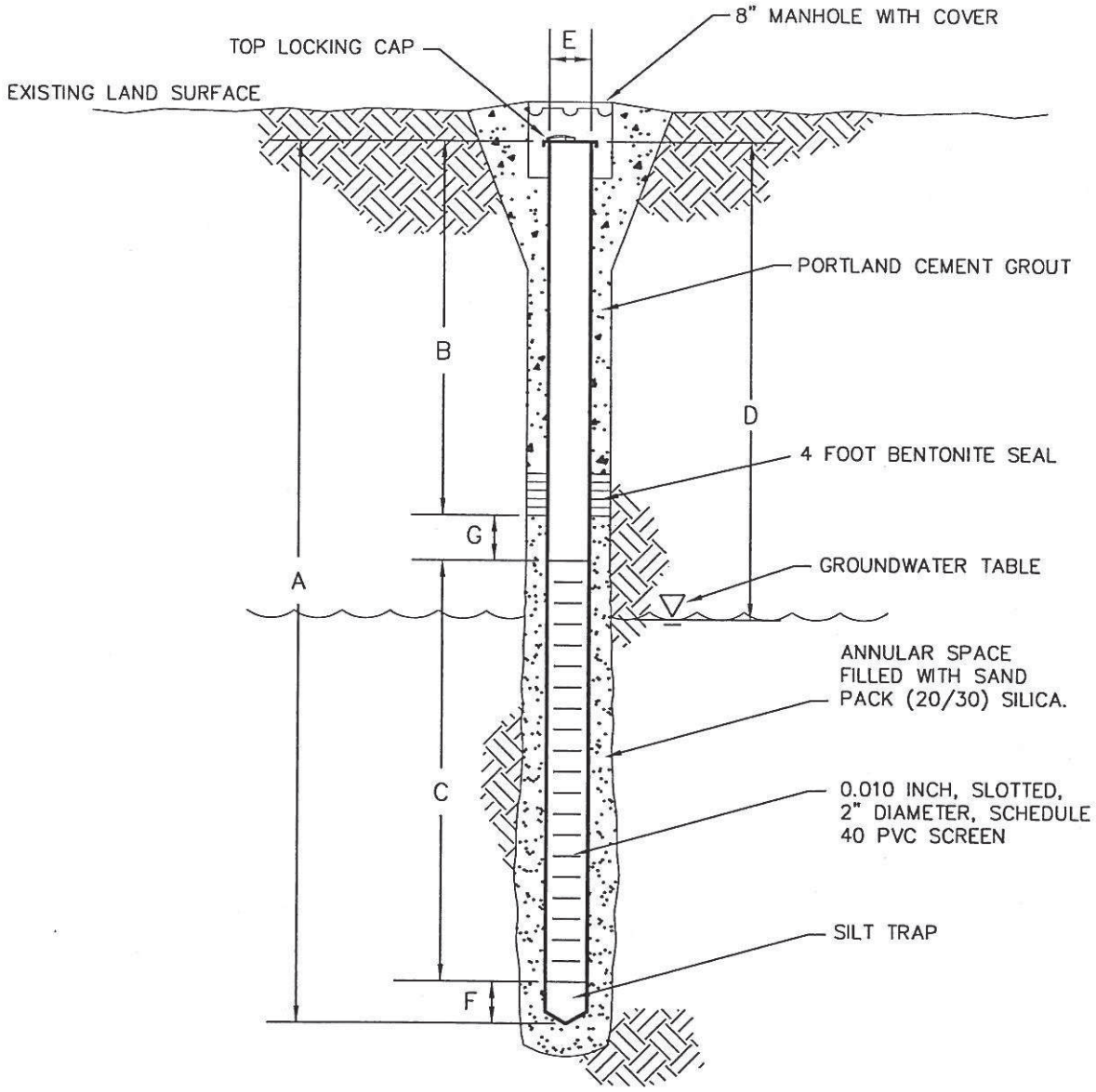

DIMENSION TABLE						
A	B	C	D	E	F	G
20'	8'	10'	6.7'	2"	0.5'	2'

DRAWING STATUS	DRAFT		FINAL	☒

PROJECT NO. : 106004			PROJECT MANAGER: BRIAN FREDO		
SCALE: NOT TO SCALE		CADD ID: 106004B009	PLOT DATE: 07/13/06	CHK BY: B.F.	CHK DATE: 07/13/06
REVISION NO.: 0	REV DATE:	DRN BY: A.R.W.	DRN DATE: 07/13/06	APPVD BY: B.F.	APPVD DATE: 07/13/06

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MW-012
CONSTRUCTION DETAIL
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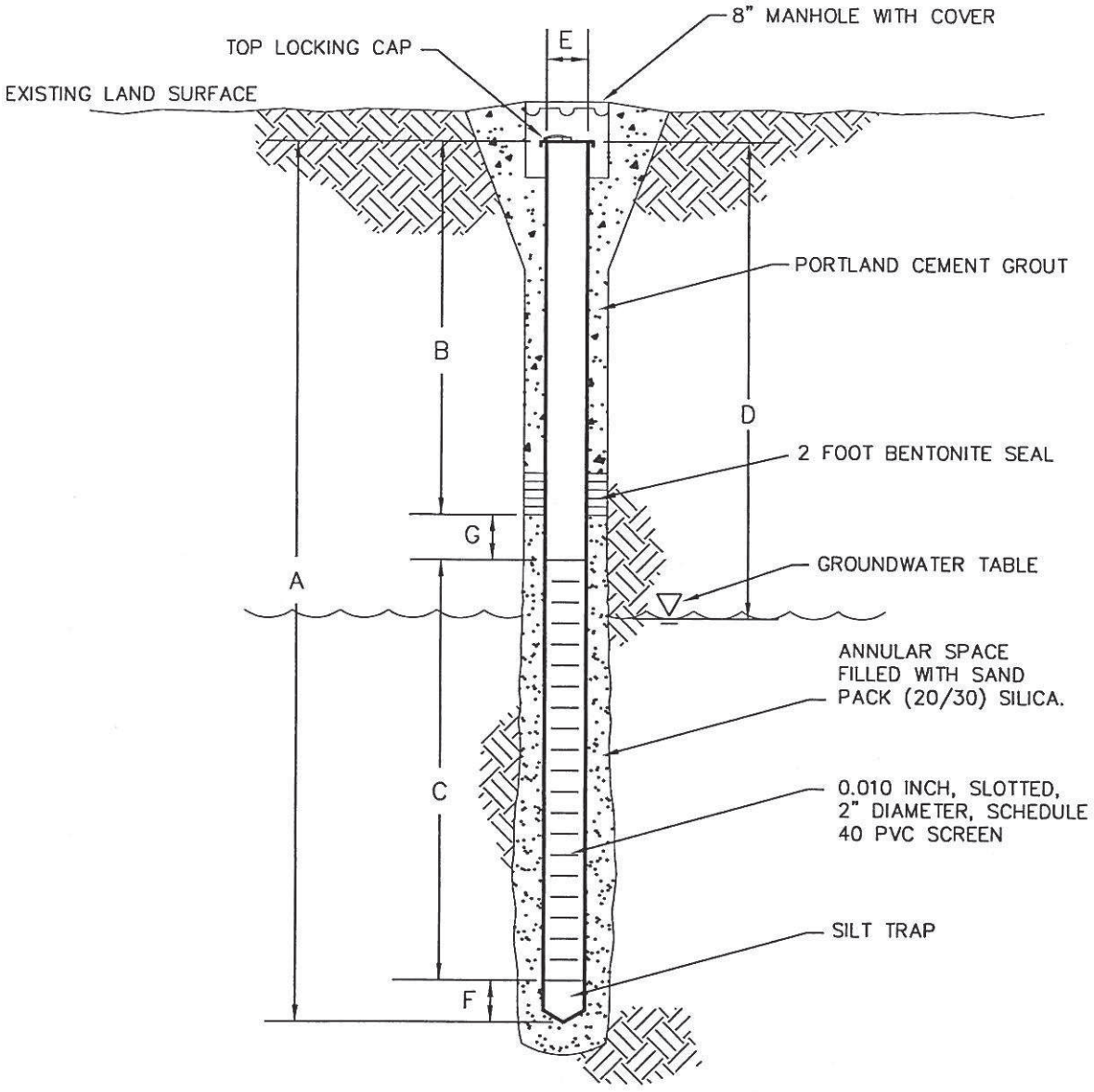

DIMENSION TABLE						
A	B	C	D	E	F	G
25'	3'	20'	7.1'	2"	0.5'	2'

DRAWING STATUS | DRAFT | | FINAL | X

PROJECT NO. : 106004			PROJECT MANAGER: BRIAN FREDO		
SCALE: NOT TO SCALE		CADD ID: 106004B010	PLOT DATE: 07/13/06	CHK BY: B.F.	CHK DATE: 07/13/06
REVISION NO.: 0	REV DATE:	DRN BY: A.R.W.	DRN DATE: 07/13/06	APPVD BY: B.F.	APPVD DATE: 07/13/06

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MW-013
CONSTRUCTION DETAIL
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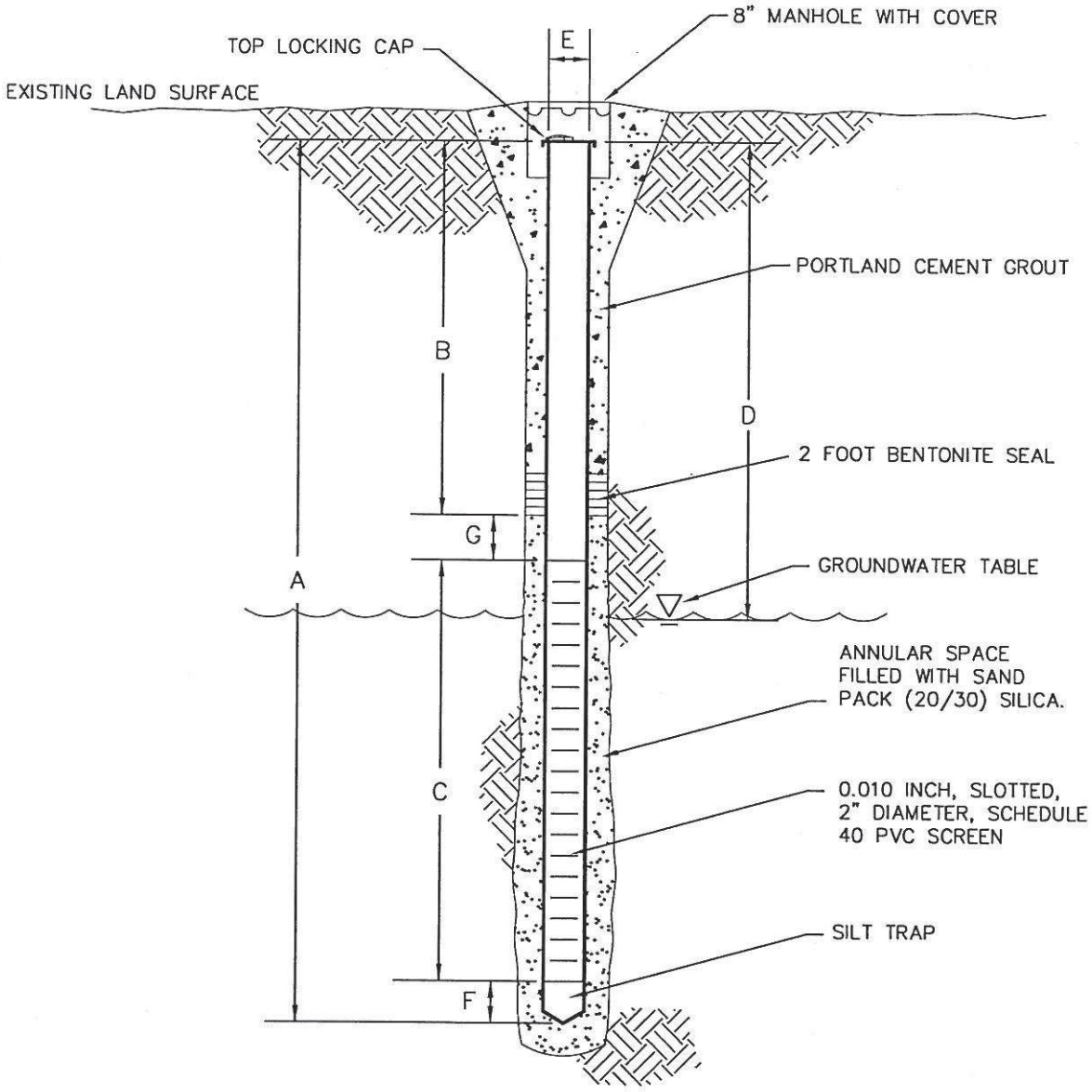

DIMENSION TABLE						
A	B	C	D	E	F	G
26'	4'	20'	4.2'	2"	0.5'	2'

DRAWING STATUS	DRAFT		FINAL	X

PROJECT NO. : 106004			PROJECT MANAGER: BRIAN FREDO		
SCALE: NOT TO SCALE		CADD ID: 106004B011	PLOT DATE: 07/13/06	CHK BY: B.F.	CHK DATE: 07/13/06
REVISION NO.: 0	REV DATE:	DRN BY: A.R.W.	DRN DATE: 07/13/06	APPVD BY: B.F.	APPVD DATE: 07/13/06

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MW-014
CONSTRUCTION DETAIL
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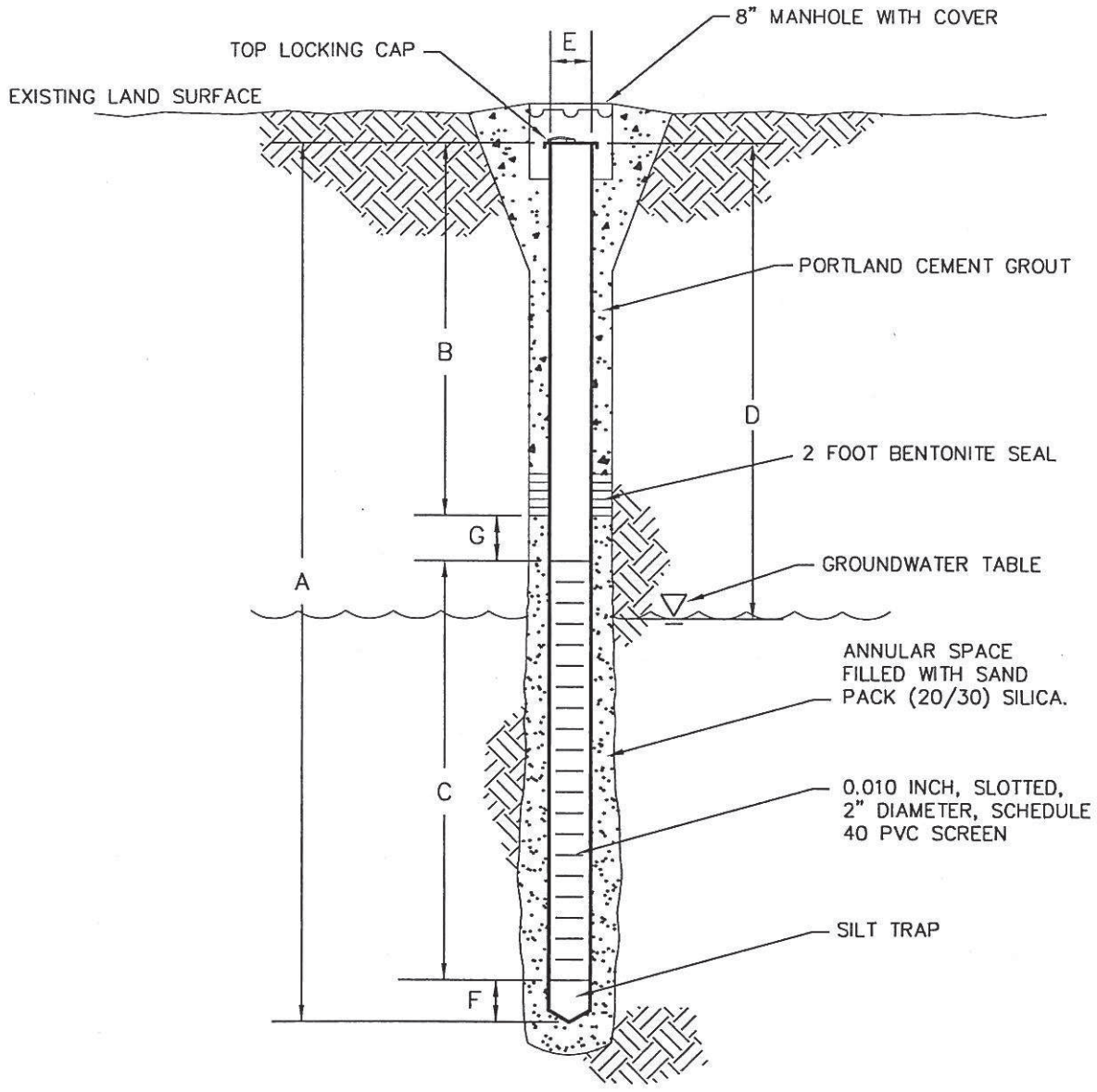

DIMENSION TABLE						
A	B	C	D	E	F	G
25'	3'	20'	2.4'	2"	0.5'	2'

DRAWING STATUS	DRAFT		FINAL	X

PROJECT NO. : 106004			PROJECT MANAGER: BRIAN FREDO		
SCALE: NOT TO SCALE		CADD ID: 106004B012	PLOT DATE: 07/13/06	CHK BY: B.F.	CHK DATE: 07/13/06
REVISION NO.: 0	REV DATE:	DRN BY: A.R.W.	DRN DATE: 07/13/06	APPVD BY: B.F.	APPVD DATE: 07/13/06

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MW-015
CONSTRUCTION DETAIL
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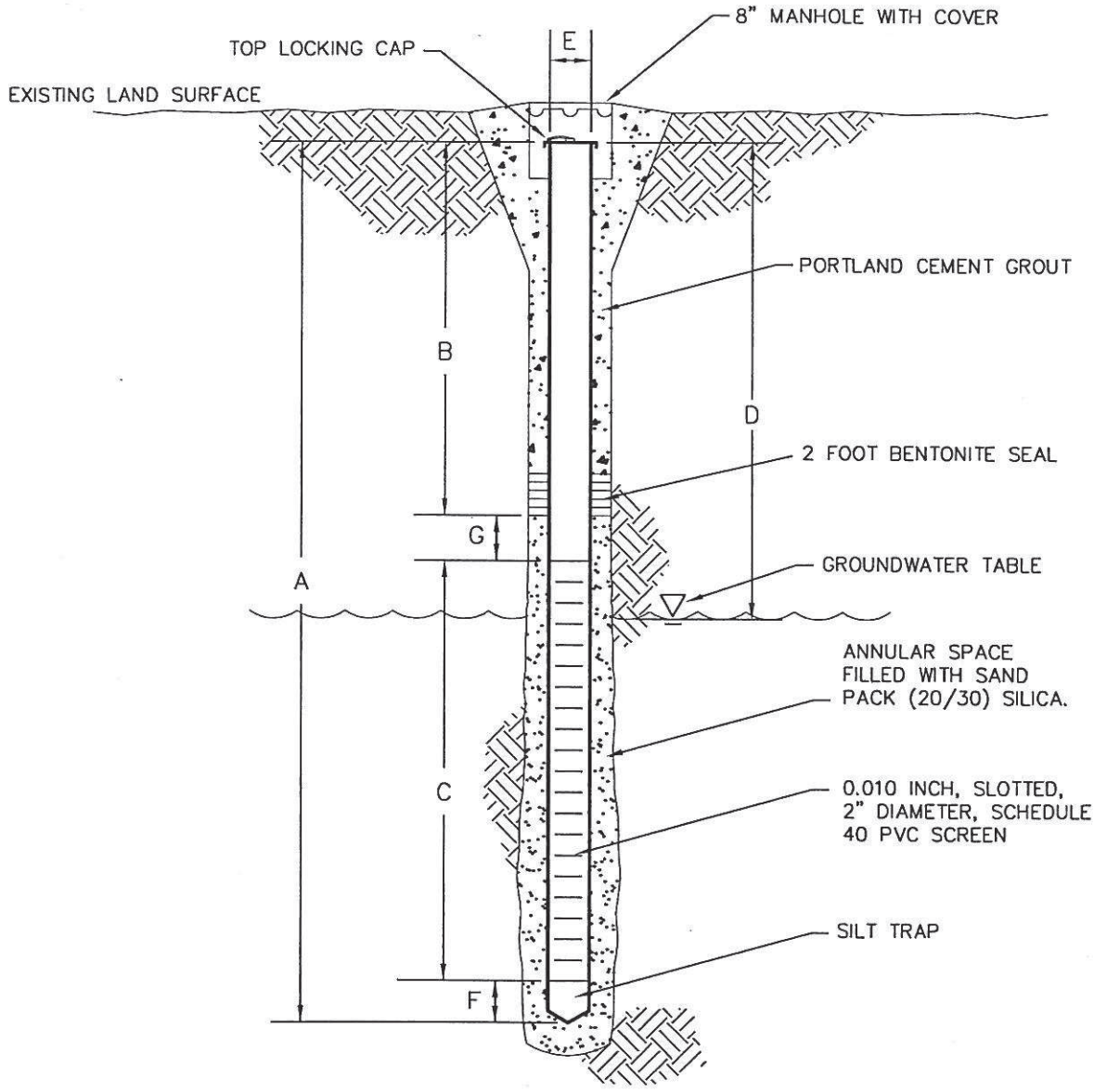

DIMENSION TABLE						
A	B	C	D	E	F	G
25'	3'	20'	2.6'	2"	0.5'	2'

DRAWING STATUS | DRAFT | | FINAL | X

PROJECT NO. : 106004			PROJECT MANAGER: BRIAN FREDO		
SCALE: NOT TO SCALE		CADD ID: 106004B013	PLOT DATE: 07/13/06	CHK BY: B.F.	CHK DATE: 07/13/06
REVISION NO.: 0	REV DATE:	DRN BY: A.R.W.	DRN DATE: 07/13/06	APPVD BY: B.F.	APPVD DATE: 07/13/06

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MW-016
CONSTRUCTION DETAIL
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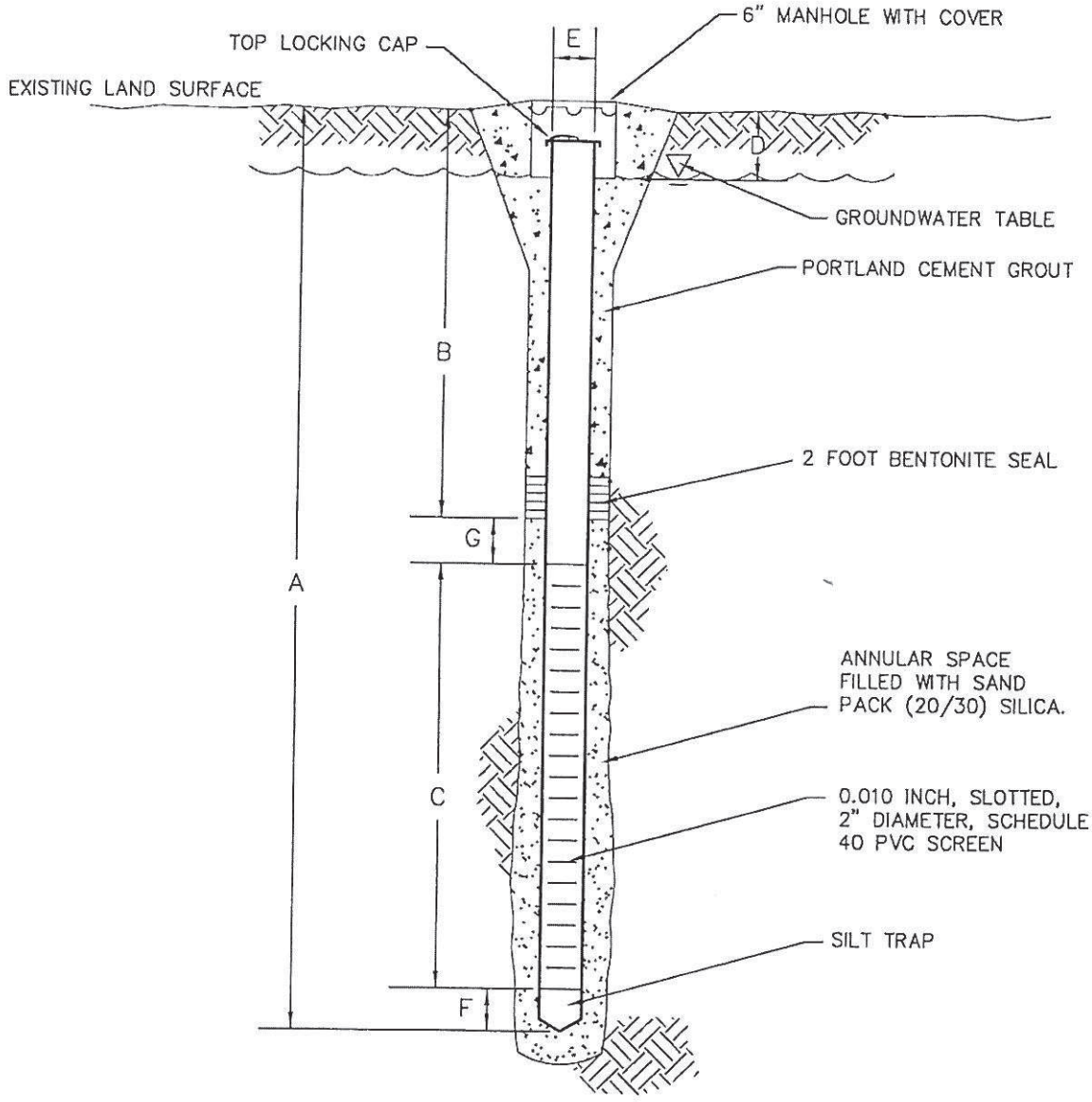

DIMENSION TABLE						
A	B	C	D	E	F	G
20'	6'	10'	3'	2"	0.5'	2'

DRAWING STATUS	DRAFT		FINAL	X		
PROJECT NO. : 30-63-060041			PROJECT MANAGER: ROBIN FUTCH			
SCALE: NOT TO SCALE		CADD ID: 060041C003	PLOT DATE: 05/31/07	CHK BY: R.F.	CHK DATE: 05/31/07	
REVISION NO.: 0	REV DATE:	DRN BY: A.R.W.	DRN DATE: 05/31/07	APPVD BY: R.F.	APPVD DATE: 05/31/07	

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FIGURE 4
MW-017
CONSTRUCTION DETAIL
CAPITAL ADHESIVES
DALTON, WHITFIELD COUNTY, GEORGIA

APPENDIX H

Laboratory Data Reports – October 2010

EPS

October 2010 Groundwater Sampling Event

A groundwater sampling and gauging event was conducted October 7-12, 2010. Samples from a total of eighteen (18) groundwater monitoring wells were collected and analyzed for Volatile Organic Compounds (VOCs). Samples collected from select wells were analyzed for Monitored Natural Attenuation (MNA) parameters and microbial analysis. Laboratory data reports and monitoring well sampling forms are attached.

Purging and Sampling Methodology

Well purging was accomplished using low-stress purging techniques. The use of low-stress purging minimizes the stresses (i.e., pressure gradients, drawdown, aeration, and turbulence) associated with more conventional purging techniques, reduces mixing of stagnant casing water with formation water (for bedrock wells), and facilitates the direct withdrawal of groundwater from the formation surrounding the well screen. Low-stress purging was conducted using a peristaltic pump with Teflon tubing. All downhole equipment was decontaminated prior to the initiation of sampling and after each use before being used at the next sampling location. All decontamination liquids were managed by containerization. Containers were labeled and stored on-Site until disposal arrangements are finalized and the containers properly disposed.

During the sampling episode, sample tubing was slowly lowered into the well and positioned near the middle of the screened interval for all wells, and at least 2 feet above the bottom of the well (to minimize potential disturbance and re-suspension of sediment). Target pump rates were less than the recharge rate of the well, which was verified throughout purging by periodically gauging the water level. If a drop in water level was noted during purging, the purge rate was adjusted downward to achieve water level stabilization (target drawdown of 0.3 feet or less). Wells were initially purged at a maximum initial rate of 500 milliliters per minute (ml/min), after which adjustments were made based on the drawdown response. If the target drawdown of 0.3 feet or less could not be maintained at low-flow rates, the flow rate was maintained at the lowest achievable rate less than 500 ml/min (100 mL/min, or lower if achievable).

Water quality parameters of pH, temperature, turbidity and conductivity were measured throughout the purging using a Horiba U-53 Water Quality Monitor equipped with a flow-through cell. This instrument provided real-time measurements of temperature, pH, specific conductivity and turbidity of the purge water as it was pumped to the surface. The gradual stabilization of these parameters during purging was utilized as an indication of when representative water from the surrounding formation was entering the pump intake. Field parameter measurements were read from the instrument display and recorded at 10 minute intervals or even volume increments. Purging was considered complete and sampling commenced when the indicator parameters met the following criteria for three consecutive readings:

1. pH measurements remained stable within 0.1 Standard Units;

2. Specific conductivity varied by no more than 10%;

3. Temperature was stable; and

4. Turbidity varied no more than 10%, or a constant non-turbid discharge (less than 10 NTUs) was achieved.

Monitoring Well Purging & Sampling Information Sheets for this sampling event are provided as Appendix A to this report. These sheets summarize field parameter readings, purge rates and drawdown measurements.

In accordance with the U.S. Environmental Protection Agency Region IV Science and Ecosystem Support Division (SESD) Field Branches Quality System and Technical Procedures guidelines (November 2007), groundwater samples were collected using the straw method. The straw method consists of filling the tubing with groundwater using the peristaltic pump then quickly removed from the pump, and a gloved thumb was placed on the tubing to stop the water from draining out. The tubing was then removed from the well and the water was allowed to gravity-drain into sample containers.

Sample containers were provided by the analytical laboratory. Groundwater samples for VOCs analysis were collected in 40-mL glass vials preserved with hydrochloric acid with zero head space, and were prepared and labeled prior to sample collection. The containers were placed in a cooler, at 4 C, and maintained under Chain-of-Custody until delivery to the analytical laboratory (Analytical Environmental Services, Inc. of Atlanta, Georgia).

All well purge water and decontamination liquids were containerized in 55-gallon drums, labeled, staged and left on-Site pending receipt of analytical testing results which will be used for disposal determination. These containers will subsequently be properly disposed of based on analytical testing results.

All downhole and/or re-usable field monitoring and/or sampling equipment was properly decontaminated between monitoring/sampling locations in accordance with procedures provided in the U.S. Environmental Protection Agency Region IV Science and Ecosystem Support Division (SESD) Field Branches Quality System and Technical Procedures guidelines (November 2007).

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 18, 2010

Timmerly Bullman
Environmental Planning Specialists, Inc.
900 Ashwood Parkway
Atlanta GA 30338

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

RE: Capitol Adhesives

Dear Timmerly Bullman: Order No: 1010759

Analytical Environmental Services, Inc. received 16 samples on 10/9/2010 12:54:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/10-06/30/11.
-AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

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

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

James Forrest
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1010759

Date: 10.8.10 Page 1 of 2

COMPANY: EPS

ADDRESS: 900 Ashwood Pkwy ste 350, Atl, GA 30338

PHONE: 404-315-9113

FAX:

SAMPLED BY: G. Henry, R. Jones

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	VOC 8260	Methane	Ethane	Sulfides	Alkalinity	Chlorides	Nitrite	Nitrate	Sulfate	TOC	PRESERVATION (See codes)	REMARKS	No # of Containers
							HCl	H+I	HCl	O	I	I							
1	10280-MW-3	10.7.10	11:35	X		GW	X	X	X	X	X	X							4
2	10280-MW-3D	10.7.10	12:00	X		GW	X	X	X	X	X	X						Please include	4
3	10280-MW-5	10.7.10	14:05	X		GW	X	X	X	X	X	X						1,4 Dioxane on	6
4	10280-MW-8	10.7.10	17:55	X		GW	X	X	X	X	X	X	X	X	X	X		all VOC Analysis.	8
5	10280-MW-9	10.7.10	18:35	X		GW	X												2
6	10281-MW-11	10.8.10	10:45	X		GW	X											* Short Hold	2
7	10281-MW-12	10.8.10	10:50	X		GW	X											on Nitrite/	2
8	10281-MW-17	10.8.10	11:58	X		GW	X											Nitrate	2
9	10281-MW-10	10.8.10	12:10	X		GW	X												2
10	10281-MW-7	10.8.10	12:48	X		GW	X												2
11	10281-MW-16	10.8.10	14:15	X		GW	X												2
12	10281-MW-2D	10.8.10	14:52	X		GW	X												2
13	10281-MW-2	10.8.10	14:53	X		GW	X												2
14	10281-DUP1	10.8.10		Y		GW	X												2

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	10.8.10 12:54	1:	10.9.10 1254
2:		2:	
3:		3:	

PROJECT INFORMATION

PROJECT NAME: CAPITOL ADHESIVES

PROJECT #:

SITE ADDRESS: Cross Plains Blvd, Dalton GA

SEND REPORT TO: TBollman@enrplanning.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

(CLIENT) FedEx UPS MAIL COURIER

GREYHOUND OTHER

RECEIPT

Total # of Containers: 46

Turnaround Time Request

- ⊗ Standard 5 Business Days
- ○ 2 Business Day Rush
- ○ Next Business Day Rush
- ○ Same Day Rush **(auth req.)**
- ○ Other

STATE PROGRAM (if any):

E-mail? Y / N; Fax? Y / N

DATA PACKAGE: I II III IV

SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC AES WILL PROCEED AS STANDARD TAT.
SAMPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1010759

Date: 10.9.10 Page 2 of 2

COMPANY: EPS

ADDRESS: 900 Ashwood Pkwy St. 350
ATL, GA 30338

PHONE: 404-315-9113

FAX:

SAMPLED BY: C. Henry, R. Jones

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	VOC 8260B	PRESERVATION (See codes) H+I	REMARKS	No # of Containers
1	10281-MW-6	10.9.10	16:03	X		GW	X	X		2
2									*Please include 1,4 Dioxane on all VOC Analysis.	
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	10.9.10 12:54	1: M.L	10.9.10 1254
2:		2:	
3:		3:	

PROJECT INFORMATION

PROJECT NAME: CAPITOL ADHESIVES

PROJECT #:

SITE ADDRESS: DALTON, GA

SEND REPORT TO: TBullman@envplanning.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers: 2

Turnaround Time Request
- [x] Standard 5 Business Days
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same Day Rush **(auth req.)**
- [ ] Other

STATE PROGRAM (if any):

E-mail? Y / N; Fax? Y / N

DATA PACKAGE: I II III IV

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT FedEx UPS MAIL COURIER GREYHOUND OTHER

SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC AES WILL PROCEED AS STANDARD TAT.
SAMPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Client: Environmental Planning Specialists, Inc.
Project: Capitol Adhesives
Lab ID: 1010759

Case Narrative

Sample Receiving Nonconformance:

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

Total Organic Carbon Analysis by Method 9060:

Due to sample matrix, sample 1010759-004F required dilution during preparation and/or analysis resulting in elevated reporting limits.

RSK 175 requires Methane, Ethane, and Ethene per Ryan Jones on 10/13/10.

Analytical Environmental Services, Inc

Date: 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10280-MW-3
Project:	Capitol Adhesives	**Collection Date:**	10/7/2010 11:35:00 AM
Lab ID:	1010759-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	230	150		ug/L	136386	1	10/13/2010 21:07	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	590	250		ug/L	136386	50	10/14/2010 16:38	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
1,1,2-Trichloroethane	23	5.0		ug/L	136386	1	10/13/2010 21:07	GK
1,1-Dichloroethane	310	250		ug/L	136386	50	10/14/2010 16:38	GK
1,1-Dichloroethene	1700	250		ug/L	136386	50	10/14/2010 16:38	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
1,2-Dichloroethane	740	250		ug/L	136386	50	10/14/2010 16:38	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
2-Butanone	BRL	50		ug/L	136386	1	10/13/2010 21:07	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/13/2010 21:07	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/13/2010 21:07	GK
Acetone	BRL	50		ug/L	136386	1	10/13/2010 21:07	GK
Benzene	6.8	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Chloroethane	BRL	10		ug/L	136386	1	10/13/2010 21:07	GK
Chloroform	880	250		ug/L	136386	50	10/14/2010 16:38	GK
Chloromethane	BRL	10		ug/L	136386	1	10/13/2010 21:07	GK
cis-1,2-Dichloroethene	1000	250		ug/L	136386	50	10/14/2010 16:38	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Cyclohexane	12	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/13/2010 21:07	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Freon-113	220	200		ug/L	136386	50	10/14/2010 16:38	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10280-MW-3
Project:	Capitol Adhesives	**Collection Date:**	10/7/2010 11:35:00 AM
Lab ID:	1010759-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	7.8	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Methylene chloride	41	5.0		ug/L	136386	1	10/13/2010 21:07	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Styrene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Tetrachloroethene	3000	250		ug/L	136386	50	10/14/2010 16:38	GK
Toluene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
trans-1,2-Dichloroethene	120	5.0		ug/L	136386	1	10/13/2010 21:07	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Trichloroethene	4500	250		ug/L	136386	50	10/14/2010 16:38	GK
Trichlorofluoromethane	5.7	5.0		ug/L	136386	1	10/13/2010 21:07	GK
Vinyl chloride	110	2.0		ug/L	136386	1	10/13/2010 21:07	GK
Surr: 4-Bromofluorobenzene	89.3	60.1-127		%REC	136386	50	10/14/2010 16:38	GK
Surr: 4-Bromofluorobenzene	87.6	60.1-127		%REC	136386	1	10/13/2010 21:07	GK
Surr: Dibromofluoromethane	104	79.6-126		%REC	136386	50	10/14/2010 16:38	GK
Surr: Dibromofluoromethane	112	79.6-126		%REC	136386	1	10/13/2010 21:07	GK
Surr: Toluene-d8	90.2	78-116		%REC	136386	50	10/14/2010 16:38	GK
Surr: Toluene-d8	89.6	78-116		%REC	136386	1	10/13/2010 21:07	GK
Sulfide by SW9030/9034				**(SW9030)**				
Sulfide	BRL	2.00		mg/L	136510	1	10/14/2010 10:45	AS
ION SCAN SW9056A								
Chloride	34	1.0		mg/L	R182071	1	10/11/2010 09:09	GR
GC Analysis of Gaseous Samples SOP-RSK 175				**(RSK175)**				
Ethane	36	9		ug/L	136382	1	10/12/2010 12:28	AK
Ethylene	19	7		ug/L	136382	1	10/12/2010 12:28	AK
Methane	1500	80		ug/L	136382	20	10/12/2010 13:50	AK
Alkalinity E310.2								
Alkalinity, Total (As CaCO3)	181	10.0		mg/L	R182075	1	10/12/2010 10:03	TL

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value		

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10280-MW-3D
Project:	Capitol Adhesives	**Collection Date:**	10/7/2010 12:00:00 PM
Lab ID:	1010759-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/12/2010 18:29	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	530	50		ug/L	136386	10	10/12/2010 19:00	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
1,1,2-Trichloroethane	6.5	5.0		ug/L	136386	1	10/12/2010 18:29	GK
1,1-Dichloroethane	150	5.0		ug/L	136386	1	10/12/2010 18:29	GK
1,1-Dichloroethene	520	50		ug/L	136386	10	10/12/2010 19:00	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
1,2-Dichloroethane	200	50		ug/L	136386	10	10/12/2010 19:00	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
2-Butanone	BRL	50		ug/L	136386	1	10/12/2010 18:29	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/12/2010 18:29	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/12/2010 18:29	GK
Acetone	BRL	50		ug/L	136386	1	10/12/2010 18:29	GK
Benzene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Chloroethane	BRL	10		ug/L	136386	1	10/12/2010 18:29	GK
Chloroform	210	50		ug/L	136386	10	10/12/2010 19:00	GK
Chloromethane	BRL	10		ug/L	136386	1	10/12/2010 18:29	GK
cis-1,2-Dichloroethene	300	50		ug/L	136386	10	10/12/2010 19:00	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/12/2010 18:29	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Freon-113	70	10		ug/L	136386	1	10/12/2010 18:29	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10280-MW-3D
Project:	Capitol Adhesives	**Collection Date:**	10/7/2010 12:00:00 PM
Lab ID:	1010759-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Styrene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Tetrachloroethene	1100	50		ug/L	136386	10	10/12/2010 19:00	GK
Toluene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
trans-1,2-Dichloroethene	31	5.0		ug/L	136386	1	10/12/2010 18:29	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Trichloroethene	1300	50		ug/L	136386	10	10/12/2010 19:00	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/12/2010 18:29	GK
Vinyl chloride	77	2.0		ug/L	136386	1	10/12/2010 18:29	GK
Surr: 4-Bromofluorobenzene	87.8	60.1-127		%REC	136386	1	10/12/2010 18:29	GK
Surr: 4-Bromofluorobenzene	89.5	60.1-127		%REC	136386	10	10/12/2010 19:00	GK
Surr: Dibromofluoromethane	107	79.6-126		%REC	136386	10	10/12/2010 19:00	GK
Surr: Dibromofluoromethane	108	79.6-126		%REC	136386	1	10/12/2010 18:29	GK
Surr: Toluene-d8	89.9	78-116		%REC	136386	1	10/12/2010 18:29	GK
Surr: Toluene-d8	90.4	78-116		%REC	136386	10	10/12/2010 19:00	GK
Sulfide by SW9030/9034				**(SW9030)**				
Sulfide	BRL	2.00		mg/L	136510	1	10/14/2010 10:45	AS
ION SCAN SW9056A								
Chloride	15	1.0		mg/L	R182071	1	10/11/2010 09:24	GR
GC Analysis of Gaseous Samples SOP-RSK 175				**(RSK175)**				
Ethane	BRL	9		ug/L	136382	1	10/12/2010 13:10	AK
Ethylene	BRL	7		ug/L	136382	1	10/12/2010 13:10	AK
Methane	270	20		ug/L	136382	5	10/12/2010 13:55	AK
Alkalinity E310.2								
Alkalinity, Total (As CaCO3)	160	10.0		mg/L	R182075	1	10/12/2010 10:04	TL

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10280-MW-5
Project:	Capitol Adhesives	**Collection Date:**	10/7/2010 2:05:00 PM
Lab ID:	1010759-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/13/2010 15:36	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,1-Dichloroethane	5.1	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,1-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,2-Dichloroethane	16	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
2-Butanone	BRL	50		ug/L	136386	1	10/13/2010 15:36	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/13/2010 15:36	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/13/2010 15:36	GK
Acetone	BRL	50		ug/L	136386	1	10/13/2010 15:36	GK
Benzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Chloroethane	240	100		ug/L	136386	10	10/13/2010 16:06	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Chloromethane	BRL	10		ug/L	136386	1	10/13/2010 15:36	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/13/2010 15:36	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Freon-113	BRL	10		ug/L	136386	1	10/13/2010 15:36	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10280-MW-5
Project:	Capitol Adhesives	**Collection Date:**	10/7/2010 2:05:00 PM
Lab ID:	1010759-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Styrene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Tetrachloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Toluene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
trans-1,2-Dichloroethene	18	5.0		ug/L	136386	1	10/13/2010 15:36	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Trichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:36	GK
Vinyl chloride	11	2.0		ug/L	136386	1	10/13/2010 15:36	GK
Surr: 4-Bromofluorobenzene	88.4	60.1-127		%REC	136386	1	10/13/2010 15:36	GK
Surr: 4-Bromofluorobenzene	89.4	60.1-127		%REC	136386	10	10/13/2010 16:06	GK
Surr: Dibromofluoromethane	101	79.6-126		%REC	136386	10	10/13/2010 16:06	GK
Surr: Dibromofluoromethane	103	79.6-126		%REC	136386	1	10/13/2010 15:36	GK
Surr: Toluene-d8	88.2	78-116		%REC	136386	10	10/13/2010 16:06	GK
Surr: Toluene-d8	90.6	78-116		%REC	136386	1	10/13/2010 15:36	GK
Sulfide by SW9030/9034				**(SW9030)**				
Sulfide	BRL	2.00		mg/L	136510	1	10/14/2010 10:45	AS
ION SCAN SW9056A								
Chloride	33	1.0		mg/L	R182071	1	10/11/2010 09:38	GR
GC Analysis of Gaseous Samples SOP-RSK 175				**(RSK175)**				
Ethane	180	9		ug/L	136382	1	10/12/2010 13:17	AK
Ethylene	130	7		ug/L	136382	1	10/12/2010 13:17	AK
Methane	8100	400		ug/L	136382	100	10/12/2010 14:11	AK
Alkalinity E310.2								
Alkalinity, Total (As CaCO3)	915	50.0		mg/L	R182075	5	10/12/2010 10:15	TL

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10280-MW-8
Project:	Capitol Adhesives	**Collection Date:**	10/7/2010 5:55:00 PM
Lab ID:	1010759-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
1,4-Dioxane	BRL	150		ug/L	136386	1	10/13/2010 17:36	GK
Total Organic Carbon (TOC) SW9060A								
Organic Carbon, Total	BRL	5.00		mg/L	R182161	5	10/12/2010 17:23	GR
TCL VOLATILE ORGANICS SW8260B (SW5030B)								
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,1-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,1-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,2-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
2-Butanone	BRL	50		ug/L	136386	1	10/13/2010 17:36	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/13/2010 17:36	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/13/2010 17:36	GK
Acetone	BRL	50		ug/L	136386	1	10/13/2010 17:36	GK
Benzene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Chloroethane	BRL	10		ug/L	136386	1	10/13/2010 17:36	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Chloromethane	BRL	10		ug/L	136386	1	10/13/2010 17:36	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/13/2010 17:36	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Freon-113	BRL	10		ug/L	136386	1	10/13/2010 17:36	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10280-MW-8
Project:	Capitol Adhesives	**Collection Date:**	10/7/2010 5:55:00 PM
Lab ID:	1010759-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Styrene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Tetrachloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Toluene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Trichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/13/2010 17:36	GK
Vinyl chloride	BRL	2.0		ug/L	136386	1	10/13/2010 17:36	GK
Surr: 4-Bromofluorobenzene	87.6	60.1-127		%REC	136386	1	10/13/2010 17:36	GK
Surr: Dibromofluoromethane	104	79.6-126		%REC	136386	1	10/13/2010 17:36	GK
Surr: Toluene-d8	89.9	78-116		%REC	136386	1	10/13/2010 17:36	GK
Sulfide by SW9030/9034				**(SW9030)**				
Sulfide	BRL	2.00		mg/L	136510	1	10/14/2010 10:45	AS
ION SCAN SW9056A								
Chloride	6.5	1.0		mg/L	R181949	1	10/09/2010 14:48	OM
Nitrate	1.00	0.25		mg/L	R181949	1	10/09/2010 14:48	OM
Nitrite	BRL	0.25		mg/L	R181949	1	10/09/2010 14:48	OM
Sulfate	6.0	1.0		mg/L	R181949	1	10/09/2010 14:48	OM
GC Analysis of Gaseous Samples SOP-RSK 175				**(RSK175)**				
Ethane	BRL	9		ug/L	136382	1	10/12/2010 13:22	AK
Ethylene	BRL	7		ug/L	136382	1	10/12/2010 13:22	AK
Methane	4	4		ug/L	136382	1	10/12/2010 13:22	AK
Alkalinity E310.2								
Alkalinity, Total (As CaCO3)	126	10.0		mg/L	R182075	1	10/12/2010 10:06	TL

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10280-MW-9
Project:	Capitol Adhesives	**Collection Date:**	10/7/2010 6:35:00 PM
Lab ID:	1010759-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/13/2010 18:05	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,1-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,1-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,2-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
2-Butanone	BRL	50		ug/L	136386	1	10/13/2010 18:05	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/13/2010 18:05	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/13/2010 18:05	GK
Acetone	BRL	50		ug/L	136386	1	10/13/2010 18:05	GK
Benzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Chloroethane	BRL	10		ug/L	136386	1	10/13/2010 18:05	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Chloromethane	BRL	10		ug/L	136386	1	10/13/2010 18:05	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/13/2010 18:05	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Freon-113	BRL	10		ug/L	136386	1	10/13/2010 18:05	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10280-MW-9
Project:	Capitol Adhesives	**Collection Date:**	10/7/2010 6:35:00 PM
Lab ID:	1010759-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Styrene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Tetrachloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Toluene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Trichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:05	GK
Vinyl chloride	BRL	2.0		ug/L	136386	1	10/13/2010 18:05	GK
Surr: 4-Bromofluorobenzene	87.5	60.1-127		%REC	136386	1	10/13/2010 18:05	GK
Surr: Dibromofluoromethane	107	79.6-126		%REC	136386	1	10/13/2010 18:05	GK
Surr: Toluene-d8	90.7	78-116		%REC	136386	1	10/13/2010 18:05	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-11
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 10:45:00 AM
Lab ID:	1010759-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/13/2010 18:36	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,1-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,1-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,2-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
2-Butanone	BRL	50		ug/L	136386	1	10/13/2010 18:36	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/13/2010 18:36	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/13/2010 18:36	GK
Acetone	BRL	50		ug/L	136386	1	10/13/2010 18:36	GK
Benzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Chloroethane	BRL	10		ug/L	136386	1	10/13/2010 18:36	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Chloromethane	BRL	10		ug/L	136386	1	10/13/2010 18:36	GK
cis-1,2-Dichloroethene	6.2	5.0		ug/L	136386	1	10/13/2010 18:36	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/13/2010 18:36	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Freon-113	BRL	10		ug/L	136386	1	10/13/2010 18:36	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-11
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 10:45:00 AM
Lab ID:	1010759-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Styrene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Tetrachloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Toluene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Trichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/13/2010 18:36	GK
Vinyl chloride	BRL	2.0		ug/L	136386	1	10/13/2010 18:36	GK
Surr: 4-Bromofluorobenzene	87.9	60.1-127		%REC	136386	1	10/13/2010 18:36	GK
Surr: Dibromofluoromethane	106	79.6-126		%REC	136386	1	10/13/2010 18:36	GK
Surr: Toluene-d8	89.1	78-116		%REC	136386	1	10/13/2010 18:36	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-12
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 10:50:00 AM
Lab ID:	1010759-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/13/2010 19:06	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,1-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,1-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,2-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
2-Butanone	BRL	50		ug/L	136386	1	10/13/2010 19:06	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/13/2010 19:06	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/13/2010 19:06	GK
Acetone	BRL	50		ug/L	136386	1	10/13/2010 19:06	GK
Benzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Chloroethane	BRL	10		ug/L	136386	1	10/13/2010 19:06	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Chloromethane	BRL	10		ug/L	136386	1	10/13/2010 19:06	GK
cis-1,2-Dichloroethene	7.6	5.0		ug/L	136386	1	10/13/2010 19:06	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/13/2010 19:06	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Freon-113	BRL	10		ug/L	136386	1	10/13/2010 19:06	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-12
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 10:50:00 AM
Lab ID:	1010759-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Styrene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Tetrachloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Toluene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Trichloroethene	6.8	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:06	GK
Vinyl chloride	BRL	2.0		ug/L	136386	1	10/13/2010 19:06	GK
Surr: 4-Bromofluorobenzene	85.8	60.1-127		%REC	136386	1	10/13/2010 19:06	GK
Surr: Dibromofluoromethane	104	79.6-126		%REC	136386	1	10/13/2010 19:06	GK
Surr: Toluene-d8	89.8	78-116		%REC	136386	1	10/13/2010 19:06	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-17
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 11:58:00 AM
Lab ID:	1010759-008	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/13/2010 19:36	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,1-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,1-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,2-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
2-Butanone	BRL	50		ug/L	136386	1	10/13/2010 19:36	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/13/2010 19:36	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/13/2010 19:36	GK
Acetone	BRL	50		ug/L	136386	1	10/13/2010 19:36	GK
Benzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Chloroethane	BRL	10		ug/L	136386	1	10/13/2010 19:36	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Chloromethane	BRL	10		ug/L	136386	1	10/13/2010 19:36	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/13/2010 19:36	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Freon-113	BRL	10		ug/L	136386	1	10/13/2010 19:36	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-17
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 11:58:00 AM
Lab ID:	1010759-008	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Styrene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Tetrachloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Toluene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Trichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/13/2010 19:36	GK
Vinyl chloride	BRL	2.0		ug/L	136386	1	10/13/2010 19:36	GK
Surr: 4-Bromofluorobenzene	89.3	60.1-127		%REC	136386	1	10/13/2010 19:36	GK
Surr: Dibromofluoromethane	105	79.6-126		%REC	136386	1	10/13/2010 19:36	GK
Surr: Toluene-d8	88.2	78-116		%REC	136386	1	10/13/2010 19:36	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-10
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 12:10:00 PM
Lab ID:	1010759-009	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/13/2010 20:07	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,1-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,1-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,2-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
2-Butanone	BRL	50		ug/L	136386	1	10/13/2010 20:07	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/13/2010 20:07	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/13/2010 20:07	GK
Acetone	BRL	50		ug/L	136386	1	10/13/2010 20:07	GK
Benzene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Chloroethane	BRL	10		ug/L	136386	1	10/13/2010 20:07	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Chloromethane	BRL	10		ug/L	136386	1	10/13/2010 20:07	GK
cis-1,2-Dichloroethene	16	5.0		ug/L	136386	1	10/13/2010 20:07	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/13/2010 20:07	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Freon-113	BRL	10		ug/L	136386	1	10/13/2010 20:07	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-10
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 12:10:00 PM
Lab ID:	1010759-009	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Styrene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Tetrachloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Toluene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Trichloroethene	93	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/13/2010 20:07	GK
Vinyl chloride	BRL	2.0		ug/L	136386	1	10/13/2010 20:07	GK
Surr: 4-Bromofluorobenzene	88.2	60.1-127		%REC	136386	1	10/13/2010 20:07	GK
Surr: Dibromofluoromethane	106	79.6-126		%REC	136386	1	10/13/2010 20:07	GK
Surr: Toluene-d8	96.6	78-116		%REC	136386	1	10/13/2010 20:07	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-7
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 12:48:00 PM
Lab ID:	1010759-010	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/13/2010 16:36	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	16	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,1-Dichloroethane	32	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,1-Dichloroethene	42	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,2-Dichloroethane	16	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
2-Butanone	BRL	50		ug/L	136386	1	10/13/2010 16:36	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/13/2010 16:36	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/13/2010 16:36	GK
Acetone	BRL	50		ug/L	136386	1	10/13/2010 16:36	GK
Benzene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Chloroethane	BRL	10		ug/L	136386	1	10/13/2010 16:36	GK
Chloroform	25	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Chloromethane	BRL	10		ug/L	136386	1	10/13/2010 16:36	GK
cis-1,2-Dichloroethene	240	50		ug/L	136386	10	10/13/2010 17:06	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/13/2010 16:36	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Freon-113	BRL	10		ug/L	136386	1	10/13/2010 16:36	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-7
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 12:48:00 PM
Lab ID:	1010759-010	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Styrene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Tetrachloroethene	1900	50		ug/L	136386	10	10/13/2010 17:06	GK
Toluene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Trichloroethene	260	50		ug/L	136386	10	10/13/2010 17:06	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/13/2010 16:36	GK
Vinyl chloride	83	2.0		ug/L	136386	1	10/13/2010 16:36	GK
Surr: 4-Bromofluorobenzene	85.1	60.1-127		%REC	136386	1	10/13/2010 16:36	GK
Surr: 4-Bromofluorobenzene	87.7	60.1-127		%REC	136386	10	10/13/2010 17:06	GK
Surr: Dibromofluoromethane	104	79.6-126		%REC	136386	1	10/13/2010 16:36	GK
Surr: Dibromofluoromethane	103	79.6-126		%REC	136386	10	10/13/2010 17:06	GK
Surr: Toluene-d8	88.6	78-116		%REC	136386	1	10/13/2010 16:36	GK
Surr: Toluene-d8	88.3	78-116		%REC	136386	10	10/13/2010 17:06	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-16
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 2:15:00 PM
Lab ID:	1010759-011	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/14/2010 19:38	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,1-Dichloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,1-Dichloroethene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,2-Dichloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
2-Butanone	BRL	50		ug/L	136386	1	10/14/2010 19:38	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/14/2010 19:38	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/14/2010 19:38	GK
Acetone	BRL	50		ug/L	136386	1	10/14/2010 19:38	GK
Benzene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Chloroethane	BRL	10		ug/L	136386	1	10/14/2010 19:38	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Chloromethane	BRL	10		ug/L	136386	1	10/14/2010 19:38	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/14/2010 19:38	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Freon-113	BRL	10		ug/L	136386	1	10/14/2010 19:38	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-16
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 2:15:00 PM
Lab ID:	1010759-011	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Styrene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Tetrachloroethene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Toluene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Trichloroethene	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/14/2010 19:38	GK
Vinyl chloride	BRL	2.0		ug/L	136386	1	10/14/2010 19:38	GK
Surr: 4-Bromofluorobenzene	89.1	60.1-127		%REC	136386	1	10/14/2010 19:38	GK
Surr: Dibromofluoromethane	103	79.6-126		%REC	136386	1	10/14/2010 19:38	GK
Surr: Toluene-d8	88.7	78-116		%REC	136386	1	10/14/2010 19:38	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-2D
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 2:52:00 PM
Lab ID:	1010759-012	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/12/2010 16:29	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,1-Dichloroethane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,1-Dichloroethene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,2-Dichloroethane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
2-Butanone	BRL	50		ug/L	136386	1	10/12/2010 16:29	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/12/2010 16:29	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/12/2010 16:29	GK
Acetone	BRL	50		ug/L	136386	1	10/12/2010 16:29	GK
Benzene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Chloroethane	BRL	10		ug/L	136386	1	10/12/2010 16:29	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Chloromethane	BRL	10		ug/L	136386	1	10/12/2010 16:29	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/12/2010 16:29	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Freon-113	BRL	10		ug/L	136386	1	10/12/2010 16:29	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-2D
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 2:52:00 PM
Lab ID:	1010759-012	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Styrene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Tetrachloroethene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Toluene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Trichloroethene	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/12/2010 16:29	GK
Vinyl chloride	BRL	2.0		ug/L	136386	1	10/12/2010 16:29	GK
Surr: 4-Bromofluorobenzene	90.4	60.1-127		%REC	136386	1	10/12/2010 16:29	GK
Surr: Dibromofluoromethane	104	79.6-126		%REC	136386	1	10/12/2010 16:29	GK
Surr: Toluene-d8	89.6	78-116		%REC	136386	1	10/12/2010 16:29	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-2
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 2:53:00 PM
Lab ID:	1010759-013	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/14/2010 20:09	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,1-Dichloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,1-Dichloroethene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,2-Dichloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
2-Butanone	BRL	50		ug/L	136386	1	10/14/2010 20:09	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/14/2010 20:09	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/14/2010 20:09	GK
Acetone	BRL	50		ug/L	136386	1	10/14/2010 20:09	GK
Benzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Chloroethane	BRL	10		ug/L	136386	1	10/14/2010 20:09	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Chloromethane	BRL	10		ug/L	136386	1	10/14/2010 20:09	GK
cis-1,2-Dichloroethene	33	5.0		ug/L	136386	1	10/14/2010 20:09	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/14/2010 20:09	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Freon-113	BRL	10		ug/L	136386	1	10/14/2010 20:09	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-2
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 2:53:00 PM
Lab ID:	1010759-013	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Styrene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Tetrachloroethene	69	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Toluene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Trichloroethene	96	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:09	GK
Vinyl chloride	7.5	2.0		ug/L	136386	1	10/14/2010 20:09	GK
Surr: 4-Bromofluorobenzene	88.4	60.1-127		%REC	136386	1	10/14/2010 20:09	GK
Surr: Dibromofluoromethane	105	79.6-126		%REC	136386	1	10/14/2010 20:09	GK
Surr: Toluene-d8	89.6	78-116		%REC	136386	1	10/14/2010 20:09	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-DUP1
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010
Lab ID:	1010759-014	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/15/2010 12:39	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,1-Dichloroethane	20	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,1-Dichloroethene	14	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,2-Dichloroethane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
2-Butanone	BRL	50		ug/L	136386	1	10/15/2010 12:39	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/15/2010 12:39	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/15/2010 12:39	GK
Acetone	BRL	50		ug/L	136386	1	10/15/2010 12:39	GK
Benzene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Chloroethane	BRL	10		ug/L	136386	1	10/15/2010 12:39	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Chloromethane	BRL	10		ug/L	136386	1	10/15/2010 12:39	GK
cis-1,2-Dichloroethene	220	100		ug/L	136386	20	10/15/2010 13:10	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/15/2010 12:39	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Freon-113	BRL	10		ug/L	136386	1	10/15/2010 12:39	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-DUP1
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010
Lab ID:	1010759-014	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Styrene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Tetrachloroethene	2200	100		ug/L	136386	20	10/15/2010 13:10	GK
Toluene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Trichloroethene	190	100		ug/L	136386	20	10/15/2010 13:10	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/15/2010 12:39	GK
Vinyl chloride	130	2.0		ug/L	136386	1	10/15/2010 12:39	GK
Surr: 4-Bromofluorobenzene	85.1	60.1-127		%REC	136386	1	10/15/2010 12:39	GK
Surr: 4-Bromofluorobenzene	87.8	60.1-127		%REC	136386	20	10/15/2010 13:10	GK
Surr: Dibromofluoromethane	102	79.6-126		%REC	136386	20	10/15/2010 13:10	GK
Surr: Dibromofluoromethane	107	79.6-126		%REC	136386	1	10/15/2010 12:39	GK
Surr: Toluene-d8	91	78-116		%REC	136386	1	10/15/2010 12:39	GK
Surr: Toluene-d8	87.9	78-116		%REC	136386	20	10/15/2010 13:10	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-6
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 4:03:00 PM
Lab ID:	1010759-015	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/14/2010 20:39	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	37	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,1-Dichloroethane	15	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,1-Dichloroethene	76	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,2-Dichloroethane	14	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
2-Butanone	BRL	50		ug/L	136386	1	10/14/2010 20:39	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/14/2010 20:39	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/14/2010 20:39	GK
Acetone	BRL	50		ug/L	136386	1	10/14/2010 20:39	GK
Benzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Chloroethane	BRL	10		ug/L	136386	1	10/14/2010 20:39	GK
Chloroform	25	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Chloromethane	BRL	10		ug/L	136386	1	10/14/2010 20:39	GK
cis-1,2-Dichloroethene	5.5	5.0		ug/L	136386	1	10/14/2010 20:39	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/14/2010 20:39	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Freon-113	17	10		ug/L	136386	1	10/14/2010 20:39	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10281-MW-6
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010 4:03:00 PM
Lab ID:	1010759-015	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Styrene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Tetrachloroethene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Toluene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
trans-1,2-Dichloroethene	5.2	5.0		ug/L	136386	1	10/14/2010 20:39	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Trichloroethene	36	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/14/2010 20:39	GK
Vinyl chloride	5.6	2.0		ug/L	136386	1	10/14/2010 20:39	GK
Surr: 4-Bromofluorobenzene	87.3	60.1-127		%REC	136386	1	10/14/2010 20:39	GK
Surr: Dibromofluoromethane	106	79.6-126		%REC	136386	1	10/14/2010 20:39	GK
Surr: Toluene-d8	88.5	78-116		%REC	136386	1	10/14/2010 20:39	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	TRIP BLANK
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010
Lab ID:	1010759-016	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	136386	1	10/13/2010 15:06	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,1-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,1-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,2-Dibromoethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,2-Dichloroethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,2-Dichloropropane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
2-Butanone	BRL	50		ug/L	136386	1	10/13/2010 15:06	GK
2-Hexanone	BRL	10		ug/L	136386	1	10/13/2010 15:06	GK
4-Methyl-2-pentanone	BRL	10		ug/L	136386	1	10/13/2010 15:06	GK
Acetone	BRL	50		ug/L	136386	1	10/13/2010 15:06	GK
Benzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Bromodichloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Bromoform	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Bromomethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Carbon disulfide	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Carbon tetrachloride	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Chlorobenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Chloroethane	BRL	10		ug/L	136386	1	10/13/2010 15:06	GK
Chloroform	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Chloromethane	BRL	10		ug/L	136386	1	10/13/2010 15:06	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Cyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Dibromochloromethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Dichlorodifluoromethane	BRL	10		ug/L	136386	1	10/13/2010 15:06	GK
Ethylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Freon-113	BRL	10		ug/L	136386	1	10/13/2010 15:06	GK
Isopropylbenzene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
m,p-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Methyl acetate	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
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- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	TRIP BLANK
Project:	Capitol Adhesives	**Collection Date:**	10/8/2010
Lab ID:	1010759-016	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Methylene chloride	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
o-Xylene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Styrene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Tetrachloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Toluene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Trichloroethene	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Trichlorofluoromethane	BRL	5.0		ug/L	136386	1	10/13/2010 15:06	GK
Vinyl chloride	BRL	2.0		ug/L	136386	1	10/13/2010 15:06	GK
Surr: 4-Bromofluorobenzene	91	60.1-127		%REC	136386	1	10/13/2010 15:06	GK
Surr: Dibromofluoromethane	102	79.6-126		%REC	136386	1	10/13/2010 15:06	GK
Surr: Toluene-d8	88.1	78-116		%REC	136386	1	10/13/2010 15:06	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Env Planning Work Order Number 1010759

Checklist completed by Mark 10.9.10
Signature Date

Carrier name: FedEx __ UPS __ Courier __ Client ✓ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.2°c Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted __ Yes ✓ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by MK

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Client: Environmental Planning Specialists, Inc.
Project: Capitol Adhesives
Lab Order: 1010759

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1010759-001A	10280-MW-3	10/7/2010 11:35:00AM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/13/2010
1010759-001A	10280-MW-3	10/7/2010 11:35:00AM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/14/2010
1010759-001A	10280-MW-3	10/7/2010 11:35:00AM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/13/2010
1010759-001B	10280-MW-3	10/7/2010 11:35:00AM	Groundwater	GC Analysis of Gaseous Samples		10/12/2010	10/12/2010
1010759-001C	10280-MW-3	10/7/2010 11:35:00AM	Groundwater	Sulfide by SW9030/9034		10/14/2010	10/14/2010
1010759-001D	10280-MW-3	10/7/2010 11:35:00AM	Groundwater	Alkalinity			10/12/2010
1010759-001D	10280-MW-3	10/7/2010 11:35:00AM	Groundwater	ION SCAN			10/11/2010
1010759-002A	10280-MW-3D	10/7/2010 12:00:00PM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/12/2010
1010759-002A	10280-MW-3D	10/7/2010 12:00:00PM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/12/2010
1010759-002B	10280-MW-3D	10/7/2010 12:00:00PM	Groundwater	GC Analysis of Gaseous Samples		10/12/2010	10/12/2010
1010759-002C	10280-MW-3D	10/7/2010 12:00:00PM	Groundwater	Sulfide by SW9030/9034		10/14/2010	10/14/2010
1010759-002D	10280-MW-3D	10/7/2010 12:00:00PM	Groundwater	Alkalinity			10/12/2010
1010759-002D	10280-MW-3D	10/7/2010 12:00:00PM	Groundwater	ION SCAN			10/11/2010
1010759-003A	10280-MW-5	10/7/2010 2:05:00PM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/13/2010
1010759-003A	10280-MW-5	10/7/2010 2:05:00PM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/13/2010
1010759-003B	10280-MW-5	10/7/2010 2:05:00PM	Groundwater	GC Analysis of Gaseous Samples		10/12/2010	10/12/2010
1010759-003C	10280-MW-5	10/7/2010 2:05:00PM	Groundwater	Sulfide by SW9030/9034		10/14/2010	10/14/2010
1010759-003D	10280-MW-5	10/7/2010 2:05:00PM	Groundwater	Alkalinity			10/12/2010
1010759-003D	10280-MW-5	10/7/2010 2:05:00PM	Groundwater	ION SCAN			10/11/2010
1010759-004A	10280-MW-8	10/7/2010 5:55:00PM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/13/2010
1010759-004A	10280-MW-8	10/7/2010 5:55:00PM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/13/2010
1010759-004B	10280-MW-8	10/7/2010 5:55:00PM	Groundwater	GC Analysis of Gaseous Samples		10/12/2010	10/12/2010
1010759-004C	10280-MW-8	10/7/2010 5:55:00PM	Groundwater	Sulfide by SW9030/9034		10/14/2010	10/14/2010
1010759-004D	10280-MW-8	10/7/2010 5:55:00PM	Groundwater	Alkalinity			10/12/2010
1010759-004E	10280-MW-8	10/7/2010 5:55:00PM	Groundwater	ION SCAN			10/09/2010
1010759-004F	10280-MW-8	10/7/2010 5:55:00PM	Groundwater	Total Organic Carbon (TOC)			10/12/2010
1010759-005A	10280-MW-9	10/7/2010 6:35:00PM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/13/2010
1010759-005A	10280-MW-9	10/7/2010 6:35:00PM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/13/2010
1010759-006A	10281-MW-11	10/8/2010 10:45:00AM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/13/2010

Analytical Environmental Services, Inc

Date: 18-Oct-10

Client: Environmental Planning Specialists, Inc.
Project: Capitol Adhesives
Lab Order: 1010759

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1010759-006A	10281-MW-11	10/8/2010 10:45:00AM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/13/2010
1010759-007A	10281-MW-12	10/8/2010 10:50:00AM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/13/2010
1010759-007A	10281-MW-12	10/8/2010 10:50:00AM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/13/2010
1010759-008A	10281-MW-17	10/8/2010 11:58:00AM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/13/2010
1010759-008A	10281-MW-17	10/8/2010 11:58:00AM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/13/2010
1010759-009A	10281-MW-10	10/8/2010 12:10:00PM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/13/2010
1010759-009A	10281-MW-10	10/8/2010 12:10:00PM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/13/2010
1010759-010A	10281-MW-7	10/8/2010 12:48:00PM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/13/2010
1010759-010A	10281-MW-7	10/8/2010 12:48:00PM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/13/2010
1010759-011A	10281-MW-16	10/8/2010 2:15:00PM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/14/2010
1010759-011A	10281-MW-16	10/8/2010 2:15:00PM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/14/2010
1010759-012A	10281-MW-2D	10/8/2010 2:52:00PM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/12/2010
1010759-012A	10281-MW-2D	10/8/2010 2:52:00PM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/12/2010
1010759-013A	10281-MW-2	10/8/2010 2:53:00PM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/14/2010
1010759-013A	10281-MW-2	10/8/2010 2:53:00PM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/14/2010
1010759-014A	10281-DUP1	10/8/2010 12:00:00AM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/15/2010
1010759-014A	10281-DUP1	10/8/2010 12:00:00AM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/15/2010
1010759-015A	10281-MW-6	10/8/2010 4:03:00PM	Groundwater	TCL VOLATILE ORGANICS		10/12/2010	10/14/2010
1010759-015A	10281-MW-6	10/8/2010 4:03:00PM	Groundwater	Volatile Organic Compounds by GC/MS		10/12/2010	10/14/2010
1010759-016A	TRIP BLANK	10/8/2010 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		10/12/2010	10/13/2010
1010759-016A	TRIP BLANK	10/8/2010 12:00:00AM	Aqueous	Volatile Organic Compounds by GC/MS		10/12/2010	10/13/2010

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: 136382

Sample ID: **MB-136382** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182123**
SampleType: **MBLK** TestCode: **GC Analysis of Gaseous Samples SOP-RSK 175** BatchID: **136382** Analysis Date: **10/12/2010** Seq No: **3789544**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethane	BRL	9	0	0	0	0	0	0	0	0	
Ethylene	BRL	7	0	0	0	0	0	0	0	0	
Methane	BRL	4	0	0	0	0	0	0	0	0	

Sample ID: **LCS-136382** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182123**
SampleType: **LCS** TestCode: **GC Analysis of Gaseous Samples SOP-RSK 175** BatchID: **136382** Analysis Date: **10/12/2010** Seq No: **3789552**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethane	85.92	9	200	0	43	37.6	115	0	0	0	
Ethylene	56.21	7	200	0	28.1	23.2	115	0	0	0	
Methane	95.00	4	200	0	47.5	39.8	115	0	0	0	

Sample ID: **LCSD-136382** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182123**
SampleType: **LCSD** TestCode: **GC Analysis of Gaseous Samples SOP-RSK 175** BatchID: **136382** Analysis Date: **10/12/2010** Seq No: **3789556**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethane	85.17	9	200	0	42.6	37.6	115	85.92	0.884	19.1	
Ethylene	56.12	7	200	0	28.1	23.2	115	56.21	0.158	19.7	
Methane	92.86	4	200	0	46.4	39.8	115	95.00	2.27	18.7	

Sample ID: **1010759-004BMS** Client ID: **10280-MW-8** Units: **ug/L** Prep Date: **10/12/2010** Run No: **182123**
SampleType: **MS** TestCode: **GC Analysis of Gaseous Samples SOP-RSK 175** BatchID: **136382** Analysis Date: **10/12/2010** Seq No: **3789676**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethane	108.9	9	200	0	54.5	40.3	115	0	0	0	
Ethylene	71.85	7	200	0	35.9	24.7	115	0	0	0	
Methane	116.3	4	200	4.399	56	38.9	115	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: 136382

Sample ID: **1010759-004BMSD** Client ID: **10280-MW-8** Units: **ug/L** Prep Date: **10/12/2010** Run No: **182123**
SampleType: **MSD** TestCode: **GC Analysis of Gaseous Samples SOP-RSK 175** BatchID: **136382** Analysis Date: **10/12/2010** Seq No: **3789682**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethane	108.9	9	200	0	54.5	40.3	115	108.9	0.024	20	
Ethylene	72.13	7	200	0	36.1	24.7	115	71.85	0.394	20	
Methane	116.5	4	200	4.399	56.1	38.9	115	116.3	0.136	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: 136386

Sample ID: **MB-136386** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182104**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **136386** Analysis Date: **10/12/2010** Seq No: **3789401**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	BRL	150	0	0	0	0	0	0	0	0	

Sample ID: **MB-136386** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182104**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136386** Analysis Date: **10/12/2010** Seq No: **3790611**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	
Acetone	BRL	50	0	0	0	0	0	0	0	0	
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: 136386

Sample ID: **MB-136386** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182104**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136386** Analysis Date: **10/12/2010** Seq No: **3790611**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Freon-113	BRL	10	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: 136386

Sample ID: **MB-136386** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182104**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136386** Analysis Date: **10/12/2010** Seq No: **3790611**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	43.66	0	50	0	87.3	60.1	127	0	0	0	
Surr: Dibromofluoromethane	53.69	0	50	0	107	79.6	126	0	0	0	
Surr: Toluene-d8	44.73	0	50	0	89.5	78	116	0	0	0	

Sample ID: **LCS-136386** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182104**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136386** Analysis Date: **10/12/2010** Seq No: **3790610**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	43.73	5.0	50	0	87.5	61.4	146	0	0	0	
Benzene	44.65	5.0	50	0	89.3	72.8	131	0	0	0	
Chlorobenzene	48.46	5.0	50	0	96.9	76	123	0	0	0	
Toluene	46.69	5.0	50	0	93.4	74.7	128	0	0	0	
Trichloroethene	51.75	5.0	50	0	104	74.4	130	0	0	0	
Surr: 4-Bromofluorobenzene	48.08	0	50	0	96.2	60.1	127	0	0	0	
Surr: Dibromofluoromethane	51.91	0	50	0	104	79.6	126	0	0	0	
Surr: Toluene-d8	47.35	0	50	0	94.7	78	116	0	0	0	

Sample ID: **1010759-012AMS** Client ID: **10281-MW-2D** Units: **ug/L** Prep Date: **10/12/2010** Run No: **182104**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136386** Analysis Date: **10/12/2010** Seq No: **3790613**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	3940	500	5000	0	78.8	48.8	172	0	0	0	
Benzene	4043	500	5000	0	80.9	64.5	143	0	0	0	
Chlorobenzene	4453	500	5000	0	89.1	74.5	129	0	0	0	
Toluene	4100	500	5000	0	82	62	145	0	0	0	
Trichloroethene	4507	500	5000	0	90.1	70.3	140	0	0	0	
Surr: 4-Bromofluorobenzene	4514	0	5000	0	90.3	60.1	127	0	0	0	
Surr: Dibromofluoromethane	5110	0	5000	0	102	79.6	126	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: 136386

Sample ID: **1010759-012AMS**	Client ID: **10281-MW-2D**	Units: **ug/L**	Prep Date: **10/12/2010**	Run No: **182104**
SampleType: **MS**	TestCode: **TCL VOLATILE ORGANICS SW8260B**	BatchID: **136386**	Analysis Date: **10/12/2010**	Seq No: **3790613**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Toluene-d8	4472	0	5000	0	89.4	78	116	0	0	0	

Sample ID: **1010759-012AMSD**	Client ID: **10281-MW-2D**	Units: **ug/L**	Prep Date: **10/12/2010**	Run No: **182104**
SampleType: **MSD**	TestCode: **TCL VOLATILE ORGANICS SW8260B**	BatchID: **136386**	Analysis Date: **10/12/2010**	Seq No: **3790614**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	3710	500	5000	0	74.2	48.8	172	3940	6.01	21.6	
Benzene	3982	500	5000	0	79.6	64.5	143	4043	1.52	18.3	
Chlorobenzene	4291	500	5000	0	85.8	74.5	129	4453	3.71	19.2	
Toluene	4028	500	5000	0	80.6	62	145	4100	1.77	21.2	
Trichloroethene	4462	500	5000	0	89.2	70.3	140	4507	1	20.3	
Surr: 4-Bromofluorobenzene	4391	0	5000	0	87.8	60.1	127	4514	0	0	
Surr: Dibromofluoromethane	5060	0	5000	0	101	79.6	126	5110	0	0	
Surr: Toluene-d8	4470	0	5000	0	89.4	78	116	4472	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: 136510

Sample ID: **MB-136510**	Client ID:					Units: **mg/L**		Prep Date: **10/14/2010**		Run No: **182355**	
SampleType: **MBLK**	TestCode: **Sulfide by SW9030/9034**					BatchID: **136510**		Analysis Date: **10/14/2010**		Seq No: **3795882**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	BRL	2.00	0	0	0	0	0	0	0	0	

Sample ID: **LCS-136510**	Client ID:					Units: **mg/L**		Prep Date: **10/14/2010**		Run No: **182355**	
SampleType: **LCS**	TestCode: **Sulfide by SW9030/9034**					BatchID: **136510**		Analysis Date: **10/14/2010**		Seq No: **3795883**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	456.8	2.00	456.8	0	100	40	120	0	0	0	

Sample ID: **1010759-004CMS**	Client ID: **10280-MW-8**					Units: **mg/L**		Prep Date: **10/14/2010**		Run No: **182355**	
SampleType: **MS**	TestCode: **Sulfide by SW9030/9034**					BatchID: **136510**		Analysis Date: **10/14/2010**		Seq No: **3795888**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	46.08	2.00	45.68	0	101	58.7	129	0	0	0	

Sample ID: **1010759-004CMSD**	Client ID: **10280-MW-8**					Units: **mg/L**		Prep Date: **10/14/2010**		Run No: **182355**	
SampleType: **MSD**	TestCode: **Sulfide by SW9030/9034**					BatchID: **136510**		Analysis Date: **10/14/2010**		Seq No: **3795889**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	44.88	2.00	45.68	0	98.2	58.7	129	46.08	2.64	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: R181949

Sample ID: **MB-R181949**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **181949**	
SampleType: **MBLK**	TestCode: **ION SCAN SW9056A**				BatchID: **R181949**		Analysis Date: **10/09/2010**		Seq No: **3785396**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	BRL	1.0	0	0	0	0	0	0	0	0	
Nitrate	BRL	0.25	0	0	0	0	0	0	0	0	
Nitrite	BRL	0.25	0	0	0	0	0	0	0	0	
Sulfate	BRL	1.0	0	0	0	0	0	0	0	0	

Sample ID: **LCS-R181949**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **181949**	
SampleType: **LCS**	TestCode: **ION SCAN SW9056A**				BatchID: **R181949**		Analysis Date: **10/09/2010**		Seq No: **3785395**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	9.549	1.0	10	0.09621	94.5	90	110	0	0	0	
Nitrate	4.989	0.25	5	0	99.8	90	110	0	0	0	
Nitrite	4.993	0.25	5	0.03411	99.2	90	110	0	0	0	
Sulfate	23.65	1.0	25	0.4281	92.9	90	110	0	0	0	

Sample ID: **1010759-004EMS**	Client ID: **10280-MW-8**				Units: **mg/L**		Prep Date:		Run No: **181949**	
SampleType: **MS**	TestCode: **ION SCAN SW9056A**				BatchID: **R181949**		Analysis Date: **10/09/2010**		Seq No: **3785398**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	15.93	1.0	10	6.513	94.2	90	110	0	0	0	
Nitrate	5.975	0.25	5	0.9982	99.5	90	110	0	0	0	
Nitrite	4.758	0.25	5	0	95.2	90	110	0	0	0	
Sulfate	29.12	1.0	25	5.957	92.7	90	110	0	0	0	

Sample ID: **1010759-004EMSD**	Client ID: **10280-MW-8**				Units: **mg/L**		Prep Date:		Run No: **181949**	
SampleType: **MSD**	TestCode: **ION SCAN SW9056A**				BatchID: **R181949**		Analysis Date: **10/09/2010**		Seq No: **3785399**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	16.02	1.0	10	6.513	95.1	90	110	15.93	0.549	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: R181949

Sample ID: **1010759-004EMSD** Client ID: **10280-MW-8** Units: **mg/L** Prep Date: Run No: **181949**
SampleType: **MSD** TestCode: **ION SCAN SW9056A** BatchID: **R181949** Analysis Date: **10/09/2010** Seq No: **3785399**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.999	0.25	5	0.9982	100	90	110	5.975	0.405	20	
Nitrite	4.776	0.25	5	0	95.5	90	110	4.758	0.388	20	
Sulfate	29.29	1.0	25	5.957	93.3	90	110	29.12	0.577	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: R182071

Sample ID: **MB-R182071**	Client ID:					Units: **mg/L**		Prep Date:		Run No: **182071**	
SampleType: **MBLK**	TestCode: **ION SCAN SW9056A**					BatchID: **R182071**		Analysis Date: **10/11/2010**		Seq No: **3788113**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	BRL	1.0	0	0	0	0	0	0	0	0	

Sample ID: **LCS-R182071**	Client ID:					Units: **mg/L**		Prep Date:		Run No: **182071**	
SampleType: **LCS**	TestCode: **ION SCAN SW9056A**					BatchID: **R182071**		Analysis Date: **10/11/2010**		Seq No: **3788110**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	9.892	1.0	10	0.1247	97.7	90	110	0	0	0	

Sample ID: **1010753-002AMS**	Client ID:					Units: **mg/L**		Prep Date:		Run No: **182071**	
SampleType: **MS**	TestCode: **ION SCAN SW9056A**					BatchID: **R182071**		Analysis Date: **10/11/2010**		Seq No: **3788138**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	13.58	1.0	10	4.285	93	90	110	0	0	0	

Sample ID: **1010753-002AMSD**	Client ID:					Units: **mg/L**		Prep Date:		Run No: **182071**	
SampleType: **MSD**	TestCode: **ION SCAN SW9056A**					BatchID: **R182071**		Analysis Date: **10/11/2010**		Seq No: **3788141**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	13.67	1.0	10	4.285	93.8	90	110	13.58	0.622	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: R182075

Sample ID: **MB-R182075**	Client ID:					Units: **mg/L**		Prep Date:		Run No: **182075**	
SampleType: **MBLK**	TestCode: **Alkalinity E310.2**					BatchID: **R182075**		Analysis Date: **10/12/2010**		Seq No: **3788633**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	BRL	10.0	0	0	0	0	0	0	0	0	

Sample ID: **LCS-R182075**	Client ID:					Units: **mg/L**		Prep Date:		Run No: **182075**	
SampleType: **LCS**	TestCode: **Alkalinity E310.2**					BatchID: **R182075**		Analysis Date: **10/12/2010**		Seq No: **3788634**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	244.0	10.0	250	0	97.6	75	125	0	0	0	

Sample ID: **1010420-001ADUP**	Client ID:					Units: **mg/L**		Prep Date:		Run No: **182075**	
SampleType: **DUP**	TestCode: **Alkalinity E310.2**					BatchID: **R182075**		Analysis Date: **10/12/2010**		Seq No: **3788636**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	143.0	10.0	0	0	0	0	0	141.0	1.41	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010759

ANALYTICAL QC SUMMARY REPORT

BatchID: R182161

Sample ID: **MB-R182161**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **182161**
SampleType: **MBLK**	TestCode: **Total Organic Carbon (TOC) SW9060A**				BatchID: **R182161**		Analysis Date: **10/12/2010**		Seq No: **3790620**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Organic Carbon, Total	BRL	1.00	0	0	0	0	0	0	0	0	

Sample ID: **LCS-R182161**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **182161**
SampleType: **LCS**	TestCode: **Total Organic Carbon (TOC) SW9060A**				BatchID: **R182161**		Analysis Date: **10/12/2010**		Seq No: **3790619**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Organic Carbon, Total	24.51	1.00	25	0	98	90	110	0	0	0	

Sample ID: **1010663-002AMS**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **182161**
SampleType: **MS**	TestCode: **Total Organic Carbon (TOC) SW9060A**				BatchID: **R182161**		Analysis Date: **10/12/2010**		Seq No: **3790628**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Organic Carbon, Total	27.72	1.00	25	2.549	101	80	120	0	0	0	

Sample ID: **1010663-002AMSD**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **182161**
SampleType: **MSD**	TestCode: **Total Organic Carbon (TOC) SW9060A**				BatchID: **R182161**		Analysis Date: **10/12/2010**		Seq No: **3790629**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Organic Carbon, Total	27.01	1.00	25	2.549	97.8	80	120	27.72	2.59	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 19, 2010

Timmerly Bullman
Environmental Planning Specialists, Inc.
900 Ashwood Parkway
Atlanta GA 30338

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

RE: Capitol Adhesives

Dear Timmerly Bullman: Order No: 1010956

Analytical Environmental Services, Inc. received 8 samples on 10/13/2010 8:15:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/10-06/30/11.
-AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

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

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

James Forrest
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1010956

Date: 10-13-10 Page 1 of 1

COMPANY: EPS

ADDRESS: 900 Ashwood Pkwy Suite 350 Atlanta, GA 30338

PHONE: 404-315-9113

FAX:

SAMPLED BY: Ryan James

SIGNATURE:

| # | SAMPLE ID | SAMPLED DATE | SAMPLED TIME | Grab | Composite | Matrix (See codes) | VOC 8260 | Alkalinity | Sulfate | Methane | Ethane / Ethene | Chloride | | |

Analytical Environmental Services, Inc

Date: 21-Oct-10

Client: Environmental Planning Specialists, Inc.
Project: Capitol Adhesives
Lab ID: 1010956

Case Narrative

The vials of 1010956-002A with sample id " 10285-MW-13" were labeled as " 10258-MW-13 "with collection date and time matched to COC. Sample was logged in according to COC.

Analysis for 1,4-Dioxane was verified by Timmerly Bulman via email on 10/13 @ 5:30pm.

The following samples were received but not listed on the chain of custody: 10258-DUP2, 10-285-SB-SO-10, 10-285-SB-SO-11, 10-285-SB-SO-12. The samples were tested for the analyses listed in the sample containers per Timmerly Bullman on 10/13/10.

Volatiles Organic Compounds Analysis by Method 8260B:

Due to sample matrix, sample 1010956-006A required dilution during preparation and/or analysis resulting in elevated reporting limits.

Toluene values for the QC samples 1010838-008AMS/MSD are "E" qualified indicating estimated values over linear calibration range due to the level of target analyte present in the unspiked sample.

Analytical Environmental Services, Inc

Date: 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10285-MW-4
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 11:20:00 AM
Lab ID:	1010956-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	50		ug/L	136428	1	10/14/2010 13:24	JT
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,1,2-Trichloroethane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,1-Dichloroethane	6.2	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,1-Dichloroethene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,2-Dibromoethane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,2-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,2-Dichloroethane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,2-Dichloropropane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,3-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
1,4-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
2-Butanone	BRL	50		ug/L	136428	1	10/14/2010 13:24	JT
2-Hexanone	BRL	10		ug/L	136428	1	10/14/2010 13:24	JT
4-Methyl-2-pentanone	BRL	10		ug/L	136428	1	10/14/2010 13:24	JT
Acetone	BRL	50		ug/L	136428	1	10/14/2010 13:24	JT
Benzene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Bromodichloromethane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Bromoform	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Bromomethane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Carbon disulfide	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Carbon tetrachloride	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Chlorobenzene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Chloroethane	BRL	10		ug/L	136428	1	10/14/2010 13:24	JT
Chloroform	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Chloromethane	BRL	10		ug/L	136428	1	10/14/2010 13:24	JT
cis-1,2-Dichloroethene	57	5.0		ug/L	136428	1	10/14/2010 13:24	JT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Cyclohexane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Dibromochloromethane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Dichlorodifluoromethane	BRL	10		ug/L	136428	1	10/14/2010 13:24	JT
Ethylbenzene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Freon-113	BRL	10		ug/L	136428	1	10/14/2010 13:24	JT
Isopropylbenzene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
m,p-Xylene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Methyl acetate	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Methyl tert-butyl ether	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10285-MW-4
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 11:20:00 AM
Lab ID:	1010956-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Methylene chloride	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
o-Xylene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Styrene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Tetrachloroethene	19	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Toluene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Trichloroethene	86	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Trichlorofluoromethane	BRL	5.0		ug/L	136428	1	10/14/2010 13:24	JT
Vinyl chloride	59	2.0		ug/L	136428	1	10/14/2010 13:24	JT
Surr: 4-Bromofluorobenzene	80	60.1-127		%REC	136428	1	10/14/2010 13:24	JT
Surr: Dibromofluoromethane	105	79.6-126		%REC	136428	1	10/14/2010 13:24	JT
Surr: Toluene-d8	92.8	78-116		%REC	136428	1	10/14/2010 13:24	JT
Sulfide by SW9030/9034				**(SW9030)**				
Sulfide	BRL	2.00		mg/L	136510	1	10/14/2010 10:45	AS
ION SCAN SW9056A								
Chloride	9.7	1.0		mg/L	R182363	1	10/14/2010 09:42	GR
GC Analysis of Gaseous Samples SOP-RSK 175				**(RSK175)**				
Ethane	BRL	9		ug/L	136603	1	10/16/2010 14:21	AK
Ethylene	48	7		ug/L	136603	1	10/16/2010 14:21	AK
Methane	4300	400		ug/L	136603	100	10/16/2010 14:47	AK
Alkalinity E310.2								
Alkalinity, Total (As CaCO3)	233	10.0		mg/L	R182463	1	10/18/2010 12:31	TL

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10285-MW-13
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 9:32:00 AM
Lab ID:	1010956-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	50		ug/L	136428	1	10/18/2010 17:22	JT
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,1,2-Trichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,1-Dichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,1-Dichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,2-Dibromoethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,2-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,2-Dichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,2-Dichloropropane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,3-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
1,4-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
2-Butanone	BRL	50		ug/L	136428	1	10/18/2010 17:22	JT
2-Hexanone	BRL	10		ug/L	136428	1	10/18/2010 17:22	JT
4-Methyl-2-pentanone	BRL	10		ug/L	136428	1	10/18/2010 17:22	JT
Acetone	BRL	50		ug/L	136428	1	10/18/2010 17:22	JT
Benzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Bromodichloromethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Bromoform	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Bromomethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Carbon disulfide	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Carbon tetrachloride	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Chlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Chloroethane	BRL	10		ug/L	136428	1	10/18/2010 17:22	JT
Chloroform	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Chloromethane	BRL	10		ug/L	136428	1	10/18/2010 17:22	JT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Cyclohexane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Dibromochloromethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Dichlorodifluoromethane	BRL	10		ug/L	136428	1	10/18/2010 17:22	JT
Ethylbenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Freon-113	BRL	10		ug/L	136428	1	10/18/2010 17:22	JT
Isopropylbenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
m,p-Xylene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Methyl acetate	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Methyl tert-butyl ether	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT

Qualifiers:

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- BRL Below reporting limit
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- N Analyte not NELAC certified
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- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10285-MW-13
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 9:32:00 AM
Lab ID:	1010956-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Methylene chloride	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
o-Xylene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Styrene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Tetrachloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Toluene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Trichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Trichlorofluoromethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:22	JT
Vinyl chloride	BRL	2.0		ug/L	136428	1	10/18/2010 17:22	JT
Surr: 4-Bromofluorobenzene	81.3	60.1-127		%REC	136428	1	10/18/2010 17:22	JT
Surr: Dibromofluoromethane	106	79.6-126		%REC	136428	1	10/18/2010 17:22	JT
Surr: Toluene-d8	95.3	78-116		%REC	136428	1	10/18/2010 17:22	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10285-MW-14
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 9:52:00 AM
Lab ID:	1010956-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	50		ug/L	136428	1	10/18/2010 17:54	JT
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,1,2-Trichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,1-Dichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,1-Dichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,2-Dibromoethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,2-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,2-Dichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,2-Dichloropropane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,3-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
1,4-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
2-Butanone	BRL	50		ug/L	136428	1	10/18/2010 17:54	JT
2-Hexanone	BRL	10		ug/L	136428	1	10/18/2010 17:54	JT
4-Methyl-2-pentanone	BRL	10		ug/L	136428	1	10/18/2010 17:54	JT
Acetone	BRL	50		ug/L	136428	1	10/18/2010 17:54	JT
Benzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Bromodichloromethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Bromoform	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Bromomethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Carbon disulfide	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Carbon tetrachloride	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Chlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Chloroethane	BRL	10		ug/L	136428	1	10/18/2010 17:54	JT
Chloroform	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Chloromethane	BRL	10		ug/L	136428	1	10/18/2010 17:54	JT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Cyclohexane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Dibromochloromethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Dichlorodifluoromethane	BRL	10		ug/L	136428	1	10/18/2010 17:54	JT
Ethylbenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Freon-113	BRL	10		ug/L	136428	1	10/18/2010 17:54	JT
Isopropylbenzene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
m,p-Xylene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Methyl acetate	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Methyl tert-butyl ether	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10285-MW-14
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 9:52:00 AM
Lab ID:	1010956-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Methylene chloride	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
o-Xylene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Styrene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Tetrachloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Toluene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Trichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Trichlorofluoromethane	BRL	5.0		ug/L	136428	1	10/18/2010 17:54	JT
Vinyl chloride	BRL	2.0		ug/L	136428	1	10/18/2010 17:54	JT
Surr: 4-Bromofluorobenzene	88.7	60.1-127		%REC	136428	1	10/18/2010 17:54	JT
Surr: Dibromofluoromethane	111	79.6-126		%REC	136428	1	10/18/2010 17:54	JT
Surr: Toluene-d8	98.8	78-116		%REC	136428	1	10/18/2010 17:54	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10285-MW-15
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 11:50:00 AM
Lab ID:	1010956-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	50		ug/L	136428	1	10/18/2010 18:23	JT
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	8.9	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,1,2-Trichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,1-Dichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,1-Dichloroethene	23	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,2-Dibromoethane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,2-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,2-Dichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,2-Dichloropropane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,3-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
1,4-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
2-Butanone	BRL	50		ug/L	136428	1	10/18/2010 18:23	JT
2-Hexanone	BRL	10		ug/L	136428	1	10/18/2010 18:23	JT
4-Methyl-2-pentanone	BRL	10		ug/L	136428	1	10/18/2010 18:23	JT
Acetone	BRL	50		ug/L	136428	1	10/18/2010 18:23	JT
Benzene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Bromodichloromethane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Bromoform	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Bromomethane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Carbon disulfide	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Carbon tetrachloride	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Chlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Chloroethane	BRL	10		ug/L	136428	1	10/18/2010 18:23	JT
Chloroform	7.9	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Chloromethane	BRL	10		ug/L	136428	1	10/18/2010 18:23	JT
cis-1,2-Dichloroethene	22	5.0		ug/L	136428	1	10/18/2010 18:23	JT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Cyclohexane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Dibromochloromethane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Dichlorodifluoromethane	BRL	10		ug/L	136428	1	10/18/2010 18:23	JT
Ethylbenzene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Freon-113	BRL	10		ug/L	136428	1	10/18/2010 18:23	JT
Isopropylbenzene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
m,p-Xylene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Methyl acetate	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Methyl tert-butyl ether	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10285-MW-15
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 11:50:00 AM
Lab ID:	1010956-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Methylene chloride	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
o-Xylene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Styrene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Tetrachloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Toluene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Trichloroethene	8.9	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Trichlorofluoromethane	BRL	5.0		ug/L	136428	1	10/18/2010 18:23	JT
Vinyl chloride	5.9	2.0		ug/L	136428	1	10/18/2010 18:23	JT
Surr: 4-Bromofluorobenzene	85.9	60.1-127		%REC	136428	1	10/18/2010 18:23	JT
Surr: Dibromofluoromethane	112	79.6-126		%REC	136428	1	10/18/2010 18:23	JT
Surr: Toluene-d8	96.4	78-116		%REC	136428	1	10/18/2010 18:23	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10258-DUP2
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010
Lab ID:	1010956-005	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	50		ug/L	136428	1	10/18/2010 19:00	JT
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,1,2-Trichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,1-Dichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,1-Dichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,2-Dibromoethane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,2-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,2-Dichloroethane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,2-Dichloropropane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,3-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
1,4-Dichlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
2-Butanone	BRL	50		ug/L	136428	1	10/18/2010 19:00	JT
2-Hexanone	BRL	10		ug/L	136428	1	10/18/2010 19:00	JT
4-Methyl-2-pentanone	BRL	10		ug/L	136428	1	10/18/2010 19:00	JT
Acetone	BRL	50		ug/L	136428	1	10/18/2010 19:00	JT
Benzene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Bromodichloromethane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Bromoform	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Bromomethane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Carbon disulfide	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Carbon tetrachloride	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Chlorobenzene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Chloroethane	BRL	10		ug/L	136428	1	10/18/2010 19:00	JT
Chloroform	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Chloromethane	BRL	10		ug/L	136428	1	10/18/2010 19:00	JT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Cyclohexane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Dibromochloromethane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Dichlorodifluoromethane	BRL	10		ug/L	136428	1	10/18/2010 19:00	JT
Ethylbenzene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Freon-113	BRL	10		ug/L	136428	1	10/18/2010 19:00	JT
Isopropylbenzene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
m,p-Xylene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Methyl acetate	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Methyl tert-butyl ether	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10258-DUP2
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010
Lab ID:	1010956-005	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylcyclohexane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Methylene chloride	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
o-Xylene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Styrene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Tetrachloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Toluene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Trichloroethene	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Trichlorofluoromethane	BRL	5.0		ug/L	136428	1	10/18/2010 19:00	JT
Vinyl chloride	BRL	2.0		ug/L	136428	1	10/18/2010 19:00	JT
Surr: 4-Bromofluorobenzene	81.4	60.1-127		%REC	136428	1	10/18/2010 19:00	JT
Surr: Dibromofluoromethane	107	79.6-126		%REC	136428	1	10/18/2010 19:00	JT
Surr: Toluene-d8	94.7	78-116		%REC	136428	1	10/18/2010 19:00	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
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- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10-285-SB-SO-10
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 10:30:00 AM
Lab ID:	1010956-006	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
VOLATILES, TCLP SW1311/8260B				**(SW1311)**				
1,1-Dichloroethene	BRL	0.10		mg/L	136721	20	10/19/2010 14:34	JT
1,2-Dichloroethane	BRL	0.10		mg/L	136721	20	10/19/2010 14:34	JT
2-Butanone	BRL	0.20		mg/L	136721	20	10/19/2010 14:34	JT
Benzene	BRL	0.10		mg/L	136721	20	10/19/2010 14:34	JT
Carbon tetrachloride	BRL	0.10		mg/L	136721	20	10/19/2010 14:34	JT
Chlorobenzene	BRL	0.10		mg/L	136721	20	10/19/2010 14:34	JT
Chloroform	BRL	0.10		mg/L	136721	20	10/19/2010 14:34	JT
Tetrachloroethene	0.22	0.10		mg/L	136721	20	10/19/2010 14:34	JT
Trichloroethene	BRL	0.10		mg/L	136721	20	10/19/2010 14:34	JT
Vinyl chloride	BRL	0.040		mg/L	136721	20	10/19/2010 14:34	JT
Surr: 4-Bromofluorobenzene	89.4	64.4-125		%REC	136721	20	10/19/2010 14:34	JT
Surr: Dibromofluoromethane	109	79.8-123		%REC	136721	20	10/19/2010 14:34	JT
Surr: Toluene-d8	94.5	78.3-116		%REC	136721	20	10/19/2010 14:34	JT
Volatile Organic Compounds by GC/MS SW8260B				**(SW5035)**				
1,4-Dioxane	BRL	1.2		mg/Kg-dry	136503	50	10/19/2010 15:03	JT
Surr: 4-Bromofluorobenzene	94.3	56-137		%REC	136503	50	10/19/2010 15:03	JT
Surr: Dibromofluoromethane	104	73.7-137		%REC	136503	50	10/19/2010 15:03	JT
Surr: Toluene-d8	98.2	69.2-126		%REC	136503	50	10/19/2010 15:03	JT
Total Organic Carbon SW9060A Modified				**(SW9060 Modified)**				
Total Organic Carbon (TOC)	1940	500		mg/Kg-dry	136523	1	10/15/2010 11:22	GR
TOTAL MERCURY SW7471B				**(SW7471)**				
Mercury	BRL	0.121		mg/Kg-dry	136566	1	10/15/2010 17:17	TA
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,1,1-Trichloroethane	7.2	2.4		mg/Kg-dry	136503	1000	10/18/2010 20:39	JE
1,1,2,2-Tetrachloroethane	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
1,1,2-Trichloroethane	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
1,1-Dichloroethane	4.2	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
1,1-Dichloroethene	0.63	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
1,2,4-Trichlorobenzene	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
1,2-Dibromo-3-chloropropane	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
1,2-Dibromoethane	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
1,2-Dichlorobenzene	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
1,2-Dichloroethane	3.4	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
1,2-Dichloropropane	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
1,3-Dichlorobenzene	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
1,4-Dichlorobenzene	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
2-Butanone	BRL	1.2		mg/Kg-dry	136503	50	10/16/2010 17:37	NK

Qualifiers:

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- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc

Date: 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10-285-SB-SO-10
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 10:30:00 AM
Lab ID:	1010956-006	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
2-Hexanone	BRL	0.24		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
4-Methyl-2-pentanone	BRL	0.24		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Acetone	BRL	2.4		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Benzene	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Bromodichloromethane	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Bromoform	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Bromomethane	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Carbon disulfide	BRL	0.24		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Carbon tetrachloride	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Chlorobenzene	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Chloroethane	BRL	0.24		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Chloroform	3.1	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Chloromethane	BRL	0.24		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
cis-1,2-Dichloroethene	7.8	2.4		mg/Kg-dry	136503	1000	10/18/2010 20:39	JE
cis-1,3-Dichloropropene	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Cyclohexane	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Dibromochloromethane	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Dichlorodifluoromethane	BRL	0.24		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Ethylbenzene	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Freon-113	BRL	0.24		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Isopropylbenzene	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
m,p-Xylene	0.34	0.24		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Methyl acetate	0.13	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Methyl tert-butyl ether	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Methylcyclohexane	0.26	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Methylene chloride	5.9	2.4		mg/Kg-dry	136503	1000	10/18/2010 20:39	JE
o-Xylene	0.16	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Styrene	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Tetrachloroethene	43	2.4		mg/Kg-dry	136503	1000	10/18/2010 20:39	JE
Toluene	1.1	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
trans-1,2-Dichloroethene	0.17	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
trans-1,3-Dichloropropene	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Trichloroethene	16	2.4		mg/Kg-dry	136503	1000	10/18/2010 20:39	JE
Trichlorofluoromethane	BRL	0.12		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Vinyl chloride	BRL	0.24		mg/Kg-dry	136503	50	10/16/2010 17:37	NK
Surr: 4-Bromofluorobenzene	98.4	58.2-140		%REC	136503	50	10/16/2010 17:37	NK
Surr: 4-Bromofluorobenzene	99.4	56-137		%REC	136503	1000	10/18/2010 20:39	JE
Surr: Dibromofluoromethane	104	71.1-132		%REC	136503	50	10/16/2010 17:37	NK
Surr: Dibromofluoromethane	92.9	73.7-137		%REC	136503	1000	10/18/2010 20:39	JE
Surr: Toluene-d8	94.4	77.6-119		%REC	136503	50	10/16/2010 17:37	NK
Surr: Toluene-d8	98.4	69.2-126		%REC	136503	1000	10/18/2010 20:39	JE

Qualifiers:

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- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10-285-SB-SO-10
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 10:30:00 AM
Lab ID:	1010956-006	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
MERCURY, TCLP SW1311/7470A				**(SW7470)**				
Mercury	BRL	0.00400		mg/L	136538	1	10/18/2010 15:10	TA
ICP METALS, TCLP SW1311/6010C				**(SW3010A)**				
Arsenic	BRL	0.250		mg/L	136576	1	10/15/2010 20:34	MW
Barium	0.897	0.500		mg/L	136576	1	10/15/2010 20:34	MW
Cadmium	BRL	0.0250		mg/L	136576	1	10/15/2010 20:34	MW
Chromium	BRL	0.0500		mg/L	136576	1	10/15/2010 20:34	MW
Lead	BRL	0.0500		mg/L	136576	1	10/15/2010 20:34	MW
Selenium	BRL	0.100		mg/L	136576	1	10/15/2010 20:34	MW
Silver	BRL	0.0250		mg/L	136576	1	10/15/2010 20:34	MW
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	15.1	1.00		mg/kg	R182627	1	10/19/2010 17:00	AS
METALS, TOTAL SW6010C				**(SW3050B)**				
Arsenic	BRL	5.67		mg/Kg-dry	136481	1	10/14/2010 19:29	BB
Barium	132	5.67		mg/Kg-dry	136481	1	10/14/2010 19:29	BB
Cadmium	BRL	2.84		mg/Kg-dry	136481	1	10/14/2010 19:29	BB
Chromium	8.24	2.84		mg/Kg-dry	136481	1	10/14/2010 19:29	BB
Lead	13.0	5.67		mg/Kg-dry	136481	1	10/14/2010 19:29	BB
Selenium	BRL	5.67		mg/Kg-dry	136481	1	10/14/2010 19:29	BB
Silver	BRL	2.84		mg/Kg-dry	136481	1	10/14/2010 19:29	BB
PERCENT MOISTURE D2216								
Percent Moisture	17.7	0		wt%	R182591	1	10/18/2010 17:30	AS

Qualifiers:

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- Narr See case narrative
- NC Not confirmed
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Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10-285-SB-SO-11
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 10:45:00 AM
Lab ID:	1010956-007	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon SW9060A Modified					**(SW9060 Modified)**			
Total Organic Carbon (TOC)	1780	500		mg/Kg-dry	136523	1	10/15/2010 12:58	GR
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	6.10	1.00		mg/kg	R182627	1	10/19/2010 17:00	AS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc **Date:** 21-Oct-10

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	10-285-SB-SO-12
Project:	Capitol Adhesives	**Collection Date:**	10/12/2010 11:10:00 AM
Lab ID:	1010956-008	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon SW9060A Modified					**(SW9060 Modified)**			
Total Organic Carbon (TOC)	1390	500		mg/Kg-dry	136523	1	10/15/2010 09:48	GR
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	3.58	1.00		mg/kg	R182627	1	10/19/2010 17:00	AS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client EPS Work Order Number 1010956

Checklist completed by Signature 10/13/10 Date

Carrier name: FedEx __ UPS __ Courier __ Client ✓ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.0°C Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes __ No ✓

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted __ Yes ✓ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by PT

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136428

Sample ID: **MB-136428** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182190**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136428** Analysis Date: **10/13/2010** Seq No: **3791394**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	
Acetone	BRL	50	0	0	0	0	0	0	0	0	
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136428

Sample ID: **MB-136428** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182190**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136428** Analysis Date: **10/13/2010** Seq No: **3791394**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Freon-113	BRL	10	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	41.06	0	50	0	82.1	60.1	127	0	0	0	
Surr: Dibromofluoromethane	51.70	0	50	0	103	79.6	126	0	0	0	
Surr: Toluene-d8	45.29	0	50	0	90.6	78	116	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136428

Sample ID: **MB-136428** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182190**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **136428** Analysis Date: **10/13/2010** Seq No: **3794547**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	BRL	150	0	0	0	0	0	0	0	0	

Sample ID: **LCS-136428** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182190**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136428** Analysis Date: **10/12/2010** Seq No: **3791392**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	51.70	5.0	50	0	103	61.4	146	0	0	0	
Benzene	47.46	5.0	50	0	94.9	72.8	131	0	0	0	
Chlorobenzene	50.42	5.0	50	0	101	76	123	0	0	0	
Toluene	47.06	5.0	50	0	94.1	74.7	128	0	0	0	
Trichloroethene	47.47	5.0	50	0	94.9	74.4	130	0	0	0	
Surr: 4-Bromofluorobenzene	39.64	0	50	0	79.3	60.1	127	0	0	0	
Surr: Dibromofluoromethane	45.21	0	50	0	90.4	79.6	126	0	0	0	
Surr: Toluene-d8	43.37	0	50	0	86.7	78	116	0	0	0	

Sample ID: **1010699-001AMS** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182241**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136428** Analysis Date: **10/13/2010** Seq No: **3792736**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	81.18	5.0	50	0	162	48.8	172	0	0	0	
Benzene	59.00	5.0	50	0	118	64.5	143	0	0	0	
Chlorobenzene	61.78	5.0	50	0	124	74.5	129	0	0	0	
Toluene	58.32	5.0	50	0.6000	115	62	145	0	0	0	
Trichloroethene	59.65	5.0	50	0.9800	117	70.3	140	0	0	0	
Surr: 4-Bromofluorobenzene	41.88	0	50	0	83.8	60.1	127	0	0	0	
Surr: Dibromofluoromethane	50.28	0	50	0	101	79.6	126	0	0	0	
Surr: Toluene-d8	43.90	0	50	0	87.8	78	116	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136428

Sample ID: **1010699-001AMSD** Client ID: Units: **ug/L** Prep Date: **10/12/2010** Run No: **182241**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136428** Analysis Date: **10/13/2010** Seq No: **3792737**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	76.42	5.0	50	0	153	48.8	172	81.18	6.04	21.6	
Benzene	59.76	5.0	50	0	120	64.5	143	59.00	1.28	18.3	
Chlorobenzene	58.36	5.0	50	0	117	74.5	129	61.78	5.69	19.2	
Toluene	59.02	5.0	50	0.6000	117	62	145	58.32	1.19	21.2	
Trichloroethene	61.23	5.0	50	0.9800	120	70.3	140	59.65	2.61	20.3	
Surr: 4-Bromofluorobenzene	41.93	0	50	0	83.9	60.1	127	41.88	0	0	
Surr: Dibromofluoromethane	51.68	0	50	0	103	79.6	126	50.28	0	0	
Surr: Toluene-d8	45.68	0	50	0	91.4	78	116	43.90	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136481

Sample ID: **MB-136481** Client ID: Units: **mg/Kg** Prep Date: **10/14/2010** Run No: **182344**
SampleType: **MBLK** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **136481** Analysis Date: **10/14/2010** Seq No: **3796032**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	1.000	0	0	0	0	0	0	0	0	
Barium	BRL	1.000	0	0	0	0	0	0	0	0	
Cadmium	BRL	0.500	0	0	0	0	0	0	0	0	
Chromium	BRL	0.500	0	0	0	0	0	0	0	0	
Lead	BRL	1.000	0	0	0	0	0	0	0	0	
Selenium	BRL	1.000	0	0	0	0	0	0	0	0	
Silver	BRL	0.500	0	0	0	0	0	0	0	0	

Sample ID: **LCS-136481** Client ID: Units: **mg/Kg** Prep Date: **10/14/2010** Run No: **182344**
SampleType: **LCS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **136481** Analysis Date: **10/14/2010** Seq No: **3796031**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	50.90	5.00	50	0.2141	101	80	120	0	0	0	
Barium	51.45	5.00	50	0.03679	103	80	120	0	0	0	
Cadmium	51.21	2.50	50	0	102	80	120	0	0	0	
Chromium	52.54	2.50	50	0.1327	105	80	120	0	0	0	
Lead	50.58	5.00	50	0	101	80	120	0	0	0	
Selenium	50.01	5.00	50	0	100	80	120	0	0	0	
Silver	5.163	2.50	5	0	103	80	120	0	0	0	

Sample ID: **1010929-009AMS** Client ID: Units: **mg/Kg-dry** Prep Date: **10/14/2010** Run No: **182344**
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C** BatchID: **136481** Analysis Date: **10/14/2010** Seq No: **3796039**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	52.77	5.50	54.96	5.583	85.9	75	125	0	0	0	
Barium	108.3	5.50	54.96	57.30	92.8	75	125	0	0	0	
Cadmium	54.37	2.75	54.96	0	98.9	75	125	0	0	0	
Chromium	78.06	2.75	54.96	42.60	64.5	75	125	0	0	0	S

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136481

Sample ID: **1010929-009AMS** Client ID:
SampleType: **MS** TestCode: **METALS, TOTAL** **SW6010C**
Units: **mg/Kg-dry** Prep Date: **10/14/2010** Run No: **182344**
BatchID: **136481** Analysis Date: **10/14/2010** Seq No: **3796039**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	64.42	5.50	54.96	13.35	92.9	75	125	0	0	0	
Selenium	47.71	5.50	54.96	0	86.8	75	125	0	0	0	
Silver	5.284	2.75	5.496	0	96.1	75	125	0	0	0	

Sample ID: **1010929-009AMSD** Client ID:
SampleType: **MSD** TestCode: **METALS, TOTAL** **SW6010C**
Units: **mg/Kg-dry** Prep Date: **10/14/2010** Run No: **182344**
BatchID: **136481** Analysis Date: **10/14/2010** Seq No: **3796040**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	55.55	5.53	55.28	5.583	90.4	75	125	52.77	5.14	20	
Barium	109.6	5.53	55.28	57.30	94.6	75	125	108.3	1.21	20	
Cadmium	55.70	2.76	55.28	0	101	75	125	54.37	2.42	20	
Chromium	78.40	2.76	55.28	42.60	64.8	75	125	78.06	0.433	20	S
Lead	69.98	5.53	55.28	13.35	102	75	125	64.42	8.28	20	
Selenium	48.50	5.53	55.28	0	87.7	75	125	47.71	1.65	20	
Silver	5.425	2.76	5.528	0	98.1	75	125	5.284	2.64	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136503

Sample ID: **MB-136503** Client ID: Units: **mg/Kg** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3799289**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,1,2,2-Tetrachloroethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,1,2-Trichloroethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,1-Dichloroethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,1-Dichloroethene	BRL	0.25	0	0	0	0	0	0	0	0	
1,2,4-Trichlorobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
1,2-Dibromo-3-chloropropane	BRL	0.25	0	0	0	0	0	0	0	0	
1,2-Dibromoethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,2-Dichlorobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
1,2-Dichloroethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,2-Dichloropropane	BRL	0.25	0	0	0	0	0	0	0	0	
1,3-Dichlorobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
1,4-Dichlorobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
2-Butanone	BRL	2.5	0	0	0	0	0	0	0	0	
2-Hexanone	BRL	0.50	0	0	0	0	0	0	0	0	
4-Methyl-2-pentanone	BRL	0.50	0	0	0	0	0	0	0	0	
Acetone	BRL	5.0	0	0	0	0	0	0	0	0	
Benzene	BRL	0.25	0	0	0	0	0	0	0	0	
Bromodichloromethane	BRL	0.25	0	0	0	0	0	0	0	0	
Bromoform	BRL	0.25	0	0	0	0	0	0	0	0	
Bromomethane	BRL	0.25	0	0	0	0	0	0	0	0	
Carbon disulfide	BRL	0.50	0	0	0	0	0	0	0	0	
Carbon tetrachloride	BRL	0.25	0	0	0	0	0	0	0	0	
Chlorobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
Chloroethane	BRL	0.50	0	0	0	0	0	0	0	0	
Chloroform	BRL	0.25	0	0	0	0	0	0	0	0	
Chloromethane	BRL	0.50	0	0	0	0	0	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136503

Sample ID: **MB-136503** Client ID: Units: **mg/Kg** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3799289**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	0.25	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	0.25	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	0.25	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	0.25	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	0.50	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	0.25	0	0	0	0	0	0	0	0	
Freon-113	BRL	0.50	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	0.25	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	0.50	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	0.25	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	0.25	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	0.25	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	0.25	0	0	0	0	0	0	0	0	
o-Xylene	BRL	0.25	0	0	0	0	0	0	0	0	
Styrene	BRL	0.25	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	0.25	0	0	0	0	0	0	0	0	
Toluene	BRL	0.25	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	0.25	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	0.25	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	0.25	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	0.25	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	0.50	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	2.404	0	2.5	0	96.2	58.2	140	0	0	0	
Surr: Dibromofluoromethane	2.540	0	2.5	0	102	71.1	132	0	0	0	
Surr: Toluene-d8	2.538	0	2.5	0	102	77.6	119	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136503

Sample ID: **LCS-136503** Client ID: Units: **mg/Kg** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3799285**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	1.245	0.25	1	0	124	60	158	0	0	0	
Benzene	1.035	0.25	1	0	104	68.8	141	0	0	0	
Chlorobenzene	1.004	0.25	1	0	100	76.2	136	0	0	0	
Toluene	1.058	0.25	1	0	106	69.8	141	0	0	0	
Trichloroethene	1.026	0.25	1	0	103	71.2	147	0	0	0	
Surr: 4-Bromofluorobenzene	2.554	0	2.5	0	102	58.2	140	0	0	0	
Surr: Dibromofluoromethane	2.448	0	2.5	0	97.9	71.1	132	0	0	0	
Surr: Toluene-d8	2.508	0	2.5	0	100	77.6	119	0	0	0	

Sample ID: **1010838-008AMS** Client ID: Units: **mg/Kg-dry** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3799297**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	8.090	0.59	5.918	0	137	55.2	163	0	0	0	
Benzene	9.029	0.59	5.918	2.138	116	67.4	144	0	0	0	
Chlorobenzene	5.818	0.59	5.918	0	98.3	73.6	140	0	0	0	
Toluene	211.8	0.59	5.918	209.4	41	64.6	145	0	0	0	SE
Trichloroethene	7.578	0.59	5.918	0	128	70.1	149	0	0	0	
Surr: 4-Bromofluorobenzene	6.686	0	5.918	0	113	58.2	140	0	0	0	
Surr: Dibromofluoromethane	5.248	0	5.918	0	88.7	71.1	132	0	0	0	
Surr: Toluene-d8	6.220	0	5.918	0	105	77.6	119	0	0	0	

Sample ID: **1010838-008AMSD** Client ID: Units: **mg/Kg-dry** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3799299**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	7.413	0.59	5.918	0	125	55.2	163	8.090	8.73	34.9	
Benzene	8.611	0.59	5.918	2.138	109	67.4	144	9.029	4.74	27.2	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136503

Sample ID: **1010838-008AMSD** Client ID:
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B**
Units: **mg/Kg-dry** Prep Date: **10/13/2010** Run No: **182243**
BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3799299**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	5.761	0.59	5.918	0	97.3	73.6	140	5.818	0.981	33.4	
Toluene	200.1	0.59	5.918	209.4	-156	64.6	145	211.8	5.65	26.8	SE
Trichloroethene	7.240	0.59	5.918	0	122	70.1	149	7.578	4.55	34	
Surr: 4-Bromofluorobenzene	5.874	0	5.918	0	99.3	58.2	140	6.686	0	0	
Surr: Dibromofluoromethane	5.285	0	5.918	0	89.3	71.1	132	5.248	0	0	
Surr: Toluene-d8	6.129	0	5.918	0	104	77.6	119	6.220	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136510

Sample ID: **MB-136510**	Client ID:					Units: **mg/L**		Prep Date: **10/14/2010**		Run No: **182355**	
SampleType: **MBLK**	TestCode: **Sulfide by SW9030/9034**					BatchID: **136510**		Analysis Date: **10/14/2010**		Seq No: **3795882**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	BRL	2.00	0	0	0	0	0	0	0	0	

Sample ID: **LCS-136510**	Client ID:					Units: **mg/L**		Prep Date: **10/14/2010**		Run No: **182355**	
SampleType: **LCS**	TestCode: **Sulfide by SW9030/9034**					BatchID: **136510**		Analysis Date: **10/14/2010**		Seq No: **3795883**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	456.8	2.00	456.8	0	100	40	120	0	0	0	

Sample ID: **1010759-004CMS**	Client ID:					Units: **mg/L**		Prep Date: **10/14/2010**		Run No: **182355**	
SampleType: **MS**	TestCode: **Sulfide by SW9030/9034**					BatchID: **136510**		Analysis Date: **10/14/2010**		Seq No: **3795888**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	46.08	2.00	45.68	0	101	58.7	129	0	0	0	

Sample ID: **1010759-004CMSD**	Client ID:					Units: **mg/L**		Prep Date: **10/14/2010**		Run No: **182355**	
SampleType: **MSD**	TestCode: **Sulfide by SW9030/9034**					BatchID: **136510**		Analysis Date: **10/14/2010**		Seq No: **3795889**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfide	44.88	2.00	45.68	0	98.2	58.7	129	46.08	2.64	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136523

Sample ID: **MB-136523**	Client ID:				Units: **mg/Kg-dry**		Prep Date: **10/13/2010**		Run No: **182384**
SampleType: **MBLK**	TestCode: **Total Organic Carbon SW9060A Modified**				BatchID: **136523**		Analysis Date: **10/15/2010**		Seq No: **3796652**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	BRL	500	0	0	0	0	0	0	0	0	

Sample ID: **LCS-136523**	Client ID:				Units: **mg/Kg-dry**		Prep Date: **10/13/2010**		Run No: **182384**
SampleType: **LCS**	TestCode: **Total Organic Carbon SW9060A Modified**				BatchID: **136523**		Analysis Date: **10/15/2010**		Seq No: **3796654**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	2853	500	2420	0	118	70	130	0	0	0	

Sample ID: **1010956-008ADUP**	Client ID: **10-285-SB-SO-12**				Units: **mg/Kg-dry**		Prep Date: **10/13/2010**		Run No: **182384**
SampleType: **DUP**	TestCode: **Total Organic Carbon SW9060A Modified**				BatchID: **136523**		Analysis Date: **10/15/2010**		Seq No: **3796659**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	1373	500	0	0	0	0	0	1393	1.45	50	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136538

Sample ID: **MB-136538** Client ID: Units: **mg/L** Prep Date: **10/18/2010** Run No: **182448**
SampleType: **MBLK** TestCode: **MERCURY, TCLP SW1311/7470A** BatchID: **136538** Analysis Date: **10/18/2010** Seq No: **3800056**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	BRL	0.00400	0	0	0	0	0	0	0	0	

Sample ID: **LCS-136538** Client ID: Units: **mg/L** Prep Date: **10/18/2010** Run No: **182448**
SampleType: **LCS** TestCode: **MERCURY, TCLP SW1311/7470A** BatchID: **136538** Analysis Date: **10/18/2010** Seq No: **3800057**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.03797	0.00400	0.04	0	94.9	80	120	0	0	0	

Sample ID: **1010950-001BMS** Client ID: Units: **mg/L** Prep Date: **10/18/2010** Run No: **182448**
SampleType: **MS** TestCode: **MERCURY, TCLP SW1311/7470A** BatchID: **136538** Analysis Date: **10/18/2010** Seq No: **3800061**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.03418	0.00400	0.04	0	85.4	80	120	0	0	0	

Sample ID: **1010950-001BMSD** Client ID: Units: **mg/L** Prep Date: **10/18/2010** Run No: **182448**
SampleType: **MSD** TestCode: **MERCURY, TCLP SW1311/7470A** BatchID: **136538** Analysis Date: **10/18/2010** Seq No: **3800062**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.03349	0.00400	0.04	0	83.7	80	120	0.03418	2.05	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136566

Sample ID: **MB-136566**	Client ID:				Units: **mg/Kg**		Prep Date: **10/15/2010**		Run No: **182385**
SampleType: **MBLK**	TestCode: **TOTAL MERCURY SW7471B**				BatchID: **136566**		Analysis Date: **10/15/2010**		Seq No: **3798019**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	BRL	0.100	0	0	0	0	0	0	0	0	

Sample ID: **LCS-136566**	Client ID:				Units: **mg/Kg**		Prep Date: **10/15/2010**		Run No: **182385**
SampleType: **LCS**	TestCode: **TOTAL MERCURY SW7471B**				BatchID: **136566**		Analysis Date: **10/15/2010**		Seq No: **3798020**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.3266	0.100	0.4	0	81.7	80	120	0	0	0	

Sample ID: **1010956-006EMS**	Client ID: **10-285-SB-SO-10**				Units: **mg/Kg-dry**		Prep Date: **10/15/2010**		Run No: **182385**
SampleType: **MS**	TestCode: **TOTAL MERCURY SW7471B**				BatchID: **136566**		Analysis Date: **10/15/2010**		Seq No: **3798022**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.5368	0.121	0.4844	0.03896	103	70	130	0	0	0	

Sample ID: **1010956-006EMSD**	Client ID: **10-285-SB-SO-10**				Units: **mg/Kg-dry**		Prep Date: **10/15/2010**		Run No: **182385**
SampleType: **MSD**	TestCode: **TOTAL MERCURY SW7471B**				BatchID: **136566**		Analysis Date: **10/15/2010**		Seq No: **3798023**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.5305	0.120	0.4815	0.03896	102	70	130	0.5368	1.18	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136576

Sample ID: **MB-136576** Client ID: Units: **mg/L** Prep Date: **10/15/2010** Run No: **182472**
SampleType: **MBLK** TestCode: **ICP METALS, TCLP SW1311/6010C** BatchID: **136576** Analysis Date: **10/15/2010** Seq No: **3799228**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.250	0	0	0	0	0	0	0	0	
Barium	BRL	0.500	0	0	0	0	0	0	0	0	
Cadmium	BRL	0.0250	0	0	0	0	0	0	0	0	
Chromium	BRL	0.0500	0	0	0	0	0	0	0	0	
Lead	BRL	0.0500	0	0	0	0	0	0	0	0	
Selenium	BRL	0.100	0	0	0	0	0	0	0	0	
Silver	BRL	0.0250	0	0	0	0	0	0	0	0	

Sample ID: **LCS-136576** Client ID: Units: **mg/L** Prep Date: **10/15/2010** Run No: **182472**
SampleType: **LCS** TestCode: **ICP METALS, TCLP SW1311/6010C** BatchID: **136576** Analysis Date: **10/15/2010** Seq No: **3799181**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	4.910	0.250	5	0	98.2	85	115	0	0	0	
Barium	4.866	0.500	5	0.01390	97	80	120	0	0	0	
Cadmium	4.704	0.0250	5	0	94.1	85	115	0	0	0	
Chromium	4.805	0.0500	5	0	96.1	85	115	0	0	0	
Lead	4.606	0.0500	5	0	92.1	85	115	0	0	0	
Selenium	4.767	0.100	5	0	95.3	85	115	0	0	0	
Silver	0.4998	0.0250	0.5	0	100	85	115	0	0	0	

Sample ID: **1010956-006DMS** Client ID: **10-285-SB-SO-10** Units: **mg/L** Prep Date: **10/15/2010** Run No: **182472**
SampleType: **MS** TestCode: **ICP METALS, TCLP SW1311/6010C** BatchID: **136576** Analysis Date: **10/15/2010** Seq No: **3799236**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	4.979	0.250	5	0	99.6	50	150	0	0	0	
Barium	5.919	0.500	5	0.8969	100	50	150	0	0	0	
Cadmium	4.817	0.0250	5	0	96.3	50	150	0	0	0	
Chromium	4.918	0.0500	5	0.01348	98.1	50	150	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136576

Sample ID: **1010956-006DMS**	Client ID: **10-285-SB-SO-10**		Units: **mg/L**	Prep Date: **10/15/2010**	Run No: **182472**
SampleType: **MS**	TestCode: **ICP METALS, TCLP**	**SW1311/6010C**	BatchID: **136576**	Analysis Date: **10/15/2010**	Seq No: **3799236**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	4.701	0.0500	5	0.03297	93.4	50	150	0	0	0	
Selenium	4.819	0.100	5	0.03431	95.7	50	150	0	0	0	
Silver	0.5178	0.0250	0.5	0	104	50	150	0	0	0	

Sample ID: **1010956-006DMSD**	Client ID: **10-285-SB-SO-10**		Units: **mg/L**	Prep Date: **10/15/2010**	Run No: **182472**
SampleType: **MSD**	TestCode: **ICP METALS, TCLP**	**SW1311/6010C**	BatchID: **136576**	Analysis Date: **10/15/2010**	Seq No: **3799240**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	4.872	0.250	5	0	97.4	50	150	4.979	2.17	30	
Barium	5.801	0.500	5	0.8969	98.1	50	150	5.919	2.02	30	
Cadmium	4.714	0.0250	5	0	94.3	50	150	4.817	2.18	30	
Chromium	4.819	0.0500	5	0.01348	96.1	50	150	4.918	2.04	30	
Lead	4.606	0.0500	5	0.03297	91.5	50	150	4.701	2.05	30	
Selenium	4.728	0.100	5	0.03431	93.9	50	150	4.819	1.9	30	
Silver	0.5072	0.0250	0.5	0	101	50	150	0.5178	2.06	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136603

Sample ID: **MB-136603** Client ID: Units: **ug/L** Prep Date: **10/16/2010** Run No: **182551**
SampleType: **MBLK** TestCode: **GC Analysis of Gaseous Samples SOP-RSK 175** BatchID: **136603** Analysis Date: **10/16/2010** Seq No: **3800315**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethane	BRL	9	0	0	0	0	0	0	0	0	
Ethylene	BRL	7	0	0	0	0	0	0	0	0	
Methane	BRL	4	0	0	0	0	0	0	0	0	

Sample ID: **LCS-136603** Client ID: Units: **ug/L** Prep Date: **10/16/2010** Run No: **182551**
SampleType: **LCS** TestCode: **GC Analysis of Gaseous Samples SOP-RSK 175** BatchID: **136603** Analysis Date: **10/16/2010** Seq No: **3800316**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethane	87.94	9	200	0	44	37.6	115	0	0	0	
Ethylene	57.16	7	200	0	28.6	23.2	115	0	0	0	
Methane	95.69	4	200	0	47.8	39.8	115	0	0	0	

Sample ID: **LCSD-136603** Client ID: Units: **ug/L** Prep Date: **10/16/2010** Run No: **182551**
SampleType: **LCSD** TestCode: **GC Analysis of Gaseous Samples SOP-RSK 175** BatchID: **136603** Analysis Date: **10/16/2010** Seq No: **3800317**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethane	81.36	9	200	0	40.7	37.6	115	87.94	7.78	19.1	
Ethylene	51.35	7	200	0	25.7	23.2	115	57.16	10.7	19.7	
Methane	89.48	4	200	0	44.7	39.8	115	95.69	6.71	18.7	

Sample ID: **1010A03-002GMS** Client ID: Units: **ug/L** Prep Date: **10/16/2010** Run No: **182551**
SampleType: **MS** TestCode: **GC Analysis of Gaseous Samples SOP-RSK 175** BatchID: **136603** Analysis Date: **10/16/2010** Seq No: **3800328**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethane	114.4	9	200	0	57.2	40.3	115	0	0	0	
Ethylene	77.91	7	200	0	39	24.7	115	0	0	0	
Methane	125.8	4	200	6.158	59.8	38.9	115	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136603

Sample ID: **1010A03-002GMSD** Client ID:
SampleType: **MSD** TestCode: **GC Analysis of Gaseous Samples SOP-RSK 175**
Units: **ug/L** BatchID: **136603**
Prep Date: **10/16/2010** Analysis Date: **10/16/2010**
Run No: **182551** Seq No: **3800329**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethane	112.1	9	200	0	56	40.3	115	114.4	2.02	20	
Ethylene	76.72	7	200	0	38.4	24.7	115	77.91	1.53	20	
Methane	123.6	4	200	6.158	58.7	38.9	115	125.8	1.78	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136721

Sample ID: **MB-136721** Client ID: Units: **mg/L** Prep Date: **10/19/2010** Run No: **182612**
SampleType: **MBLK** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **136721** Analysis Date: **10/19/2010** Seq No: **3801791**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	BRL	0.10	0	0	0	0	0	0	0	0	
1,2-Dichloroethane	BRL	0.10	0	0	0	0	0	0	0	0	
2-Butanone	BRL	0.20	0	0	0	0	0	0	0	0	
Benzene	BRL	0.10	0	0	0	0	0	0	0	0	
Carbon tetrachloride	BRL	0.10	0	0	0	0	0	0	0	0	
Chlorobenzene	BRL	0.10	0	0	0	0	0	0	0	0	
Chloroform	BRL	0.10	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	0.10	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	0.10	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	0.040	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	0.8630	0	1	0	86.3	64.4	125	0	0	0	
Surr: Dibromofluoromethane	1.039	0	1	0	104	79.8	123	0	0	0	
Surr: Toluene-d8	0.9080	0	1	0	90.8	78.3	116	0	0	0	

Sample ID: **LCS-136721** Client ID: Units: **mg/L** Prep Date: **10/19/2010** Run No: **182612**
SampleType: **LCS** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **136721** Analysis Date: **10/19/2010** Seq No: **3801790**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	1.280	0.10	1	0	128	54.1	155	0	0	0	
1,2-Dichloroethane	1.073	0.10	1	0	107	65.6	138	0	0	0	
2-Butanone	2.589	0.20	2	0	129	54.7	156	0	0	0	
Benzene	1.208	0.10	1	0	121	75	131	0	0	0	
Carbon tetrachloride	1.130	0.10	1	0	113	65.6	144	0	0	0	
Chlorobenzene	1.069	0.10	1	0	107	76.8	122	0	0	0	
Chloroform	1.147	0.10	1	0	115	65.8	130	0	0	0	
Tetrachloroethene	1.183	0.10	1	0	118	64.7	138	0	0	0	
Trichloroethene	1.167	0.10	1	0	117	68.1	134	0	0	0	
Vinyl chloride	1.364	0.040	1	0	136	53.3	151	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136721

Sample ID: **LCS-136721** Client ID: Units: **mg/L** Prep Date: **10/19/2010** Run No: **182612**
SampleType: **LCS** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **136721** Analysis Date: **10/19/2010** Seq No: **3801790**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	1.075	0	1	0	108	64.4	125	0	0	0	
Surr: Dibromofluoromethane	0.9864	0	1	0	98.6	79.8	123	0	0	0	
Surr: Toluene-d8	1.064	0	1	0	106	78.3	116	0	0	0	

Sample ID: **1010B33-002AMS** Client ID: Units: **mg/L** Prep Date: **10/19/2010** Run No: **182612**
SampleType: **MS** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **136721** Analysis Date: **10/19/2010** Seq No: **3802522**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	1.463	0.10	1	0	146	48.8	171	0	0	0	
1,2-Dichloroethane	1.215	0.10	1	0	122	58.2	140	0	0	0	
2-Butanone	2.931	0.20	2	0	147	26.1	191	0	0	0	
Benzene	1.407	0.10	1	0	141	76.8	132	0	0	0	S
Carbon tetrachloride	1.404	0.10	1	0	140	61	153	0	0	0	
Chlorobenzene	1.123	0.10	1	0	112	74.3	125	0	0	0	
Chloroform	1.220	0.10	1	0	122	63	135	0	0	0	
Tetrachloroethene	1.270	0.10	1	0.02300	125	65.3	147	0	0	0	
Trichloroethene	1.347	0.10	1	0	135	70.7	140	0	0	0	
Vinyl chloride	1.650	0.040	1	0	165	36.3	174	0	0	0	
Surr: 4-Bromofluorobenzene	1.104	0	1	0	110	64.4	125	0	0	0	
Surr: Dibromofluoromethane	1.125	0	1	0	112	79.8	123	0	0	0	
Surr: Toluene-d8	1.186	0	1	0	119	78.3	116	0	0	0	S

Sample ID: **1010B33-002ADUP** Client ID: Units: **mg/L** Prep Date: **10/19/2010** Run No: **182612**
SampleType: **DUP** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **136721** Analysis Date: **10/19/2010** Seq No: **3802521**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	BRL	0.10	0	0	0	0	0	0	0	30	
1,2-Dichloroethane	BRL	0.10	0	0	0	0	0	0	0	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136721

Sample ID: **1010B33-002ADUP** Client ID: Units: **mg/L** Prep Date: **10/19/2010** Run No: **182612**
SampleType: **DUP** TestCode: **VOLATILES, TCLP SW1311/8260B** BatchID: **136721** Analysis Date: **10/19/2010** Seq No: **3802521**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2-Butanone	BRL	0.20	0	0	0	0	0	0	0	30	
Benzene	BRL	0.10	0	0	0	0	0	0	0	30	
Carbon tetrachloride	BRL	0.10	0	0	0	0	0	0	0	30	
Chlorobenzene	BRL	0.10	0	0	0	0	0	0	0	30	
Chloroform	BRL	0.10	0	0	0	0	0	0	0	30	
Tetrachloroethene	BRL	0.10	0	0	0	0	0	0.02300	0	30	
Trichloroethene	BRL	0.10	0	0	0	0	0	0	0	30	
Vinyl chloride	BRL	0.040	0	0	0	0	0	0	0	30	
Surr: 4-Bromofluorobenzene	0.8636	0	1	0	86.4	64.4	125	0.8940	0	0	
Surr: Dibromofluoromethane	1.099	0	1	0	110	79.8	123	1.140	0	0	
Surr: Toluene-d8	0.9612	0	1	0	96.1	78.3	116	0.9626	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: R182363

Sample ID: **MB-R182363**	Client ID:					Units: **mg/L**		Prep Date:		Run No: **182363**	
SampleType: **MBLK**	TestCode: **ION SCAN SW9056A**					BatchID: **R182363**		Analysis Date: **10/14/2010**		Seq No: **3796165**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	BRL	1.0	0	0	0	0	0	0	0	0	

Sample ID: **LCS-R182363**	Client ID:					Units: **mg/L**		Prep Date:		Run No: **182363**	
SampleType: **LCS**	TestCode: **ION SCAN SW9056A**					BatchID: **R182363**		Analysis Date: **10/14/2010**		Seq No: **3796164**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	9.808	1.0	10	0.1186	96.9	90	110	0	0	0	

Sample ID: **1010956-001DMS**	Client ID: **10285-MW-4**					Units: **mg/L**		Prep Date:		Run No: **182363**	
SampleType: **MS**	TestCode: **ION SCAN SW9056A**					BatchID: **R182363**		Analysis Date: **10/14/2010**		Seq No: **3796167**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	18.68	1.0	10	9.706	89.7	90	110	0	0	0	S

Sample ID: **1010956-001DMSD**	Client ID: **10285-MW-4**					Units: **mg/L**		Prep Date:		Run No: **182363**	
SampleType: **MSD**	TestCode: **ION SCAN SW9056A**					BatchID: **R182363**		Analysis Date: **10/14/2010**		Seq No: **3796168**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chloride	18.67	1.0	10	9.706	89.7	90	110	18.68	0.019	20	S

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: R182463

Sample ID: **MB-R182463**	Client ID:					Units: **mg/L**		Prep Date:		Run No: **182463**	
SampleType: **MBLK**	TestCode: **Alkalinity E310.2**					BatchID: **R182463**		Analysis Date: **10/18/2010**		Seq No: **3799098**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	BRL	10.0	0	0	0	0	0	0	0	0	

Sample ID: **LCS-R182463**	Client ID:					Units: **mg/L**		Prep Date:		Run No: **182463**	
SampleType: **LCS**	TestCode: **Alkalinity E310.2**					BatchID: **R182463**		Analysis Date: **10/18/2010**		Seq No: **3799099**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	253.0	10.0	250	0	101	75	125	0	0	0	

Sample ID: **1010956-001DDUP**	Client ID: **10285-MW-4**					Units: **mg/L**		Prep Date:		Run No: **182463**	
SampleType: **DUP**	TestCode: **Alkalinity E310.2**					BatchID: **R182463**		Analysis Date: **10/18/2010**		Seq No: **3799101**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	233.0	10.0	0	0	0	0	0	233.0	0	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: R182627

Sample ID: **MB-R182627**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **182627**	
SampleType: **MBLK**	TestCode: **Chemical Oxygen Demand (COD) E410.4**				BatchID: **R182627**		Analysis Date: **10/19/2010**		Seq No: **3802041**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	BRL	10.0	0	0	0	0	0	0	0	0	

Sample ID: **LCS-R182627**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **182627**	
SampleType: **LCS**	TestCode: **Chemical Oxygen Demand (COD) E410.4**				BatchID: **R182627**		Analysis Date: **10/19/2010**		Seq No: **3802042**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	527.9	10.0	500	0	106	90	110	0	0	0	

Sample ID: **1010956-006GMS**	Client ID: **10-285-SB-SO-10**				Units: **mg/kg**		Prep Date:		Run No: **182627**	
SampleType: **MS**	TestCode: **Chemical Oxygen Demand (COD) E410.4**				BatchID: **R182627**		Analysis Date: **10/19/2010**		Seq No: **3802044**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	54.49	1.25	37.5	15.07	105	90	110	0	0	0	

Sample ID: **1010956-006GMSD**	Client ID: **10-285-SB-SO-10**				Units: **mg/kg**		Prep Date:		Run No: **182627**	
SampleType: **MSD**	TestCode: **Chemical Oxygen Demand (COD) E410.4**				BatchID: **R182627**		Analysis Date: **10/19/2010**		Seq No: **3802045**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	54.49	1.25	37.5	15.07	105	90	110	54.49	0	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136503

Sample ID: **MB-136503** Client ID: Units: **mg/Kg** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3804821**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,1,1-Trichloroethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,1,2,2-Tetrachloroethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,1,2-Trichloroethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,1-Dichloroethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,1-Dichloroethene	BRL	0.25	0	0	0	0	0	0	0	0	
1,1-Dichloropropene	BRL	0.25	0	0	0	0	0	0	0	0	
1,2,3-Trichlorobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
1,2,3-Trichloropropane	BRL	0.25	0	0	0	0	0	0	0	0	
1,2,4-Trichlorobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
1,2,4-Trimethylbenzene	BRL	0.25	0	0	0	0	0	0	0	0	
1,2-Dibromo-3-chloropropane	BRL	0.25	0	0	0	0	0	0	0	0	
1,2-Dibromoethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,2-Dichlorobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
1,2-Dichloroethane	BRL	0.25	0	0	0	0	0	0	0	0	
1,2-Dichloroethene, Total	BRL	0.25	0	0	0	0	0	0	0	0	
1,2-Dichloropropane	BRL	0.25	0	0	0	0	0	0	0	0	
1,3,5-Trimethylbenzene	BRL	0.25	0	0	0	0	0	0	0	0	
1,3-Dichlorobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
1,3-Dichloropropane	BRL	0.25	0	0	0	0	0	0	0	0	
1,4-Dichlorobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
1,4-Dioxane	BRL	7.5	0	0	0	0	0	0	0	0	
2,2-Dichloropropane	BRL	0.25	0	0	0	0	0	0	0	0	
2-Butanone	BRL	2.5	0	0	0	0	0	0	0	0	
2-Chloroethyl vinyl ether	BRL	0.50	0	0	0	0	0	0	0	0	
2-Chlorotoluene	BRL	0.25	0	0	0	0	0	0	0	0	
2-Hexanone	BRL	0.50	0	0	0	0	0	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136503

Sample ID: **MB-136503** Client ID: Units: **mg/Kg** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3804821**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4-Chlorotoluene	BRL	0.25	0	0	0	0	0	0	0	0	
4-Isopropyltoluene	BRL	0.25	0	0	0	0	0	0	0	0	
4-Methyl-2-pentanone	BRL	0.50	0	0	0	0	0	0	0	0	
Acetone	BRL	5.0	0	0	0	0	0	0	0	0	
Acetonitrile	BRL	5.0	0	0	0	0	0	0	0	0	
Acrolein	BRL	2.5	0	0	0	0	0	0	0	0	
Acrylonitrile	BRL	2.5	0	0	0	0	0	0	0	0	
Allyl Chloride	BRL	0.50	0	0	0	0	0	0	0	0	
Benzene	BRL	0.25	0	0	0	0	0	0	0	0	
bis(2-Chloroethyl)ether	BRL	0.25	0	0	0	0	0	0	0	0	N
Bromobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
Bromochloromethane	BRL	0.25	0	0	0	0	0	0	0	0	
Bromodichloromethane	BRL	0.25	0	0	0	0	0	0	0	0	
Bromoform	BRL	0.25	0	0	0	0	0	0	0	0	
Bromomethane	BRL	0.25	0	0	0	0	0	0	0	0	
Carbon disulfide	BRL	0.50	0	0	0	0	0	0	0	0	
Carbon tetrachloride	BRL	0.25	0	0	0	0	0	0	0	0	
Chlorobenzene	BRL	0.25	0	0	0	0	0	0	0	0	
Chloroethane	BRL	0.50	0	0	0	0	0	0	0	0	
Chloroform	BRL	0.25	0	0	0	0	0	0	0	0	
Chloromethane	BRL	0.50	0	0	0	0	0	0	0	0	
Chloroprene	BRL	1.0	0	0	0	0	0	0	0	0	
cis-1,2-Dichloroethene	BRL	0.25	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	0.25	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	0.25	0	0	0	0	0	0	0	0	
Cyclohexanone	BRL	2.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	0.25	0	0	0	0	0	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136503

Sample ID: **MB-136503** Client ID: Units: **mg/Kg** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3804821**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Dibromomethane	BRL	0.25	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	0.50	0	0	0	0	0	0	0	0	
Ethyl acetate	BRL	2.5	0	0	0	0	0	0	0	0	
Ethyl Methacrylate	BRL	0.50	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	0.25	0	0	0	0	0	0	0	0	
Freon-113	BRL	0.50	0	0	0	0	0	0	0	0	
Freon-141B	BRL	0.50	0	0	0	0	0	0	0	0	
Freon-22	BRL	0.50	0	0	0	0	0	0	0	0	N
Hexachlorobutadiene	BRL	0.25	0	0	0	0	0	0	0	0	
Iodomethane	BRL	0.50	0	0	0	0	0	0	0	0	
Isobutyl Alcohol	BRL	10	0	0	0	0	0	0	0	0	
Isopropyl ether	BRL	0.50	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	0.25	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	0.50	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	0.25	0	0	0	0	0	0	0	0	
Methyl Methacrylate	BRL	0.50	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	0.25	0	0	0	0	0	0	0	0	
Methylacrylonitrile	BRL	10	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	0.25	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	1.0	0	0	0	0	0	0	0	0	
n-Butylbenzene	BRL	0.25	0	0	0	0	0	0	0	0	
n-Heptane	BRL	0.50	0	0	0	0	0	0	0	0	N
n-Hexane	BRL	0.50	0	0	0	0	0	0	0	0	N
n-Propylbenzene	BRL	0.25	0	0	0	0	0	0	0	0	
Naphthalene	BRL	0.25	0	0	0	0	0	0	0	0	
o-Xylene	BRL	0.25	0	0	0	0	0	0	0	0	
Pentachloroethane	BRL	0.50	0	0	0	0	0	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136503

Sample ID: **MB-136503** Client ID: Units: **mg/Kg** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3804821**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Phosgene	BRL	1.0	0	0	0	0	0	0	0	0	N
Propionitrile	BRL	5.0	0	0	0	0	0	0	0	0	
sec-Butylbenzene	BRL	0.25	0	0	0	0	0	0	0	0	
Styrene	BRL	0.25	0	0	0	0	0	0	0	0	
tert-Butyl Alcohol	BRL	0.50	0	0	0	0	0	0	0	0	
tert-Butylbenzene	BRL	0.25	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	0.25	0	0	0	0	0	0	0	0	
Tetrahydrofuran	BRL	0.50	0	0	0	0	0	0	0	0	
Toluene	BRL	0.25	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	0.25	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	0.25	0	0	0	0	0	0	0	0	
trans-1,4-Dichloro-2-butene	BRL	0.50	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	0.25	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	0.25	0	0	0	0	0	0	0	0	
Vinyl acetate	BRL	0.50	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	0.50	0	0	0	0	0	0	0	0	
Xylenes, Total	BRL	0.25	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	2.404	0	2.5	0	96.2	56	137	0	0	0	
Surr: Dibromofluoromethane	2.540	0	2.5	0	102	73.7	137	0	0	0	
Surr: Toluene-d8	2.538	0	2.5	0	102	69.2	126	0	0	0	

Sample ID: **LCS-136503** Client ID: Units: **mg/Kg** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3804818**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	1.245	0.25	1	0	124	60	158	0	0	0	
Benzene	1.035	0.25	1	0	104	68.8	141	0	0	0	
Chlorobenzene	1.004	0.25	1	0	100	76.2	136	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136503

Sample ID: **LCS-136503** Client ID: Units: **mg/Kg** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3804818**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Toluene	1.058	0.25	1	0	106	69.8	141	0	0	0	
Trichloroethene	1.026	0.25	1	0	103	71.2	147	0	0	0	
Surr: 4-Bromofluorobenzene	2.554	0	2.5	0	102	56	137	0	0	0	
Surr: Dibromofluoromethane	2.448	0	2.5	0	97.9	73.7	137	0	0	0	
Surr: Toluene-d8	2.508	0	2.5	0	100	69.2	126	0	0	0	

Sample ID: **1010838-008AMS** Client ID: Units: **mg/Kg-dry** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3804831**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	8.090	0.59	5.918	0	137	55.2	163	0	0	0	
Benzene	9.029	0.59	5.918	2.138	116	67.4	144	0	0	0	
Chlorobenzene	5.818	0.59	5.918	0	98.3	73.6	140	0	0	0	
Toluene	211.8	0.59	5.918	209.4	41	64.6	145	0	0	0	SE
Trichloroethene	7.578	0.59	5.918	0	128	70.1	149	0	0	0	
Surr: 4-Bromofluorobenzene	6.686	0	5.918	0	113	56	137	0	0	0	
Surr: Dibromofluoromethane	5.248	0	5.918	0	88.7	73.7	137	0	0	0	
Surr: Toluene-d8	6.220	0	5.918	0	105	69.2	126	0	0	0	

Sample ID: **1010838-008AMSD** Client ID: Units: **mg/Kg-dry** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3804833**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	7.413	0.59	5.918	0	125	55.2	163	8.090	8.73	34.9	
Benzene	8.611	0.59	5.918	2.138	109	67.4	144	9.029	4.74	27.2	
Chlorobenzene	5.761	0.59	5.918	0	97.3	73.6	140	5.818	0.981	33.4	
Toluene	200.1	0.59	5.918	209.4	-156	64.6	145	211.8	5.65	26.8	SE
Trichloroethene	7.240	0.59	5.918	0	122	70.1	149	7.578	4.55	34	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Capitol Adhesives
Workorder: 1010956

ANALYTICAL QC SUMMARY REPORT

BatchID: 136503

Sample ID: **1010838-008AMSD** Client ID: Units: **mg/Kg-dry** Prep Date: **10/13/2010** Run No: **182243**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **136503** Analysis Date: **10/13/2010** Seq No: **3804833**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	5.874	0	5.918	0	99.3	56	137	6.686	0	0	
Surr: Dibromofluoromethane	5.285	0	5.918	0	89.3	73.7	137	5.248	0	0	
Surr: Toluene-d8	6.129	0	5.918	0	104	69.2	126	6.220	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Microbe Inotech Laboratories, Inc.
Summary Report of Analysis
[MILB – 7402A]

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October 29, 2010

Description and Chain of Custody Record Information:

- Friday, October 8, 2010 – 10:10AM: Received by FedEx, three (3) water sample for Bioremediation Biofeasibility Studies with nutrient chemistry and identification.
- Wednesday, October 13, 2010 – 2:56PM: Received by FedEx, one (1) additional sample for Bioremediation Biofeasibility Studies with nutrient chemistry and identification.
- MiL, Inc. REPORT & Invoice No.: MILB-7402A
- Project Name: Capitol Adhesives

Total Heterotrophic Plate Counts Processing:

[Standard Bacterial Plate Count 9215- standard spread plate method] Within 20 minutes of reception an aliquot from each sample is checked for weight or volume and serially diluted. The dilutions are aseptically transferred in a laminar flow biological cabinet and plated onto previously prepared and dried Trypticase Soy Agar (TSA medium) in Petri plates. Observations for Colony Forming Units per 1 gram of soil (CFU/g) or per 1 milliliter of liquid sample (CFU/mL) are made after 24 and 48 hours of incubation at 30°C for Aerobic counts. An additional set of plates were set up and incubated anaerobically for 24 and 48 hours at 30°C.

Total Heterotrophic Plate Count Results:

DATA, Direct Count: Results reported as Colony Forming Units per 1 milliliter of liquid sample (CFU/mL)				
Sample #	**Sample Name**		**24 Hours**	**48 Hours**
1	10280-MW-3	*Aerobic*	*<1.0 x 10^1 CFU/mL	**1.0 x 10^2 CFU/mL**
2	10280-MW-3D	*Aerobic*	*<1.0 x 10^1 CFU/mL	*<1.0 x 10^1 CFU/mL
3	10280-MW-5	*Aerobic*	**1.5 x 10^2 CFU/mL**	**2.5 x 10^2 CFU/mL**
4	10285-MW-4	*Aerobic*	*<1.0 x 10^1 CFU/mL	**7.0 x 10^1 CFU/mL**

***<1.0 x 10^1 CFU/mL=None Detected**

DATA, Direct Count: Results reported as Colony Forming Units per 1 milliliter of liquid sample (CFU/mL)				
Sample #	**Sample Name**		**24 Hours**	**48 Hours**
1	10280-MW-3	*Anaerobic*	*<1.0 x 10^1 CFU/mL	**7.0 x 10^1 CFU/mL**
2	10280-MW-3D	*Anaerobic*	*<1.0 x 10^1 CFU/mL	**2.0 x 10^1 CFU/mL**
3	10280-MW-5	*Anaerobic*	*<1.0 x 10^1 CFU/mL	**3.0 x 10^1 CFU/mL**
4	10285-MW-4	*Anaerobic*	*<1.0 x 10^1 CFU/mL	*<1.0 x 10^1 CFU/mL

***<1.0 x 10^0 CFU/mL=None Detected**

the MiL, Inc. 7259 LANSDOWNE AVENUE, SUITE 200 ST. LOUIS MO 63119-3421
PHONE: (800) 688-9144 FAX: (314) 645-2544

Approximate Percentages of Strain Types in Each Sample: Aerobic Plates

Sample # ⇒ Strain ⇓	7402A-1 MW-3	7402A-2 MW-3D	7402A-3 MW-5	7402A-4 MW-4
1	95	--	--	--
2	5	--	--	--
3	--	--	98	--
4	--	--	2	--
5	--	--	--	100
Total Strain Types per Sample →	2	0	2	1

Approximate Percentages of Strain Types in Each Sample: Anaerobic Plates

Sample # ⇒ Strain ⇓	7402A-1 MW-3	7402A-2 MW-3D	7402A-3 MW-5	7402A-4 MW-4
1A	--	34	--	--
5A	10	--	100	--
6	90	33	--	--
7	--	33	--	--
Total Strain Types per Sample →	2	3	1	0

The four anaerobic strains are facultative anaerobes.

Processing---VITEK® Identification:

The sample is Gram stained for classification (i.e. Gram-positive (**GP**), Gram-negative(**GN**), or Gram-positive bacillus (**BCL**)). A sterile swab is used to aliquot sample from original agar plate. The aliquot is diluted in a saline solution to an OD absorbance between 0.53-0.69. The diluted sample is then transferred to a VITEK® card and incubated in the instrument until a positive identification is obtained.

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Aerobic Results

VITEK® Identification Database					
MiL Sample ID	Gram Stain Results	VITEK Card	Closest Match	Percent Probability	Confidence Level
7373A-1	GP	GP	*Kocuria kristinae*	90%	Species
7373A-2	GP	GP	Slashline: *Micrococcus luteus / lylae*	--	Species
7373A-3	GN	GN	*Pseudomonas aeruginosa*	98%	Species
7373A-4	GN	GN	*Pseudomonas aeruginosa*	98%	Species
7373A-5	GP	GP	Unidentified Organism	--	--

Anaerobic Results

VITEK® Identification Database					
MiL Sample ID	Gram Stain Results	VITEK Card	Closest Match	Percent Probability	Confidence Level
7373A-1A	GN	GN	Low Discrimination: *Pseudomonas fluorescens / Aeromonas salmonicida / Neisseria animaloris / Neisseria zoodegmatis*	--	--
7373A-5A	GN	GN	*Achromobacter denitrificans*	99%	Species
7373A-6	GP	GP	*Kocuria kristinae*	90%	Species
7373A-7	GN	GN	Low Discrimination: *Pseudomonas aeruginosa / Pseudomonas fluorescens*	--	--

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Endpoint Assay Processing:

The tested bacterial strains were grown overnight on Trypticase Soy (Broth) Agar (TSA) at 30°C and then suspended in sterile saline to a turbidity of 40%-50%T. The strains are then aliquotted into a 96-well microtiter plate that contains an undisclosed growth medium of mineral salts, vitamins and buffer without a major carbon source. The wells also contain a tetrazolium dye redox indicator system. Bacterial growth (metabolic respiration/oxidation of carbon sources) is monitored by tetrazolium reduction as measured at 590nm in a microplate reader. **1,1,1-trichloroethane and trichloroethene** (@5 µL) was added to selected wells to serve as the major carbon source. Trypticase Soy Broth (TSB) serves as the positive control for bacterial growth and water serves as the negative control for bacterial growth in this assay. Total volume of each well is 150µL.

Total growth is measured after 24 hours of incubation at 30°C. The data is processed and given with background blank values subtracted. Bar-chart interpretation of the data is provided on the pages following the executive summary report of analysis. The design template of the experiment is located in the raw data section of this report. The template shows the arrangement and position of strains in the matrix. Individual strain feasibility for biodegradation potential is reported as one of the following classifications:

- Excellent Degrader
- Good Degrader
- Fair Degrader
- Minimal Degrader
- No Effect
- Growth Inhibited

Aerobic Endpoint Assay Results:

(Please also see graphical results at end of Summary Report)

Contaminant ⇒ Strain ⇓	**1,1,1-trichloroethane**	**trichloroethene**
7402A-1	Minimal	No Effect
7402A-2	Inhibited	Inhibited
7402A-3	Excellent	Excellent
7402A-4	Excellent	Excellent
7402A-5	Fair	Minimal

Anaerobic Endpoint Assay Results:

(Please also see graphical results at end of Summary Report)

Contaminant ⇒ Strain ⇓	**1,1,1-trichloroethane**	**trichloroethene**
7402A-1A	Excellent	Excellent
7402A-5A	Excellent	Excellent
7402A-6	No Effect	Inhibited
7402A-7	Inhibited	Good

Liquid Nutrient Chemistry Results – mg/L-liquid (pH is a unit-less quantity):

Sample ⇒ Analyte ⇓	**MW-3**	**MW-3D**	**MW-5**	**MW-4**	**Method**
pH	**7.64**	**7.79**	**7.58**	**7.60**	*4500–H B
Iron	**0.791**	**0.549**	**7.46**	**7.15**	*3030F, 3120B Total
Nitrogen, Ammonia (as N)	**<0.10**	**<0.10**	**<0.10**	**0.30**	*4500–NH_3 F Total
Nitrogen, Nitrite (as N)	**<0.05**	**<0.05**	**<0.05**	**<0.05**	*4500–NO_2 B
Nitrogen, Nitrate (as N)	**0.019**	**0.017**	**0.015**	**0.016**	*4500–NO_3 D
Phosphorus, Orthophosphate (as P)	**0.028**	**<0.020**	**0.115**	**0.049**	*4500–P BE
Sulfate, Turbidimetric	**11**	**8**	**5**	**5**	*4500–SO_4 E
Total Organic Carbon (TOC)	**1.3**	**0.5**	**5.9**	**0.7**	*5310C, Organic Carbon

*Units given in mg/L

Nutrient Chemistry Which Should Be Maintained for Optimum Activity:

pH of Sample:	6.5 – 8.0 are considered good conditions
Iron:	Satisfactory (>10 mg/L)
Total Organic Carbon:	
Nitrogen as N:	C:N:P ratio is typically poor at contaminated sites and usually low on available nitrogen
Ammonia:	
Nitrite:	
Nitrate	Optimum C:N:P ratio to be maintained (120 – 100):10:1
o-Phosphate	

Discussion:

To support implementation of bioremediation, the property owner must scientifically demonstrate that degradation of site contaminants can occur at rates sufficient to be protective of human health as well as the environment. This document provides data that supports a technical course of action, which, if followed, should support bioremediation at sites where this type of process is protective of the environmental quality of ground water and soils. Bioremediation results from the integration of several attenuation mechanisms, which may be classified as either destructive or nondestructive. Destructive processes include biodegradation, abiotic oxidation, and hydrolysis. Nondestructive attenuation mechanisms include sorption, dilution (caused by dispersion and infiltration), and volatilization. The chemical parameters for soil and groundwater can significantly affect bacterial populations; therefore monitoring of bioremediation projects may include these parameters, although less frequently than comparative population counts and degradative studies as completed in this study.

Dissolved Oxygen and BTEX data:

An inverse relationship between dissolved oxygen and BTEX concentrations is an important indication of aerobic biodegradation and may be used as evidence that biodegradation of fuel hydrocarbons is occurring. Low dissolved oxygen levels in an area with fuel hydrocarbon contamination generally indicates that an active zone of aerobic hydrocarbon biodegradation is present. Dissolved oxygen is the most thermodynamically favored electron acceptor used in the biodegradation of fuel hydrocarbons. Measurements of dissolved oxygen concentrations are used to estimate the mass of contaminant, which can be biodegraded by aerobic processes. Each 1.0 mg /L of dissolved oxygen consumed by microbes will destroy approximately 0.29 mg/L of BTEX compounds. During aerobic biodegradation, dissolved oxygen levels are reduced to below background levels as aerobic respiration occurs. Anaerobic bacteria (obligate anaerobes) generally cannot function at dissolved oxygen levels greater than about 0.5 mg/L.

Nitrate:

After dissolved oxygen has been depleted in the microbiological treatment zone, nitrate may be used as an electron acceptor for anaerobic biodegradation. Measurements of nitrate concentrations can be used to estimate the mass of contaminant, which can be

biodegraded by de-nitrification processes. Each 1.0 mg/L of nitrate-nitrogen consumed by microbes results in the destruction of approximately 0.9 mg/L of BTEX compounds. Each 1.0 mg/L of nitrate consumed by microbes results in the destruction of approximately 0.21 mg/L of BTEX compounds.

Sulfate:

After dissolved oxygen and nitrate have been depleted in the microbiological treatment zone, sulfate may be used as an electron acceptor for anaerobic biodegradation. Sulfate concentrations are used as an indicator of anaerobic degradation of fuel compounds. Each 1.0 mg/L of sulfate consumed by microbes results in the destruction of approximately 0.22 mg/L of BTEX compounds.

Ferrous Iron (Fe II):

In some cases ferric iron is used as an electron acceptor during anaerobic biodegradation of petroleum hydrocarbons. During this process, ferric iron is reduced to the ferrous form, which may be soluble in water. Ferrous iron concentrations are used as an indicator of anaerobic degradation of fuel compounds. Each 1.0 mg/L of ferrous iron produced during microbial iron oxidation results in the degradation of 0.047 mg/L of BTEX. Bacteria are capable of producing "siderophores," iron-specific chelating or binding agents to scavenge for iron. [For more information see the following reference, *Iron Chelation in Plants and Soil Microorganisms*, L.L Barton and B.C. Hemming (editors), Academic Press, Inc., New York, 1993, 490pp. ISBN 0-12-079870-0.].

Temperature:

Ground water temperature directly affects the solubility of oxygen and other geochemical species. The solubility of dissolved oxygen is temperature dependent, being more soluble in cold water than in warm water. Ground water temperature also affects the metabolic acidity of bacteria. Rates of hydrocarbon biodegradation roughly double for every 10 – degree Celsius (10°C) increase in temperature ("Q" 10 rule) over the temperature range between 5 and 25°C. Ground water temperatures less than about 5°C tend to inhibit biodegradation, and slow rates of biodegradation are generally observed in such waters.

pH:

The pH of ground water has an effect on the presence and activity of microbial populations in ground water. This is especially true for methanogens. Microbes capable of degrading petroleum hydrocarbon compounds generally prefer pH values varying from 6.5 to 8 standard units.

Total Petroleum Hydrocarbons and Aromatic Hydrocarbons:

These analytes are used to determine the type and distribution of fuel hydrocarbon in the aquifer. The combined concentrations of BTEX and the trimethylbenzenes (TMB) should not be greater than 50 percent of the TPH concentration. If these compounds are

found in concentrations greater than 50 percent of the TPH concentration, sampling errors such as emulsification of product in the ground water sample should be investigated.

'Rule of Thumb' Quick Nutrient Estimation:

"How Much Nitrogen and Phosphate are needed to Add to Site for Remediation Based Upon Total Petroleum Hydrocarbon?"

Example: Estimation Method for Determining Material Amounts:
The estimated contaminant mass for source area plume is:

EXAMPLE PROBLEM: Size of plume: 10,000 cubic yards
Wt. of cubic yard will be estimated as approx. 3,000 lbs
T(R)PH level = 1400 ppm or 0.0014 expressed as percentage

Calculation: 10,000 x 3,000 = 30,000,000 lbs
30,000,000 lbs x 0.0014 = 42,000 lbs T(R)PH

"How much biological oxygen demand is needed in a closed system to degrade a pound of total petroleum hydrocarbon or carbon?": Our rule is two times the amount of Carbon to be degraded.

Therefore for 42,000lbs of TPH we can assume 84,000 lbs to be the Total Carbon Number for our ratio. Using the Typical Ratio: 100-10-1, we obtain:

84,000 lbs Carbon (present)
8,400 lbs of Nitrogen (optimally to be added homogeneously to the source area plume)
840 lbs of Phosphate (to be added homogeneously to the source area plume)

The Nitrogen and Phosphate may be added simultaneously as monoammonium phosphate with the balance of nitrogen added as a slow release urea. With this information an engineer should be in a position to determine the amount of material needed and the engineering implementation design for the project; however, this may be an underestimate depending upon the chemical composition of the contaminants [see below].

Another mode of Estimation to Time for Remediation

Using a general biomass concentration equation:

kB = biodegradation rate (mg Hydrocarbon/kg soil-day) = 10 mg/kg-day (typical)
Y = cell yield (mg biomass/mg hydrocarbon) = 0.5mg/mg

kd = endogenous respiration rate (day^{-1}) = 0.05/day

Solving: $X = \frac{10mg/kg\text{-}day * 0.5mg/mg}{0.05/day}$ = 100 mg biomass/kg

The half life of benzene has been estimated and reported in the literature to range from 10 days to 24 months. In order to estimate the time to remediate with organisms, Monod kinetics may be examined. During the bioremediation process, primary substrate utilization generally describes the kinetics of the reactions taking place. Primary substrate utilization has been describe through an empirical approach by the Monod expression:

$$-dS/dt = \frac{kXS}{K_s + S}$$

where:
- S = concentration of the substrate (hydrocarbon) (g_s/L)
- t = time (minutes)
- k = max. rate of substrate utilization (g_s/g_x-min) = max. specific growth rate/mass of cells formed
- X = concentration of microorganisms (g_x/L)
- K_s = Monod half-velocity constant (g_s/L) also called half-saturation constant

Application of the Monod expression provided for bacterial growth as shown can be justified as an estimate to generation of the approximate degradation time. The point to remember is that it is based on a kinetic rate generated from the maximum specific growth rate and uses the half-saturation constant derived under optimal growth conditions, both of which are somewhat of stretch assumptions for the current site. We feel that it may be a bit too optimistic unless conditions can be brought closer to optimal, i.e. the pH closer to neutrality, better nutrient ratio balance etc. The concentration of microorganisms is estimated from the CFU value. Plate counts are reported per ml or per gram and since each cell weighs approx. 10^{-11} g, the concentration can be estimated at 10^5 CFU's/g * 10^{-8} mg = 10^{-3} mg/g * 1000 g/Kg = **1mg/Kg**. A generalized Ks will be assumed.

$$-dS/dt = \frac{kXS}{K_s + S} = \frac{(1/0.2) \text{ per day} * \mathbf{1 mg/Kg} * \mathbf{3.5 mg/Kg}}{1.4 \text{ mg/Kg} + \mathbf{3.5mg/Kg}} = 3.57 \text{ mg/Kg/day}$$

Using this estimation formula, the time to mineralize 3.5 mg/Kg of benzene would be approximately **1 day** [under optimal growth conditions]. Obviously a very optimistic projection; but, illustrative of the cleansing power of degradative microorganisms under totally optimized conditions.

Best Method of Calculating Process Nutrient Requirements:

Estimating the material needs for bioremediation is based on the same principles used for all chemical reactions. The ratio of reactants is dictated by the stoichiometric equation. For bioremediation this requires a balanced redox equation. Although design estimates as above are frequently used, there are advantages to writing a balance reaction for generating these ratios. First, estimates can be made on supplement needs for which rule-of-thumb ratios are unavailable. Second, it may be desirable to estimate the amount of a by-product, such as CO_2. Third, the reactant ratios vary with the metabolic mode selected and the nature of the nutrients. Finally, the ability to develop the stoichiometric equation provides insight on discrepancies between treatability studies and field response. Discrepancies may result from significant natural oxygen demand, an underestimation of the original organic load, or lower utilization rates that can result from poor distribution of nutrient supplements. The total quantity of reactants can be calculated from a balanced reaction, given the amount of contaminant per mass of soil or volume of groundwater.

The steps in the process are as follows: First, field data provide the type and concentration of contaminants and nutrients available. The second step is to convert field data to a mass loading of contaminants. This is typically done by using concentration contours. Any contaminant plume varies significantly in concentration. As a result, a plume may be subdivided into zones for which mean concentrations are estimated to calculate mass contaminant loads per zone. The extensiveness of this calculation is related to the accuracy desired and limited by the adequacy of the field data.

The delivery of chemicals for *in situ* bioremediation is not uniform throughout a site but is based on the localized mass load within selected zones. For example, nutrient addition may not be necessary for a significant portion of a plume but may be vital for the heart of the contamination area. The technique for coupling and balancing two halves of a redox reaction is a subject covered in college chemistry 101; however, although the development of stoichiometric equations for the breakdown of organic compounds uses the same principles, they are not as straight forward. The total reaction must include the organic species being oxidized, the electron donor being reduced, and the major nutrients for cell growth. There are four common electron acceptors and two common forms of nitrogen for nutrients. To make the writing of the stoichiometric equation easier, fortunately for those having forgotten alot of chemistry, a generalized approach for organic biodegradation with each potential electron acceptor and two nutrient sources has been developed by P.L. McCarty ["Bioengineering Issues Related to *In-Situ* Remediation of Contaminated Soils and Groundwater," *Environmental Biotechnology*, Omenn, S.S. (Ed.), Plenum Press, New York, pp. 143-162, 1987.]

The overall stoichiometric equation is a result of the summation of half reactions for the organic substrate, the selected electron acceptor, and the biomass synthesis reaction. Table 1 provides the half reactions for several electron acceptors and two cell synthesis equations.

Table 1. Generalized Half Reactions for Organic Redox Reactions

Half Reaction of Electron Donor ≈ H_D

$1/Z\ (C_aH_bO_cN_d) + (2a - c\ /\ Z\ (H_20) = a\ /Z\ (CO_2) + d\ /Z\ (NH_3) = H^+ + e^-$

where $Z = 4a + b - 2c - 3d$: a, b, c, and d represent the average number of atoms for C, H, O, and N, respectively, in the organic contaminant

Half Reaction of the Electron Acceptor ≈ H_A

Aerobic: When oxygen is the electron acceptor:

$$1/4\ O_2 + H^+ + e^- = 1/2\ H_2O$$

Anaerobic: When nitrate is the electron acceptor:

$$1/6\ NO_3^- + H^+ + 5/6e^- = 1/12\ N_2 + 1/2\ H_2O$$

When sulfate is the electron acceptor:

$$1/8\ SO_4^{-2} + H^+ + e^- = S^{-2} + 1/2\ H_2O$$

When carbon dioxide is the electron acceptor:

$$1/8\ CO_2 + H^+ + e^- = 1/8\ CH_4 = 1/4\ H_2O$$

Cell Synthesis Equation ≈ C_S

When ammonia is the nitrogen source:

$$1/4\ CO_2 + 1/20\ NH_3 + H^+ + e^- = 1/20\ C_5H_7O_2N + 2/5\ H_2O$$

When nitrate is the nitrogen source:

$$5/28\ CO_2 + 1/28\ NO_3^- + 29/28\ H^+ + e^- = 1/28\ C_5H_7O_2N + 11/28\ H_2O$$

Note: An approximate composition of cellular structure is $C_5\ H_7\ O_2\ N$. The phosphorus need for microbial growth is approximately 1/6 to 1/10 that for nitrogen.

Ammonia is the nitrogen source for one cell synthesis equation and nitrate is the source for the second. The overall reaction can be given in general terms by

$$H_D + f_eH_A + f_sC_S \qquad \textbf{Equation (I)}$$

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where H_D = half reaction for the organic compound oxidation, electron donor
H_A = half reaction for the electron acceptor
C_S = reaction that provides nutrient requirements for biomass synthesis

The cell synthesis reaction equates the nutrient demand to the amount of biomass that will be produced. During the degradation of the organic compound, a portion of that energy yields cellular growth. A factor is included in the reaction for distribution of this energy between biomass synthesis and other needs. These factors are represented by

f_e = fraction of organic oxidized for energy

f_s = fraction associated with conversion to microbial cells where $f_e + f_c = 1$

For aerobic systems, the f_s factor for energy distribution is found to range between 0.12 and 0.6 (see Table 2 below). The slower the reaction (the harder the compound is to degrade) the smaller the value of f_s. The energy fraction going to cell synthesis for anaerobic systems is much lower than for aerobic systems. Thus the amount of biomass produced is significantly less.

Table 2. Factors for Energy Distribution for Biomass Synthesis in Redox Reactions

Electron Acceptor	f_s values for Equation (I).
O_2	0.12—0.60 (mean 0.5)
NO_3	0.1—0.5
SO_4	0.04—0.2
CO_2	0.04—0.2

SOURCE: McCarty, 1987.

Example Problem:
Estimate the electron acceptor and nutrient needs for bioremediation of soil contaminated with 2.303 mg/kg of hydrocarbons having concentrations given below.

Benzene	C6H6	.063 mg/Kg
Toluene	C7H8	.140 mg/Kg
Ethyl Benzene	C8H10	.400 mg/Kg
Xylene	C8H10	1.700 mg/Kg

Table 4. Example Estimating the Average Chemical Structure of BTEX Contaminants.

Name	Empirical Formula	Mass Proportion by Atomic Wt.* C H O	Fraction of Total Mass as based on Concentration†	Total Molecular Atomic Wt. Contribution¥ C H O

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
column #								
Benzene	C6H6	72	6	0	.063/2.303	1.9	.16	0
Toluene	C7H8	84	8	0	.140/2.303	5.1	.49	0
Ethyl Benzene	C8H10	96	10	0	.400/2.303	16.7	1.7	0
Xylene	C8H10	96	10	0	1.70/2.303	70.8	7.4	0
Total atomic mass contribution						94.5	9.75	0
Average No. of Atoms (mass/atomic wt.)						**7.8**	**9.8**	**0**

* Atomic wt. x no. of atoms of each

† Ave. concentration of the compound divided by the total concentration of all contaminants

¥ Columns (1) X (4) , (2) X (4) , (3) X (4) respectively

Answer: $C_{7.8}\ H_{9.8}\ O_0$; use $\mathbf{C_8H_{10}}$ as the mean overall structure of the mixture of contaminants.

Step 1. Since most contaminated sites are a result of a mixture of organic compounds, it is easier to write one redox reaction for the mean chemical structure rather than a reaction for each compound present. The above mixture is represented by a single chemical structure for writing a stoichiometric equation. **The average chemical structure is estimated as $\mathbf{C_8H_{10}}$**. Using the overall chemical structure, the balance stoichiometric equation is obtained by substituting according to the equations of Table 1.

Step 2. Determine the most appropriate electron acceptor and metabolism mode for destruction of the above hydrocarbon mixture.

Answer: Oxygen, aerobic

Step 3. Select an appropriate source for the nutrient nitrogen.

Answer: Either ammonia or nitrate can be used. For most organisms and for this example ammonia nitrogen is selected. Ammonia is readily available to microorganisms, but it does create an additional oxygen demand. For aerobic systems, some ammonia will be oxidized to nitrite and nitrate by indigenous bacteria. Oxygen demands will be greater than estimated from the reaction for the sole oxidation of the contaminants. Nitrate, however, can serve as an electron acceptor which may not be desired for some organisms or bioremediation systems.

Step 4. Select an appropriate energy factor for the conversion of hydrocarbon to cellular mass.

Answer: Hydrocarbons oxidize relatively fast, so a valve for f_S of 0.5 is selected.

Step 5. Write the appropriate half reactions and the equation for cell growth using the yield fractions f_e and f_s (see Table 1):

Answer: $Z = 4a + b - 2c - 3d$

for $C_8\ H_{10}\ O_0\ N_0$: $a = 8$, $b = 10$, $c = 0$, $d = 0$.

Answer: $Z = 4\ (8\ ) + 10 \quad = \quad 42$

For H_D one obtains by substitution:

$$1/42\ C_8\ H_{10}\ O_0 + 14/42\ H_2O = 8/42\ CO_2 + H^+ + e^-$$

For f_eHA one obtains by substitution. [$f_e+f_s = 1$ with $f_s = 0.5$ then $f_e = 0.5$]

$$1/8\ O_2 + 1/2\ H^+ + 1/2\ e^- = 1/4\ H_2O$$

For f_sC_s one obtains by substitution:

$$1/8\ CO_2 + 1/40\ NH_3 + 1/2\ H^+ + 1/2\ e^- = 1/40\ C_5\ H_7\ O_2\ N + 2/10\ H_2O$$

Step 6. Write the overall reaction by summation of half reactions and cell growth equation (sum HD, f_eHA, and f_sC_s). Sum all quantities on the left side of the equal sign and then all quantities on the right side:

Left side: $1/42\ C_8\ H_{10}\ O_0 + 14/42\ H_2O + 1/8\ O_2 + 1/2\ H^+ + 1/2\ e^- +$
$1/8\ CO_2 + 1/40\ NH_3 + 1/2\ H^+ + 1/2\ e^- =$

Right side: $8/42\ CO_2 + H^+ + e^- + 1/4\ H_2O + 1/40\ C_5\ H_7\ O_2\ N + 2/10\ H_2O$

Answer. The stoichiometric equation is, for NH3 as the nutrient nitrogen source:

$C_8\ H_{10} + 14\ H2O + 4.5O_2 + 5.25\ CO_2 + 1.05\ NH_3 = 8CO_2 + 10.5H_2O + 1.05\ C_5\ H_7\ O_2\ N + 8.4\ H_2O$

in final form:

$C_8\ H_{10} + 4.5O_2 + 1.05\ NH_3 = 2.75CO_2 + 1.05\ C_5\ H_7\ O_2\ N + 4.9\ H_2O$

Step 7. Calculate molecular weights to establish mass ratios.

Answer: Molecular weights

$C_8H_{10} = 106$
$O_2 = 32$
NH_3 as N* = 14 * note: Nutrients are sold in terms of nitrogen (N).
$CO_2 = 44$

Step 8. Determine mass ratios:

C_8H_{10} : O_2 : N : P : CO_2

1 : 4.5(32/106) : 1.05 (14/106) : 1/6(1.05)(14/106) : 4.5(44/106)

or **1: 1.36 : 0.14 : 0.023 : 1.87**

For every pound of contaminant degraded 1.36 lb of oxygen, 0.14 lb of nitrogen, 0.023 lb of phosphorus are required, and 1.87 lb of CO_2 are produced.

Step 9. Calculate the pounds of oxygen, ammonia, and phosphorus necessary to bioremediate 10,000 cubic yards of soil contaminated with 2.303 mg/Kg of BTEX [mean empirical formula C_8H_{10}]. The chemical supply needs are:

Answer:
10,000 yd^3 X (3,000lb/yd^3) x (.002303 g HC [BTEX]/Kg) x (1Kg/2.2046 lb) x (0.03527 oz.HC/1g HC) x (1lb HC/16oz. HC) = 69.08 lbs of HydroCarbon (HC as BTEX).

Oxygen required: (69lb) (1.36) = 93.8 lb as O_2
Nitrogen required: (69lb) (0.14) = 9.66 lb as N
Phosphorus required: (69lb) (0.023) = 1.587 lb as P
CO_2 produced: (69lb) (1.87) = 129 lb as CO_2

The amount of nitrogen and phosphorus available (current measurements) must be established and subtracted from the above so the net balance can be delivered to the system.

Rate of Delivery Comments:

Assuming mixing techniques that achieve at least 90 percent contact between soils and additives, single-dose applications should be limited to 3 lb of nutrients per cubic yard of soil to prevent undesirable osmotic effects. Higher nutrient requirements should use time-release nutirents or repeated applications. A common rate on a, per square foot basis, [below the aforementioned limit] is 75lbs/5000 sq. ft.

Thank you from the staff on project:

Bruce C. Hemming, Ph.D.
President & CEO

Sara J. Blamey
Senior Microbiologist II

the MiL, Inc. 7259 LANSDOWNE AVENUE SUITE 200 ST. LOUIS MO 63119-3421
PHONE: (800) 688-9144 FAX: (314) 645-2544

MICROBE INOTECH LABORATORIES, INC. **Environmental Analysis Request Form**

SEND REPORT TO:
ATTENTION: Tammy Bullman
COMPANY: EPS
ADDRESS: 900 Ashwood Pkwy
Suite 350
Atlanta, GA 30338
PHONE: 678-336-8545
FAX: 404-315-8509
EMAIL: tbullman@enviplanning.com

SEND INVOICE TO:
ATTN: ACCOUNTS PAYABLE

PURCHASE ORDER NUMBER:
PROJECT NUMBER:
PROJECT NAME: Capitol Adhesives

AUTHORIZED SIGNATURE: TBullman
DATE: Oct 4, 2010
PRINTED: Tammy Bullman

TERMS: NET 30 DAYS
FINIANCE CHARGES OF 1.5% WILL BE ADDED TO ALL OVERDUE INVOICES

[SIGNATURE AND/OR SAMPLE SUBMISSION INDICATES ACCEPTANCE OF MIL, INC.'S STANDARD TERMS & CONDITIONS]

SOIL OR WATER SAMPLES

1 TOTAL HETEROTROPHIC PLATE COUNT WITH PHONE CALL.

2 TOTAL PLATE COUNT AND GC-FAME/BIOLOG™ IDENTIFICATIONS.

3 BIOREMEDIATION FEASIBILITY STUDY
✓ WITH CHEMISTRY
___ WITHOUT CHEMISTRY

4 CUSTOM MICROBIOLOGY (DETAIL BELOW)

ANALYSIS TYPE CIRCLE NUMBER(S)	SAMPLE NAME	AEROBIC	ANAEROBIC	CUSTOM TESTS (IF ANY)	SAMPLE DESCRIPTION/SIZE	COLLECTION DATE/TIME
1 2 (3) 4	10280-MW-3	✓	✓		1L + 250ml Ag	10-7-10 1135
1 2 (3) 4	10280-MW-3D	✓	✓		↓	10-7-10 1200
1 2 (3) 4	10280-MW-5	✓	✓		↓	10-7-10 1405
1 2 (3) 4	10285-MW-4	✓	✓		1L + 250 ml	10-12-10 / 11:20
1 2 3 4						
1 2 3 4						
1 2 3 4						
1 2 3 4						

SHOULD HAVE RECIEVED 10-8-10

LIST SUBSTRATE(S) TO BE USED IN THE ENDPOINT ASSAY: TCE, TCA

PLEASE CHECK ONE:

[ ] I WOULD LIKE TO RECEIVE THE SUMMARY REPORT ONLY, NOT THE FULL SET OF DATA (FIRST TIME CLIENTS WILL RECEIVE ALL DATA)
[ ] RESULTS TO BE SENT OVERNIGHT - EXTRA SHIPPING CHARGE
[ ] SUMMARY TO BE FAXED, DATA SENT BY REGULAR MAIL
[ ] REPORT TO BE MAILED REGULAR MAIL
[ ] SUMMARY TO BE FAXED, DATA SENT OVERNIGHT - SHIPPING CHARGE
[x] DATA SENT BY REGULAR MAIL, SUMMARY TO BE EMAILED TO: tbullman@enviplanning.com

Send 4oz samples (16 oz for chemistry) and this form to:

the MiL, Inc. 7259 LANSDOWNE AVENUE, SUITE 200 ST. LOUIS MO 63119-3421
PHONE: (800) 688-9144 FAX: (314) 645-2544

MILFORM #0011-B
AR REV. 7/05 AWJ

MICROBE INOTECH LABORATORIES, INC. **Environmental Analysis Request Form**

SEND REPORT TO:
ATTENTION: Timmerly Bullman
COMPANY: EPS
ADDRESS: 900 Ashwood Pkwy
Suite 350
Atlanta, GA 30338
PHONE: 678-336-8545
FAX: 404-315-8509
EMAIL: tbullman@envplanning.com

SEND INVOICE TO:
ATTN: ACCOUNTS PAYABLE

PURCHASE ORDER NUMBER:
PROJECT NUMBER:
PROJECT NAME: Capitol Adhesives

AUTHORIZED SIGNATURE:
TBullman DATE: Oct 4, 2010
PRINTED: Timmerly Bullman

TERMS: NET 30 DAYS
FINIANCE CHARGES OF 1.5% WILL BE ADDED TO ALL OVERDUE INVOICES

[SIGNATURE AND/OR SAMPLE SUBMISSION INDICATES ACCEPTANCE OF MIL, INC.'S STANDARD TERMS & CONDITIONS]

SOIL OR WATER SAMPLES

1 TOTAL HETEROTROPHIC PLATE COUNT WITH PHONE CALL.

2 TOTAL PLATE COUNT AND GC-FAME/BIOLOG™ IDENTIFICATIONS.

3 BIOREMEDIATION FEASIBILITY STUDY
✓ WITH CHEMISTRY
_____ WITHOUT CHEMISTRY

4 CUSTOM MICROBIOLOGY (DETAIL BELOW)

ANALYSIS TYPE CIRCLE NUMBER(S)	SAMPLE NAME	AEROBIC	ANAEROBIC	CUSTOM TESTS (IF ANY)	SAMPLE DESCRIPTION/SIZE	COLLECTION DATE/TIME
1 2 (3) 4	10280-MW-3	✓	✓		1L + 250ml Ag	10-7-10 1135
1 2 (3) 4	10280-MW-3D	✓	✓		↓	10-7-10 1200
1 2 (3) 4	10280-MW-5	✓	✓		↓	10-7-10 1405
1 2 (3) 4		✓	✓			
1 2 3 4						
1 2 3 4						
1 2 3 4						
1 2 3 4						

LIST SUBSTRATE(S) TO BE USED IN THE ENDPOINT ASSAY: TCE, TCA

PLEASE CHECK ONE:
[ ] I WOULD LIKE TO RECEIVE THE SUMMARY REPORT ONLY, NOT THE FULL SET OF DATA (FIRST TIME CLIENTS WILL RECEIVE ALL DATA)
[ ] RESULTS TO BE SENT OVERNIGHT - EXTRA SHIPPING CHARGE
[ ] SUMMARY TO BE FAXED, DATA SENT BY REGULAR MAIL
[ ] REPORT TO BE MAILED REGULAR MAIL
[ ] SUMMARY TO BE FAXED, DATA SENT OVERNIGHT - SHIPPING CHARGE
[✓] DATA SENT BY REGULAR MAIL, SUMMARY TO BE EMAILED TO: tbullman@envplanning.com

Send **4oz** samples (16 oz for chemistry) and this form to:

the MiL, Inc. 7259 LANSDOWNE AVENUE, SUITE 200 ST. LOUIS MO 63119-3421

PHONE: (800) 688-9144 FAX: (314) 645-2544

MILFORM #0011-B
AR REV. 7/05 AWJ

FAXED

OCT 0 8 2010

BY: RJH

the MiL, inc. ATTENTION: Timmerly Bullman Fax: 404-315-8509

Sample Receipt Confirmation Form

This notice is to confirm receipt of samples at Microbe Inotech Laboratories, Inc.,
at 7259 Lansdowne Avenue Suite 200, St. Louis, MO 63119-3421
Telephone: 1-800-688-9144 Fax: 1-314-645-2544
Reach Us Online At: www.microbeinotech.com

Client Information:

Contact: Timmerly Bullman
Firm: Environmental Planning
Phone Number: 678-336-8545
Project Name: Capitol Adhesives
Project Number:

the MiL, inc. Information:

Receiving Staff Member: RJH
Assigned MiL Project Number: MILB- 7402A
Shipment Carrier: FedEx
Shipment Tracking Number:

Sample Information:

Total Number of Sample Containers: 6 Representing Total Number of Samples: 3

ELECTRONIC DATE & TIME STAMP

OR Arrived on:
Friday, October 08, 2010 - 10:10:19 AM
Day of Week Month/Day/Year Time of Day

	List of Samples Received	Condition Upon Receipt	Analysis Requested	Collection Date		
1	10280-MW-3	Intact	Bioremediation w/chemistry	10	7	10
2	10280-MW-3D	Intact	Bioremediation w/chemistry	10	7	10
3	10280-MW-5	Intact	Bioremediation w/chemistry	10	7	10
4						
5						
6						
7						
8						
9						
10						

Continued On Additional Page (If Checked): ☐

Comments or Further Requested Information:

Thank You, R. Hoffmann.
Signature of Sender

the MiL, inc. ATTENTION: Timmerly Bullman Fax: 404-315-8509

Sample Receipt Confirmation Form

This notice is to confirm receipt of samples at Microbe Inotech Laboratories, Inc.,
at 7259 Lansdowne Avenue Suite 200, St. Louis, MO 63119-3421
Telephone: 1-800-688-9144 Fax: 1-314-645-2544
Reach Us Online At: www.microbeinotech.com

Client Information:

Contact: Timmerly Bullman
Firm: Environmental Planning
Phone Number: 678-336-8545
Project Name: Capitol Adhesives
Project Number:

the MiL, inc. Information:

Receiving Staff Member: SB
Assigned MiL Project Number: MILB- 7402A
Shipment Carrier: FedEx
Shipment Tracking Number:

Sample Information:

Total Number of Sample Containers: 1 Representing Total Number of Samples: 1

ELECTRONIC DATE & TIME STAMP

OR Arrived on:
Wednesday, October 13, 2010 - 2:56:04 PM
Day of Week Month/Day/Year Time of Day

	List of Samples Received	Condition Upon Receipt	Analysis Requested	Collection Date		
1	10285-MW-4	Intact	Bioremediation w/ chem			
2						
3						
4						
5						
6						
7						
8						
9						
10						

Continued On Additional Page (If Checked): ☐

Comments or Further Requested Information: Three additional samples received 10/8/10 for this project.

Thank You, Lora N Blaney.
Signature of Sender

FAXED
OCT 13 2010
BY:

the MiL, inc. 7259 Lansdowne Avenue Suite 200, St. Louis, MO 63119-3421
PHONE: (800) 688-9144 FAX: (314) 645-2544

Microbe Inotech Laboratories Inc

bioMerieux Customer: 07624
System #: C22903

Laboratory Report

Printed Oct 23, 2010 15:33 CDT
Autoprint
Report Version: 1 of 1

Isolate Group: 7402A-1

Bionumber: 070031312001030
Selected Organism: Kocuria kristinae

Comments:	

Identification Information	Card:	GP	Lot Number:	242194140	Expires:	Apr 7, 2012 13:00 CDT
	Completed:	Oct 23, 2010 15:47 CDT	Status:	Final	Analysis Time:	5.25 hours
Selected Organism	90% Probability		Kocuria kristinae			
	Bionumber:	070031312001030			Confidence:	Good identification
SRF Organism						
Analysis Organisms and Tests to Separate:						
Analysis Messages:						
Contraindicating Typical Biopattern(s)						
Kocuria kristinae	AGAL(1),BGAL(21),URE(1),					

Biochemical Details

2	AMY	-	4	PIPLC	-	5	dXYL	-	8	ADH1	+	9	BGAL	+	11	AGLU	+
13	APPA	(-)	14	CDEX	-	15	AspA	-	16	BGAR	-	17	AMAN	-	19	PHOS	-
20	LeuA	+	23	ProA	+	24	BGURr	-	25	AGAL	+	26	PyrA	-	27	BGUR	-
28	AlaA	+	29	TyrA	+	30	dSOR	-	31	URE	+	32	POLYB	-	37	dGAL	-
38	dRIB	-	39	ILATk	+	42	LAC	-	44	NAG	-	45	dMAL	-	46	BACI	-
47	NOVO	-	50	NC6.5	-	52	dMAN	-	53	dMNE	+	54	MBdG	-	56	PUL	-
57	dRAF	-	58	O129R	-	59	SAL	-	60	SAC	+	62	dTRE	+	63	ADH2s	-
64	OPTO	-															

Installed VITEK 2 Systems Version: 04.03
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:

Microbe Inotech Laboratories Inc

bioMerieux Customer: 07624
System #: C22903

Laboratory Report

Printed Oct 21, 2010 19:13 CDT
Autoprint
Report Version: 1 of 1

Isolate Group: 7402A strain2-1

Bionumber: 040032300000000
Selected Organism: Slashline

Comments:	

Identification Information	Card:	GP	Lot Number:	242194140	Expires:	Apr 7, 2012 13:00 CDT
	Completed:	Oct 21, 2010 19:29 CDT	Status:	Final	Analysis Time:	6.00 hours
Selected Organism	Slashline					
	Bionumber:	040032300000000			Confidence:	Excellent identification
SRF Organism						

Analysis Organisms and Tests to Separate:

Micrococcus luteus / lylae	
Micrococcus lylae	YELLOW(1),
Micrococcus luteus	YELLOW(95),

Analysis Messages:

Contraindicating Typical Biopattern(s)

Biochemical Details

2	AMY	-	4	PIPLC	-	5	dXYL	-	8	ADH1	-	9	BGAL	-	11	AGLU	+
13	APPA	-	14	CDEX	-	15	AspA	-	16	BGAR	-	17	AMAN	-	19	PHOS	-
20	LeuA	+	23	ProA	+	24	BGURr	-	25	AGAL	-	26	PyrA	+	27	BGUR	-
28	AlaA	+	29	TyrA	+	30	dSOR	-	31	URE	-	32	POLYB	-	37	dGAL	-
38	dRIB	-	39	ILATk	-	42	LAC	-	44	NAG	-	45	dMAL	-	46	BACI	-
47	NOVO	-	50	NC6.5	-	52	dMAN	-	53	dMNE	-	54	MBdG	-	56	PUL	-
57	dRAF	-	58	O129R	-	59	SAL	-	60	SAC	-	62	dTRE	-	63	ADH2s	-
64	OPTO	-															

Installed VITEK 2 Systems Version: 04.03
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:

Microbe Inotech Laboratories Inc

bioMerieux Customer: 07624
System #: C22903

Laboratory Report

Printed Oct 16, 2010 14:50 CDT
Autoprint
Report Version: 1 of 1

Isolate Group: 7402A-3

Bionumber: 0043053203500240
Selected Organism: Pseudomonas aeruginosa

Comments:	

Identification Information	**Card:**	GN	**Lot Number:**	241169740	**Expires:**	Aug 7, 2011 13:00 CDT
	Completed:	Oct 16, 2010 15:04 CDT	**Status:**	Final	**Analysis Time:**	5.00 hours
Selected Organism	98% Probability		**Pseudomonas aeruginosa**			
	Bionumber:	0043053203500240			**Confidence:**	Excellent identification
SRF Organism						
Analysis Organisms and Tests to Separate:						
Analysis Messages:						
Contraindicating Typical Biopattern(s)						
Pseudomonas aeruginosa	URE(16),					

Biochemical Details

2	APPA	-	3	ADO	-	4	PyrA	-	5	IARL	-	7	dCEL	-	9	BGAL	-
10	H2S	-	11	BNAG	-	12	AGLTp	+	13	dGLU	+	14	GGT	+	15	OFF	-
17	BGLU	-	18	dMAL	-	19	dMAN	-	20	dMNE	+	21	BXYL	-	22	BAlap	+
23	ProA	+	26	LIP	+	27	PLE	-	29	TyrA	-	31	URE	+	32	dSOR	-
33	SAC	-	34	dTAG	-	35	dTRE	-	36	CIT	+	37	MNT	+	39	5KG	-
40	ILATk	+	41	AGLU	-	42	SUCT	+	43	NAGA	-	44	AGAL	-	45	PHOS	-
46	GlyA	-	47	ODC	-	48	LDC	-	53	IHISa	-	56	CMT	+	57	BGUR	-
58	O129R	-	59	GGAA	-	61	IMLTa	+	62	ELLM	-	64	ILATa	-			

Installed VITEK 2 Systems Version: 04.03
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:

Microbe Inotech Laboratories Inc

bioMerieux Customer: 07624
System #: C22903

Laboratory Report

Printed Oct 16, 2010 14:50 CDT
Autoprint
Report Version: 1 of 1

Isolate Group: 740A-4

Bionumber: 0043053203500240
Selected Organism: Pseudomonas aeruginosa

Comments:	

Identification Information	Card: GN	Lot Number: 241169740	Expires: Aug 7, 2011 13:00 CDT
	Completed: Oct 16, 2010 15:04 CDT	Status: Final	Analysis Time: 5.00 hours
Selected Organism	98% Probability	Pseudomonas aeruginosa	
	Bionumber: 0043053203500240		Confidence: Excellent identification
SRF Organism			
Analysis Organisms and Tests to Separate:			
Analysis Messages:			
Contraindicating Typical Biopattern(s)			
Pseudomonas aeruginosa URE(16),			

Biochemical Details

2	APPA	-	3	ADO	-	4	PyrA	-	5	lARL	-	7	dCEL	-	9	BGAL	-
10	H2S	-	11	BNAG	-	12	AGLTp	+	13	dGLU	+	14	GGT	+	15	OFF	-
17	BGLU	-	18	dMAL	-	19	dMAN	-	20	dMNE	+	21	BXYL	-	22	BAlap	+
23	ProA	+	26	LIP	+	27	PLE	-	29	TyrA	-	31	URE	+	32	dSOR	-
33	SAC	-	34	dTAG	-	35	dTRE	-	36	CIT	+	37	MNT	+	39	5KG	-
40	ILATk	+	41	AGLU	-	42	SUCT	+	43	NAGA	-	44	AGAL	-	45	PHOS	-
46	GlyA	-	47	ODC	-	48	LDC	-	53	lHISa	-	56	CMT	+	57	BGUR	-
58	O129R	-	59	GGAA	-	61	lMLTa	+	62	ELLM	-	64	lLATa	-			

Installed VITEK 2 Systems Version: 04.03
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:

Microbe Inotech Laboratories Inc

bioMerieux Customer: 07624
System #: C22903

Laboratory Report

Printed Oct 21, 2010 18:13 CDT
Autoprint
Report Version: 1 of 1

Isolate Group: 7402A strain 5-1

Bionumber: 070175300001000
Selected Organism: Unidentified Organism

Comments:	

Identification Information	**Card:**	GP	**Lot Number:**	242194140	**Expires:**	Apr 7, 2012 13:00 CDT
	Completed:	Oct 21, 2010 18:29 CDT	**Status:**	Final	**Analysis Time:**	5.00 hours
Selected Organism	**Unidentified Organism** **Bionumber:** 070175300001000					
SRF Organism						
Analysis Organisms and Tests to Separate:						
Analysis Messages:						
Contraindicating Typical Biopattern(s)						

Biochemical Details

2	AMY	-	4	PIPLC	-	5	dXYL	-	8	ADH1	+	9	BGAL	+	11	AGLU	+
13	APPA	-	14	CDEX	-	15	AspA	-	16	BGAR	+	17	AMAN	-	19	PHOS	-
20	LeuA	+	23	ProA	+	24	BGURr	+	25	AGAL	+	26	PyrA	-	27	BGUR	+
28	AlaA	+	29	TyrA	+	30	dSOR	-	31	URE	-	32	POLYB	-	37	dGAL	-
38	dRIB	-	39	ILATk	-	42	LAC	-	44	NAG	-	45	dMAL	-	46	BACI	-
47	NOVO	-	50	NC6.5	-	52	dMAN	-	53	dMNE	+	54	MBdG	-	56	PUL	-
57	dRAF	-	58	O129R	-	59	SAL	-	60	SAC	-	62	dTRE	-	63	ADH2s	-
64	OPTO	-															

Installed VITEK 2 Systems Version: 04.03
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:

Microbe Inotech Laboratories Inc

bioMerieux Customer: 07624
System #: C22903

Laboratory Report

Printed Oct 21, 2010 21:12 CDT
Autoprint
Report Version: 1 of 1

Isolate Group: 7402A strain 1-1A

Bionumber: 0001041100000000
Selected Organism: Low Discrimination

Comments:	

Identification Information	Card:	GN	Lot Number:	241169740	Expires:	Aug 7, 2011 13:00 CDT
	Completed:	Oct 21, 2010 21:34 CDT	Status:	Final	Analysis Time:	10.25 hours
Selected Organism		Low Discrimination				
	Bionumber:	0001041100000000			Confidence:	Low discrimination

SRF Organism	

Analysis Organisms and Tests to Separate:

Pseudomonas fluorescens	MOB(99),
Aeromonas salmonicida	MOB(1),dMANNITOL(99),
Neisseria animaloris/zoodegmatis	
Neisseria animaloris	dGLUf(99),MOB(1),dMANNITOL(1),
Neisseria zoodegmatis	dGLUf(1),MOB(1),dMANNITOL(1),
Low Discrimination Organism	

Analysis Messages:

Contraindicating Typical Biopattern(s)

Pseudomonas fluorescens	lLATk(76),
Neisseria animaloris/zoodegmatis	ELLM(96),

Installed VITEK 2 Systems Version: 04.03
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:

Microbe Inotech Laboratories Inc

bioMerieux Customer: 07624
System #: C22903

Laboratory Report

Printed Oct 21, 2010 21:12 CDT
Autoprint
Report Version: 1 of 1

Isolate Group: 7402A strain 1-1A

Bionumber: 0001041100000000
Selected Organism: Low Discrimination

Biochemical Details

2	APPA	-	3	ADO	-	4	PyrA	-	5	IARL	-	7	dCEL	-	9	BGAL	-
10	H2S	-	11	BNAG	-	12	AGLTp	-	13	dGLU	+	14	GGT	-	15	OFF	-
17	BGLU	-	18	dMAL	-	19	dMAN	-	20	dMNE	-	21	BXYL	-	22	BAlap	(+)
23	ProA	+	26	LIP	-	27	PLE	-	29	TyrA	+	31	URE	-	32	dSOR	-
33	SAC	-	34	dTAG	-	35	dTRE	-	36	CIT	-	37	MNT	-	39	5KG	-
40	ILATk	-	41	AGLU	-	42	SUCT	-	43	NAGA	-	44	AGAL	-	45	PHOS	-
46	GlyA	-	47	ODC	-	48	LDC	-	53	IHISa	-	56	CMT	-	57	BGUR	-
58	O129R	-	59	GGAA	-	61	IMLTa	-	62	ELLM	-	64	ILATa	-			

Installed VITEK 2 Systems Version: 04.03
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:

Microbe Inotech Laboratories Inc

bioMerieux Customer: 07624
System #: C22903

Laboratory Report

Printed Oct 23, 2010 17:59 CDT
Autoprint
Report Version: 1 of 1

Isolate Group: 7402A-5A

Bionumber: 4000000101500040
Selected Organism: Achromobacter denitrificans

Comments:	

Identification Information	Card:	GN	Lot Number:	241168740	Expires:	Jul 28, 2011 13:00 CDT
	Completed:	Oct 23, 2010 18:17 CDT	Status:	Final	Analysis Time:	7.75 hours
Selected Organism	99% Probability		Achromobacter denitrificans			
	Bionumber:	4000000101500040			Confidence:	Excellent identification
SRF Organism						
Analysis Organisms and Tests to Separate:						
Analysis Messages:						
Contraindicating Typical Biopattern(s)						

Biochemical Details

2	APPA	-	3	ADO	-	4	PyrA	+	5	IARL	-	7	dCEL	-	9	BGAL	-
10	H2S	-	11	BNAG	-	12	AGLTp	-	13	dGLU	-	14	GGT	-	15	OFF	-
17	BGLU	-	18	dMAL	-	19	dMAN	-	20	dMNE	-	21	BXYL	-	22	BAlap	-
23	ProA	-	26	LIP	-	27	PLE	-	29	TyrA	+	31	URE	-	32	dSOR	-
33	SAC	-	34	dTAG	-	35	dTRE	-	36	CIT	+	37	MNT	-	39	5KG	-
40	ILATk	+	41	AGLU	-	42	SUCT	+	43	NAGA	-	44	AGAL	-	45	PHOS	-
46	GlyA	-	47	ODC	-	48	LDC	-	53	IHISa	-	56	CMT	-	57	BGUR	-
58	O129R	-	59	GGAA	-	61	IMLTa	+	62	ELLM	-	64	ILATa	-			

Installed ViTEK 2 Systems Version: 04.03
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:

Microbe Inotech Laboratories Inc

bioMerieux Customer: 07624
System #: C22903

Laboratory Report

Printed Oct 23, 2010 15:32 CDT
Autoprint
Report Version: 1 of 1

Isolate Group: 7402A-6

Bionumber: 070031312001010
Selected Organism: Kocuria kristinae

Comments:	

Identification Information	Card:	GP	Lot Number:	242194140	Expires:	Apr 7, 2012 13:00 CDT
	Completed:	Oct 23, 2010 15:46 CDT	Status:	Final	Analysis Time:	5.25 hours
Selected Organism	90% Probability		Kocuria kristinae			
	Bionumber:	070031312001010			Confidence:	Good identification
SRF Organism						
Analysis Organisms and Tests to Separate:						
Analysis Messages:						
Contraindicating Typical Biopattern(s)						
Kocuria kristinae	AGAL(1),BGAL(21),URE(1),					

Biochemical Details

2	AMY	-	4	PIPLC	-	5	dXYL	-	8	ADH1	+	9	BGAL	+	11	AGLU	+
13	APPA	(-)	14	CDEX	-	15	AspA	-	16	BGAR	-	17	AMAN	-	19	PHOS	-
20	LeuA	+	23	ProA	+	24	BGURr	-	25	AGAL	+	26	PyrA	-	27	BGUR	-
28	AlaA	+	29	TyrA	+	30	dSOR	-	31	URE	+	32	POLYB	-	37	dGAL	-
38	dRIB	-	39	ILATk	+	42	LAC	-	44	NAG	-	45	dMAL	-	46	BACI	-
47	NOVO	-	50	NC6.5	-	52	dMAN	-	53	dMNE	+	54	MBdG	-	56	PUL	-
57	dRAF	-	58	O129R	-	59	SAL	-	60	SAC	+	62	dTRE	-	63	ADH2s	-
64	OPTO	-															

Installed VITEK 2 Systems Version: 04.03
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:

Microbe Inotech Laboratories Inc

bioMerieux Customer: 07624
System #: C22903

Laboratory Report

Printed Oct 23, 2010 20:25 CDT
Autoprint
Report Version: 1 of 1

Isolate Group: 7402A-7

Bionumber: 0000041100500000
Selected Organism: Low Discrimination

Comments:	

Identification Information	Card:	GN	Lot Number:	241168740	Expires:	Jul 28, 2011 13:00 CDT
	Completed:	Oct 23, 2010 20:46 CDT	Status:	Final	Analysis Time:	10.25 hours
Selected Organism	Low Discrimination					
	Bionumber:	0000041100500000			Confidence:	Low discrimination

SRF Organism

Analysis Organisms and Tests to Separate:

Pseudomonas aeruginosa 42C(99),PYOCYANIN(99),
Pseudomonas fluorescens 42C(1),PYOCYANIN(1),
Low Discrimination Organism

Analysis Messages:

Contraindicating Typical Biopattern(s)

Pseudomonas aeruginosa GGT(95),CIT(81),dGLU(89),
Pseudomonas fluorescens dGLU(83),

Biochemical Details

2	APPA	-	3	ADO	-	4	PyrA	-	5	lARL	-	7	dCEL	-	9	BGAL	-
10	H2S	-	11	BNAG	-	12	AGLTp	-	13	dGLU	-	14	GGT	-	15	OFF	-
17	BGLU	-	18	dMAL	-	19	dMAN	-	20	dMNE	-	21	BXYL	-	22	BAlap	+
23	ProA	+	26	LIP	-	27	PLE	-	29	TyrA	+	31	URE	-	32	dSOR	-
33	SAC	-	34	dTAG	-	35	dTRE	-	36	CIT	-	37	MNT	-	39	5KG	-
40	ILATk	+	41	AGLU	-	42	SUCT	+	43	NAGA	-	44	AGAL	-	45	PHOS	-
46	GlyA	-	47	ODC	-	48	LDC	-	53	lHISa	-	56	CMT	-	57	BGUR	-
58	O129R	-	59	GGAA	-	61	lMLTa	-	62	ELLM	-	64	ILATa	-			

Installed VITEK 2 Systems Version: 04.03
MIC Interpretation Guideline:
AES Parameter Set Name:

Therapeutic Interpretation Guideline:
AES Parameter Last Modified:

7402A Evironmental Professionals

Biofesibility: 4 Faculatitive Anaerobic Strains versus TCA and TCE

5 Aerobic Strains Versus TCA and TCE

7402A Anaerobic Strains 24hours

24 hours Anaerobic

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.005	0.003	0.056	0.057	0.034	0.031	0.048	0.047	0.086	0.082	-0.002	0.002
B	0.000	-0.003	0.057	0.054	0.029	0.026	0.047	0.047	0.076	0.035	-0.003	-0.003
C	0.027	0.034	1.595	1.522	2.270	2.210	0.085	0.082	0.861	0.877	0.031	0.027
D	0.024	0.035	1.705	1.593	2.183	2.276	0.083	0.077	0.789	0.845	0.027	0.025
E	0.161	0.080	0.095	0.092	1.389	1.748	0.074	0.071	0.047	0.054	0.033	0.073
F	0.091	0.030	0.068	0.055	1.394	1.299	0.074	0.070	0.027	0.057	0.049	0.033
G	0.035	0.029	0.748	0.433	2.038	1.869	0.033	0.039	0.034	0.038	0.030	0.038
H	0.040	0.030	0.367	0.527	1.938	1.719	0.039	0.042	0.042	0.034	0.034	0.035

Endpoint

L1 590

Automix: Off
Calibrate: On

Plate Last Read:
10:41 AM 10/26/2010

Formula: L1

Data Mode: Absorbance

Plate Blank Used L1 = 0.039

Control

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Co01	A3	1	0.056	0.056	0.001	2.520
	A4		0.057			
	B3		0.057			
	B4		0.054			
Co02	A5	2	0.034	0.030	0.003	11.175
	A6		0.031			
	B5		0.029			
	B6		0.026			
Co03	A7	3	0.048	0.047	0.001	1.055
	A8		0.047			
	B7		0.047			
	B8		0.047			
Co04	A9	4	0.086	0.070	0.024	33.672
	A10		0.082			
	B9		0.076			
	B10		0.035			
TSB	C1	5	0.027	0.029	0.004	14.189
	C2		0.034			
	C11		0.031			
	C12		0.027			
	D1		0.024			
	D2		0.035			
	D11		0.027			
	D12		0.025			
TSB TCA	G1	6	0.035	0.034	0.004	11.705
	G2		0.029			
	G11		0.030			
	G12		0.038			
	H1		0.040			
	H2		0.030			
	H11		0.034			
	H12		0.035			
TSB TCE	E1	7	0.161	0.069	0.044	63.991
	E2		0.080			
	E11		0.033			
	E12		0.073			
	F1		0.091			
	F2		0.030			
	F11		0.049			
	F12		0.033			

TSB

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	C3	1	1.595	1.604	0.076	4.711
	C4		1.522			
	D3		1.705			
	D4		1.593			
Str5	C5	2	2.270	2.235	0.046	2.040
	C6		2.210			
	D5		2.183			
	D6		2.276			
Str6	C7	3	0.085	0.082	0.003	4.157
	C8		0.082			
	D7		0.083			
	D8		0.077			
Str7	C9	4	0.861	0.843	0.038	4.542
	C10		0.877			
	D9		0.789			
	D10		0.845			

TSB + TCE

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	E3	1	0.095	0.078	0.019	24.813
	E4		0.092			
	F3		0.068			
	F4		0.055			
Str5	E5	2	1.389	1.458	0.199	13.620
	E6		1.748			
	F5		1.394			
	F6		1.299			
Str6	E7	3	0.074	0.072	0.002	2.848
	E8		0.071			
	F7		0.074			
	F8		0.070			
Str7	E9	4	0.047	0.046	0.014	29.111
	E10		0.054			
	F9		0.027			
	F10		0.057			

TSB + TCA

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	G3	1	0.748	0.519	0.166	32.057
	G4		0.433			
	H3		0.367			
	H4		0.527			
Str5	G5	2	2.038	1.891	0.134	7.087
	G6		1.869			
	H5		1.938			
	H6		1.719			
Str6	G7	3	0.033	0.038	0.004	9.837
	G8		0.039			
	H7		0.039			
	H8		0.042			
Str7	G9	4	0.034	0.037	0.004	10.316
	G10		0.038			
	H9		0.042			
	H10		0.034			

7402A Anaerobic Strains48 hours

48 hours Anaerobic

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.011	0.005	0.044	0.055	0.036	0.030	0.043	0.045	0.079	0.081	-0.003	0.004
B	0.000	-0.004	0.052	0.054	0.040	0.045	0.049	0.052	0.072	0.058	-0.007	-0.006
C	0.025	0.034	1.883	1.894	2.460	2.434	0.084	0.085	2.034	2.226	0.028	0.022
D	0.024	0.033	2.035	1.858	2.480	2.557	0.085	0.075	2.031	2.191	0.024	0.021
E	0.194	0.047	1.986	1.834	2.648	2.897	0.047	0.064	0.046	0.050	0.098	0.084
F	0.143	0.101	1.139	1.311	2.476	2.462	0.058	0.056	0.029	0.053	0.083	0.289
G	0.030	0.028	2.121	1.572	2.433	2.416	0.028	0.041	0.513	0.611	0.024	0.030
H	0.036	0.031	1.589	1.895	2.261	2.239	0.043	0.037	0.400	0.446	0.026	0.031

Endpoint

L1 590

Automix: Off
Calibrate: On

Plate Last Read:
2:44 PM 10/27/2010

Formula: L1

Data Mode: Absorbance

Plate Blank Used L1 = 0.043

Control

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Co01	A3	1	0.044	0.051	0.005	9.740
	A4		0.055			
	B3		0.052			
	B4		0.054			
Co02	A5	2	0.036	0.038	0.006	16.806
	A6		0.030			
	B5		0.040			
	B6		0.045			
Co03	A7	3	0.043	0.047	0.004	8.531
	A8		0.045			
	B7		0.049			
	B8		0.052			
Co04	A9	4	0.079	0.073	0.010	14.356
	A10		0.081			
	B9		0.072			
	B10		0.058			
TSB	C1	5	0.025	0.026	0.005	18.456
	C2		0.034			
	C11		0.028			
	C12		0.022			
	D1		0.024			
	D2		0.033			
	D11		0.024			
	D12		0.021			
TSB TCA	G1	6	0.030	0.030	0.004	12.289
	G2		0.028			
	G11		0.024			
	G12		0.030			
	H1		0.036			
	H2		0.031			
	H11		0.026			
	H12		0.031			
TSB TCE	E1	7	0.194	0.130	0.078	60.084
	E2		0.047			
	E11		0.098			
	E12		0.084			
	F1		0.143			
	F2		0.101			
	F11		0.083			
	F12		0.289			

TSB

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	C3	1	1.883	1.918	0.080	4.160
	C4		1.894			
	D3		2.035			
	D4		1.858			
Str5	C5	2	2.460	2.483	0.053	2.133
	C6		2.434			
	D5		2.480			
	D6		2.557			
Str6	C7	3	0.084	0.082	0.005	5.904
	C8		0.085			
	D7		0.085			
	D8		0.075			
Str7	C9	4	2.034	2.121	0.103	4.839
	C10		2.226			
	D9		2.031			
	D10		2.191			

TSB + TCE

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	E3	1	1.986	1.568	0.406	25.929
	E4		1.834			
	F3		1.139			
	F4		1.311			
Str5	E5	2	2.648	2.621	0.203	7.733
	E6		2.897			
	F5		2.476			
	F6		2.462			
Str6	E7	3	0.047	0.056	0.007	12.518
	E8		0.064			
	F7		0.058			
	F8		0.056			
Str7	E9	4	0.046	0.045	0.011	24.098
	E10		0.050			
	F9		0.029			
	F10		0.053			

TSB + TCA

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	G3	1	2.121	1.794	0.264	14.691
	G4		1.572			
	H3		1.589			
	H4		1.895			
Str5	G5	2	2.433	2.337	0.101	4.338
	G6		2.416			
	H5		2.261			
	H6		2.239			
Str6	G7	3	0.028	0.037	0.007	17.858
	G8		0.041			
	H7		0.043			
	H8		0.037			
Str7	G9	4	0.513	0.493	0.092	18.602
	G10		0.611			
	H9		0.400			
	H10		0.446			

24 hours Aerobic

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.044	0.037	0.055	0.067	0.141	0.153	0.078	0.074	0.070	0.066	0.054	0.058
B	0.039	0.035	0.057	0.058	0.143	0.119	0.095	0.086	0.067	0.061	0.051	0.050
C	0.068	0.068	0.071	0.078	0.159	0.176	2.902	2.817	2.935	2.996	0.074	0.079
D	0.061	0.069	0.074	0.069	0.173	0.183	2.898	2.923	3.109	3.025	0.077	0.078
E	0.148	0.085	0.077	0.098	0.157	0.173	2.385	2.496	2.574	2.521	0.103	0.093
F	0.110	0.100	0.073	0.082	0.123	0.161	2.131	2.144	2.339	2.276	0.096	0.089
G	0.073	0.067	0.061	0.060	0.109	0.109	1.955	1.868	2.700	2.866	0.067	0.076
H	0.079	0.078	0.059	0.058	0.148	0.103	1.862	1.610	2.488	2.559	0.069	0.076

Endpoint
L1 590
Automix: Off Calibrate: On

Plate Last Read:
10:43 AM 10/26/2010

Formula: L1

Data Mode: Absorbance

Control

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Co01	A3	1	0.055	0.059	0.005	8.971
	A4		0.067			
	B3		0.057			
	B4		0.058			
Co02	A5	2	0.141	0.139	0.014	10.309
	A6		0.153			
	B5		0.143			
	B6		0.119			
Co03	A7	3	0.078	0.083	0.009	11.156
	A8		0.074			
	B7		0.095			
	B8		0.086			
Co04	A9	4	0.070	0.066	0.004	5.669
	A10		0.066			
	B9		0.067			
	B10		0.061			
Co05	A11	5	0.054	0.053	0.004	6.749
	A12		0.058			
	B11		0.051			
	B12		0.050			
TSB	C1	6	0.068	0.067	0.004	5.559
	C2		0.068			
	D1		0.061			
	D2		0.069			
TSB TCA	G1	7	0.073	0.074	0.006	7.407
	G2		0.067			
	H1		0.079			
	H2		0.078			
TSB TCE	E1	8	0.148	0.111	0.027	24.266
	E2		0.085			
	F1		0.110			
	F2		0.100			

TSB

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	C3	1	0.071	0.073	0.004	5.364
	C4		0.078			
	D3		0.074			
	D4		0.069			
Str2	C5	2	0.159	0.173	0.010	5.834
	C6		0.176			
	D5		0.173			
	D6		0.183			
Str3	C7	3	2.902	2.885	0.047	1.617
	C8		2.817			
	D7		2.898			
	D8		2.923			
Str4	C9	4	2.935	3.016	0.072	2.398
	C10		2.996			
	D9		3.109			
	D10		3.025			
Str5	C11	5	0.074	0.077	0.002	2.806
	C12		0.079			
	D11		0.077			
	D12		0.078			

TSB + TCE

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	E3	1	0.077	0.083	0.011	13.297
	E4		0.098			
	F3		0.073			
	F4		0.082			
Str2	E5	2	0.157	0.154	0.021	13.967
	E6		0.173			
	F5		0.123			
	F6		0.161			
Str3	E7	3	2.385	2.289	0.181	7.898
	E8		2.496			
	F7		2.131			
	F8		2.144			
Str4	E9	4	2.574	2.428	0.143	5.874
	E10		2.521			
	F9		2.339			
	F10		2.276			
Str5	E11	5	0.103	0.095	0.006	6.204
	E12		0.093			
	F11		0.096			
	F12		0.089			

TSB + TCA

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	G3	1	0.061	0.060	0.001	2.170
	G4		0.060			
	H3		0.059			
	H4		0.058			
Str2	G5	2	0.109	0.117	0.021	17.650
	G6		0.109			
	H5		0.148			
	H6		0.103			
Str3	G7	3	1.955	1.824	0.149	8.154
	G8		1.868			
	H7		1.862			
	H8		1.610			
Str4	G9	4	2.700	2.653	0.167	6.293
	G10		2.866			
	H9		2.488			
	H10		2.559			
Str5	G11	5	0.067	0.072	0.005	6.514
	G12		0.076			
	H11		0.069			
	H12		0.076			

48 hours Aerobic

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.008	-0.004	0.011	0.010	0.119	0.119	0.100	0.081	0.036	0.039	0.009	0.012
B	0.001	-0.007	0.008	0.009	0.109	0.076	0.233	0.177	0.081	0.098	0.003	0.005
C	0.019	0.026	0.029	0.028	0.111	0.131	2.855	2.744	2.850	2.932	0.027	0.027
D	0.019	0.017	0.036	0.018	0.119	0.131	2.898	2.914	3.032	2.952	0.031	0.025
E	0.099	0.043	0.026	0.017	0.096	0.131	2.871	2.992	2.956	2.920	0.066	0.059
F	0.273	0.139	0.018	0.053	0.073	0.106	2.914	2.805	2.791	2.785	0.059	0.048
G	0.027	0.025	0.015	0.018	0.073	0.073	2.119	2.035	2.718	2.919	0.020	0.022
H	0.031	0.028	0.011	0.009	0.102	0.066	2.170	2.132	2.754	2.893	0.019	0.026

Endpoint
L1 590
Automix: Off Calibrate: On

Plate Last Read:
2:43 PM 10/27/2010

Formula: L1
Data Mode: Absorbance
Plate Blank Used L1 = 0.045

Control

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Co01	A3	1	0.012	0.010	0.002	17.516
	A4		0.011			
	B3		0.008			
	B4		0.010			
Co02	A5	2	0.119	0.106	0.020	18.871
	A6		0.119			
	B5		0.110			
	B6		0.077			
Co03	A7	3	0.100	0.148	0.070	47.500
	A8		0.082			
	B7		0.233			
	B8		0.177			
Co04	A9	4	0.036	0.063	0.031	49.061
	A10		0.039			
	B9		0.082			
	B10		0.098			
Co05	A11	5	0.010	0.008	0.004	52.015
	A12		0.013			
	B11		0.004			
	B12		0.006			
TSB	C1	6	0.020	0.021	0.003	16.898
	C2		0.026			
	D1		0.020			
	D2		0.018			
TSB TCA	G1	7	0.027	0.028	0.003	10.705
	G2		0.025			
	H1		0.032			
	H2		0.028			
TSB TCE	E1	8	0.099	0.139	0.098	70.475
	E2		0.044			
	F1		0.273			
	F2		0.140			

TSB

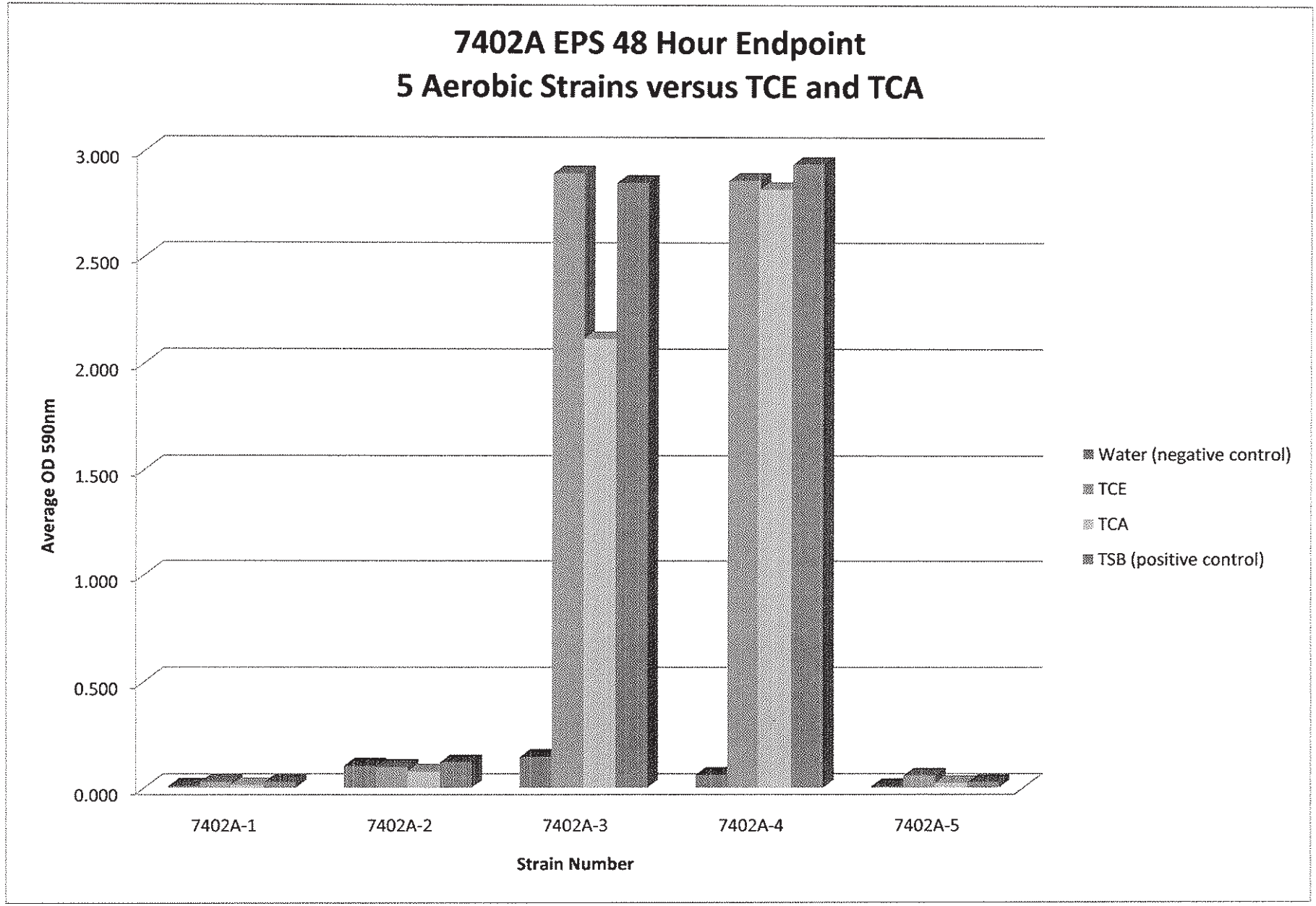
Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	C3	1	0.030	0.028	0.007	25.169
	C4		0.029			
	D3		0.036			
	D4		0.019			
Str2	C5	2	0.112	0.123	0.010	7.868
	C6		0.132			
	D5		0.119			
	D6		0.131			
Str3	C7	3	2.856	2.853	0.077	2.688
	C8		2.744			
	D7		2.898			
	D8		2.914			
Str4	C9	4	2.850	2.941	0.075	2.542
	C10		2.932			
	D9		3.032			
	D10		2.952			
Str5	C11	5	0.027	0.027	0.003	10.958
	C12		0.027			
	D11		0.032			
	D12		0.025			

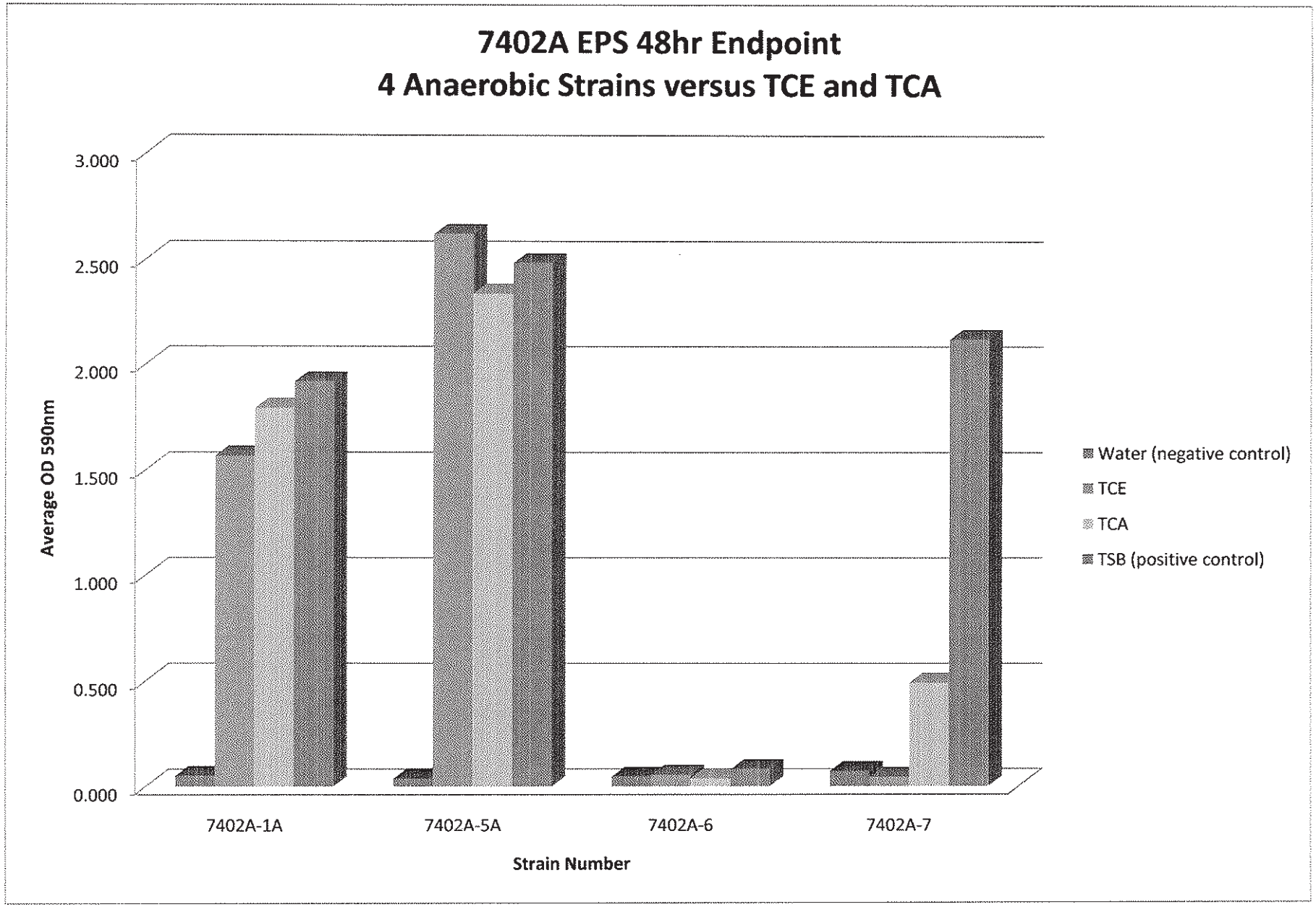
TSB + TCE

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	E3	1	0.026	0.029	0.016	57.512
	E4		0.018			
	F3		0.019			
	F4		0.053			
Str2	E5	2	0.096	0.101	0.024	23.805
	E6		0.131			
	F5		0.073			
	F6		0.107			
Str3	E7	3	2.872	2.896	0.079	2.719
	E8		2.993			
	F7		2.914			
	F8		2.805			
Str4	E9	4	2.957	2.863	0.088	3.079
	E10		2.921			
	F9		2.792			
	F10		2.785			
Str5	E11	5	0.066	0.058	0.007	12.111
	E12		0.059			
	F11		0.059			
	F12		0.049			

TSB + TCA

Sample	Wells	Sample#	Values	MeanValue	StdDev	%CV
Str1	G3	1	0.016	0.014	0.004	29.317
	G4		0.019			
	H3		0.012			
	H4		0.010			
Str2	G5	2	0.073	0.078	0.017	21.086
	G6		0.073			
	H5		0.103			
	H6		0.066			
Str3	G7	3	2.119	2.114	0.057	2.709
	G8		2.035			
	H7		2.171			
	H8		2.132			
Str4	G9	4	2.719	2.821	0.100	3.529
	G10		2.920			
	H9		2.755			
	H10		2.893			
Str5	G11	5	0.021	0.022	0.003	12.092
	G12		0.022			
	H11		0.020			
	H12		0.026			


7402A EPS 48 Hour Endpoint
5 Aerobic Strains versus TCE and TCA
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Average OD 590nm
7402A-1
7402A-2
7402A-3
7402A-4
7402A-5
Strain Number
Water (negative control)
TCE
TCA
TSB (positive control)


7402A EPS 48hr Endpoint
4 Anaerobic Strains versus TCE and TCA
Average OD 590nm
3.000
2.500
2.000
1.500
1.000
0.500
0.000
7402A-1A
7402A-5A
7402A-6
7402A-7
Strain Number
Water (negative control)
TCE
TCA
TSB (positive control)

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Atlanta, GA 30338

Phone: 404-315-9113

Fax: 404-315-8509

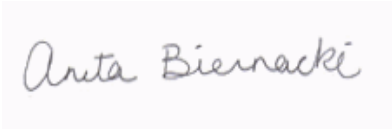
Identifier: 025HJ **Date Rec:** 10/08/2010 **Report Date:** 10/13/2010

Client Project #: **Client Project Name:** Capitol Adhesives

Purchase Order #:

Analysis Requested: CENSUS

Reviewed By:



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CENSUS

Client: **EPS, Inc.**
Project: Capitol Adhesives

MI Project Number: **025HJ**
Date Received: 10/08/2010

Sample Information

Client Sample ID:		**10280-MW-3**	**10280-MW-5**
Sample Date:		10/07/2010	10/07/2010
Units:		cells/mL	cells/mL
Analyst:		CT	CT
Dechlorinating Bacteria			
Dehalococcoides spp.	DHC	**9.39E+01**	**6.48E+04**
Functional Genes			
tceA Reductase	TCE	**4.22E+01**	**3.86E+03**
bvcA Reductase	BVC	<4.00E-01	<8.00E-01
Vinyl Chloride Reductase	VCR	**5.60E+00**	**3.73E+04**
Phylogenetic Group			
Dehalobacter spp.	DHBt	**1.60E+03**	**7.34E+03**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

EPS

Monitoring We[illegible]ampling Form

EPS Project: Capitol Adhesives **Date:** 10.8.10

Well ID: MW-2
Sampling Performed By: G. Henry R. Jones
Well Construction: 2" Flush Mount
Well Labeled: No **Well Cap:** Yes **Well Locked:** No
Well depth from TOC: 15.08
Well Diameter (in):
Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 6.73
Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 1.07
Purging Method: Peristaltic - Low flow
Sample Method: Thumb

Field Conditions: Sunny 78°
General Condition of Well: Poor - Pad cracked
Condition of surrounding area: eroded.
Depth to Water from TOC: 8.35
Method of measure: WLM
Three Well Volumes (gal): 3.23
Time @ Start of Purge: 14:20
Sample Parameters: VOC + 1,4 Dioxane

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
14:27	1 gal	22.47	6.65	0.571	0.39	88.7	-50	8.94	
14:35	2	23.25	6.77	0.577	0.71	20.0	-130	8.92	
14:42	3	23.17	6.78	0.576	0.98	3.33	-119	8.92	
14:50	4	23.22	6.78	0.577	.94	3.26	-117	8.92	

Sample ID: 1028I-MW-2 Time Collected: 14:53 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives **Date:** 10·8·10

Well ID: MW-2D **Field Conditions:** Sunny 78°

Sampling Performed By: G. Henry, R. Jones

Well Construction: 2" Flush Mount **General Condition of Well:** Poor-

Well Labeled: No **Well Cap:** Yes **Well Locked:** No **Condition of surrounding area:** eroded, muddy

Well depth from TOC: 16.59 **Depth to Water from TOC:** 7.60

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 8.99

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 1.44 **Three Well Volumes (gal):** 4.32

Purging Method: Peristaltic- Low Flow **Time @ Start of Purge:** 13:35

Sample Method: Thumb **Sample Parameters:** VOC + 1,4 Dioxane

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
13:46	1	21.73	7.31	.439	.57	39.2	-58	7.91	
14:10	2	21.52	7.52	.405	.37	39.0	-164	7.91	
14:21	3	21.72	7.52	.389	.32	19.6	-155	7.92	
14:33	4	20.82	7.53	.363	.35	0.0	-136	7.92	
14:43	5	20.79	7.53	.364	.32	4.22	-131	7.92	
14:50	6	20.81	7.53	.363	.29	0.64	-125	7.92	

Sample ID: 10281-MW-2D Time Collected: 14:52 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives **Date:** 10/7/10

Well ID: MW-3 **Field Conditions:** Sunny 55°

Sampling Performed By: G. Henry, R. Jones

Well Construction: 2" Flush mount **General Condition of Well:** good

Well Labeled: No **Well Cap:** Yes **Well Locked:** No **Condition of surrounding area:** High weeds

Well depth from TOC: 14.64 **Depth to Water from TOC:** 6.89

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 7.75

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 1.24 **Three Well Volumes (gal):** 3.72

Purging Method: Peristaltic - Low Flow **Time @ Start of Purge:** 10:30

Sample Method: Thumb / Direct (VOC) ( ) **Sample Parameters:**

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
1100	2	24.83	6.45	0.501	0.29	24.1	-39	8.10	
1110	3	24.68	6.65	0.490	0.32	8.36	-43	8.07	
1120	4	24.35	6.68	0.475	0.38	9.98	-48	8.06	
1130	5	23.67	6.71	0.473	0.44	9.14	-54	8.10	
									Fe^{2+} = 0.1 mg/L

Sample ID: 10280-MW-3 Time Collected: 1135 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives Date: 10/7/10

Well ID: MW-3D
Sampling Performed By: G. Henry, R. Jones
Well Construction: 2" FLUSH MOUNT
Well Labeled: No Well Cap: Yes-off Well Locked: No
Well depth from TOC: 21.81
Well Diameter (in): 2"
Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 14.91
Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 2.385
Purging Method: Peristaltic - Low Flow
Sample Method:

Field Conditions: Sunny 55°
General Condition of Well: Good
Condition of surrounding area: High Weeds
Depth to Water from TOC: 6.90
Method of measure: WLM
Three Well Volumes (gal): 7.16
Time @ Start of Purge: 10:30
Sample Parameters:

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1109	2.0	20.96	7.21	0.414	1.77	48.2	-91	7.61
1110	3.0	20.97	7.21	0.414	1.36	22.7	-97	7.64
1120	4.0	20.97	7.20	0.413	0.78	7.75	-107	7.58
1130	5.0	21.15	7.19	0.412	0.63	1.43	-110	7.61
1140	6.0	21.51	7.14	0.408	0.58	0.00	-119	flow cell in sun 7.60
1150	7.0	21.27	7.07	0.409	0.53	1.84	-109	7.68
1200	8.0	21.24	7.07	0.410	0.53	0.00	-109	7.58
								Fe^{2+} = 0.6 mg/L

Sample ID: 10280-MW-3D Time Collected: 1200 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives **Date:** 10·12·10

Well ID: MW-4 **Field Conditions:** Sunny 70°

Sampling Performed By: G. Henry, R. Jones

Well Construction: 2" FLUSH **General Condition of Well:** Very Poor - nearly destroyed

Well Labeled: NO **Well Cap:** ~~[illegible]~~ **Well Locked:** NO **Condition of surrounding area:** Gravel parking

Well depth from TOC: 10.45 * **Depth to Water from TOC:** ~~[illegible]~~ 5.15

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 5.3

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 0.848 **Three Well Volumes (gal):** 2.544

Purging Method: Peristaltic - Low Flow **Time @ Start of Purge:** 10:05

Sample Method: Thumb & Direct **Sample Parameters:** VOCs + 1,4 Dioxane,

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
10:24	2.0	21.72	6.48	.396	0.79	>1,000	101	
10:40	3.5	23.02	6.60	~~SH~~ .436	0.56	1,000	-40	
10:50	4.5	23.02	6.63	.435	0.51	721	-44	
11:00	5.5	22.99	6.66	.433	0.46	371	-49	
11:10	6.5	22.91	6.71	.431	0.42	386	-55	
11:15	7.0	22.88	6.73	.430	0.41	386	-57	
								Fe^{2+} = 0.5 mg/L

Sample ID: 10285-MW-4 Time Collected: 11:20 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives **Date:** 10-7-10

Well ID: MW-5 **Field Conditions:** Sunny 65°

Sampling Performed By: G. Henry, R. Jones

Well Construction: 2" Flush Mount **General Condition of Well:** Fair-

Well Labeled: No **Well Cap:** Yes **Well Locked:** No **Condition of surrounding area:** gravel

Well depth from TOC: 18.0 soft bottom **Depth to Water from TOC:** 4.07

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 13.93

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 2.22 **Three Well Volumes (gal):** 6.68

Purging Method: Peristaltic - Low Flow **Time @ Start of Purge:** 12:55

Sample Method: Thumb, (VOC) **Sample Parameters:** VOC, Al, Salinity, Chloride, Sulfide, Methane, ethane, Microbial DNA,

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW: Comments
1305	1.0	23.33	6.78	1.76	0.55	63.9	-142	4.42
1315	2.0	23.10	6.82	1.74	0.40	41.7	-145	4.44
1325	3.0	23.28	6.92	1.72	0.30	23.5	-151	4.42
1335	4.0	23.79	6.92	1.70	0.29	8.77	-151	flow cell in sun 4.42
1345	5.0	25.23	6.92	1.71	0.27	8.33	-150	4.43
1355	6.0	25.62	6.91	1.70	0.27	9.92	-148	4.43
1405	7.0	25.70	6.90	1.68	0.26	4.65	-147	4.43
								Ferrous Iron - 3.4 mg/L

Sample ID: 10280-MW-5 Time Collected: 14:05 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives **Date:** 10-8-10

Well ID: MW-6 **Field Conditions:** Sunny 80°

Sampling Performed By: G-Henry, R. Jones

Well Construction: 2" Flush Mount **General Condition of Well:** Good

Well Labeled: No **Well Cap:** Yes **Well Locked:** No **Condition of surrounding area:** gravel - smoking area

Well depth from TOC: 18.71 **Depth to Water from TOC:** 7.90

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 10.81

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 1.73 **Three Well Volumes (gal):** 5.19

Purging Method: Peristaltic - Low Flow **Time @ Start of Purge:** 15:20

Sample Method: Thumb **Sample Parameters:** VOC + 1,4 Dioxane

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
15:30	1.75	23.07	5.79	.234	.47	350	2	9.10	
15:35	2.5	23.05	5.91	.244	.40	187	-13	9.11	
15:43	3.5	23.08	5.99	.247	.35	92.6	-22	9.14	
15:49	4.0	23.05	6.01	.248	.32	63.1	-25	9.11	
15:56	5.0	23.08	6.03	.249	.31	48.7	-27	9.11	
16:06	5.25	23.07	6.03	.249	.31	47.1	-28	9.12	

Sample ID: 10281-MW-6 Time Collected: 16:03 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives **Date:** 10.8.10

Well ID: MW-7 **Field Conditions:** Sunny 75°

Sampling Performed By: G. Henry, R. Jones

Well Construction: 2" Flush Mount **General Condition of Well:** Good

Well Labeled: No **Well Cap:** Yes **Well Locked:** No **Condition of surrounding area:** Concrete

Well depth from TOC: 15.82 **Depth to Water from TOC:** 8.44

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 7.38

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 1.18 **Three Well Volumes (gal):** 3.54

Purging Method: Peristaltic Pump - Low Flow **Time @ Start of Purge:** 12:05

Sample Method: Thumb **Sample Parameters:** VOC + 1,4 Dioxane

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
12:16	1	21.18	7.12	.393	0.51	.38	157	10.23	
12:27	2	21.00	7.12	.391	0.36	69.5	150	10.21	
12:35	3	20.92	7.12	.391	0.34	48.7	147	10.22	
12:45	4	20.93	7.13	.392	0.33	24.1	144	10.21	

Sample ID: 10281-MW-7
10281-DUP1

Time Collected: 12:48

Technician Signature

Monitoring Well Sampling Form

EPS Project: Capitol Adhesives **Date:** 10.7.10

Well ID: MW-8 **Field Conditions:** Sunny 70°

Sampling Performed By: C. Henry, R. Jones

Well Construction: 2" Flush Mount **General Condition of Well:** good - initial all covered by gravel

Well Labeled: No **Well Cap:** Yes - off **Well Locked:** No **Condition of surrounding area:** Frank - gravel

Well depth from TOC: 14.85 30ft. **Depth to Water from TOC:** 7.49

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 7.36

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 1.18 **Three Well Volumes (gal):** 3.53

Purging Method: Peristaltic - Low Flow **Time @ Start of Purge:** 15:10

Sample Method: Thumb. **Sample Parameters:**

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
17:15	1 gal	21.34	7.36	.303	1.39	71.8	28	7.58	
17:22	2 gal	20.81	7.08	.299	1.07	32.6	63	7.75	
17:32	3 gal	20.66	6.91	.299 qh	.76	12.7	83	7.75	
17:42	4 gal	20.63	6.87	0.297	0.71	3.89	88		
17:52	5 gal	20.83	6.82	0.296	0.62	1.31	98		
~~18:02~~	~~6 gal~~	~~20.54 qh~~	~~7.62 qh~~	~~0.800 qh~~	wrong well	1	51	7.75	
									Fe^{2+} = 0.0 mg/L

Sample ID: 10280-MW-8 Time Collected: 17:55 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives **Date:** 10.7.10

Well ID: MW-9 **Field Conditions:** Sunny 70°

Sampling Performed By: G. Henry R. Jones

Well Construction: 2" Flush mount **General Condition of Well:** good

Well Labeled: No **Well Cap:** Yes-off **Well Locked:** No **Condition of surrounding area:** High weeds.

Well depth from TOC: 16.59 **Depth to Water from TOC:** 8.10

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 8.49

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 1.36 **Three Well Volumes (gal):** 4.08

Purging Method: Peristaltic - Low Flow **Time @ Start of Purge:** 5:05

Sample Method: Thumb. **Sample Parameters:** VOC

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
5:11	1.0	22.16	8.04	1.08	0.44	93.1	-8	8.32	
5:20	2.0	22.84	8.27	1.14	0.43	61	40	8.34	
5:30	2.75	22.62	8.28	1.14	0.43	50.1	32	8.34	
17 45	3.5	22.46	8.03	1.01	0.39	89.3	39	8.34	
17 58	5.0	22.43	7.81	.906	0.39	434	45	8.34	
18:10	6.0	22.34	7.62	.800	0.38	121	51	8.34	
18:20	7.0	22.30	7.59	.794	0.37	86	54	8.35	
18:30	8.0	22.28	7.58	.789	0.35	38.1	55	8.34	

Sample ID: 10280-MW-9 Time Collected: 18:35 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives **Date:** 10-8-18

Well ID: MW-10 **Field Conditions:** Indoors

Sampling Performed By: Ryan Jones Gregg Henry

Well Construction: Flush Mount **General Condition of Well:** Good

Well Labeled: no **Well Cap:** yes **Well Locked:** no **Condition of surrounding area:** Concrete warehouse

Well depth from TOC: 19.90 **Depth to Water from TOC:** 7.96

Well Diameter (in): 2 4 **Method of measure:**

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 11.94

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 1.91 **Three Well Volumes (gal):** 5.73

Purging Method: Peristaltic **Time @ Start of Purge:** 1100

Sample Method: Soda straw **Sample Parameters:** VOC + 1,4-Dioxane

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1110	1.0	21.90	6.22	0.244	1.67	76.7	23	9.03
1120	2.0	21.97	6.19	0.236	1.85	63.5	25	9.03
1130	3.0	22.06	6.13	0.228	1.98	35.0	36	9.07
1140	4.0	22.18	6.08	0.218	1.86	28.5	79	9.07
1150	5.0	22.22	6.09	0.216	1.78	13.4	102	9.07
1200	6.0	22.24	6.10	0.212	1.71	11.7	103	9.07
1210	7.0	22.29	6.10	0.211	1.70	9.7	110	9.07

Sample ID: 19281-MW-10 Time Collected: 1210 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives Date: 10/8/10

Well ID: MW-11
Sampling Performed By: C-Henry, R-Jones
Well Construction: 2" Flush Mount
Well Labeled: No Well Cap: Yes Well Locked: No
Well depth from TOC: 19.64
Well Diameter (in): 2"
Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 11.53
Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 1.84
Purging Method: Peristaltic Pump - Low flow
Sample Method: Thumb

Field Conditions: Sunny 70
General Condition of Well: Good
Condition of surrounding area: Concrete - Warehouse
Depth to Water from TOC: 8.11
Method of measure: WLM
Three Well Volumes (gal): 5.53
Time @ Start of Purge: 9:45
Sample Parameters: VOCs + 1,4 Dioxane

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
9:55	1	20.82	6.54	.363	1.66	50.2	162	8.23	
10:05	2	20.96	6.56	.358	1.31	29.8	166	8.22	
10:15	3	21.13	6.76	.350	.97	87.4	160	8.23	
10:20	4	21.21	6.81	.344	.86	61.8	156	8.23	
10:30	5	21.25	6.80	.342	0.82	61.8	157	8.24	
10:40	6	21.28	6.76	.340	0.75	61.3	158	8.21	

Sample ID: 10281-MW-11 Time Collected: 10:45 Technician Signature

Monitoring Well Sampling Form

EPS Project: Capitol Adhesives **Date:** 10-8-10

Well ID: MW-12 **Field Conditions:** Indoors

Sampling Performed By: Ryan Jones, Gregg Henly

Well Construction: flush mount **General Condition of Well:** Good

Well Labeled: no **Well Cap:** yes **Well Locked:** no **Condition of surrounding area:** concrete

Well depth from TOC: 19.9 **Depth to Water from TOC:** 8.46

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 11.4

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 1.83 **Three Well Volumes (gal):** 5.49

Purging Method: Peristaltic **Time @ Start of Purge:** 0950

Sample Method: Soda straw **Sample Parameters:**

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
1000	1.0	21.49	6.89	0.403	0.44	29.7	134	9.56	
1010	2.0	21.32	6.72	0.324	0.42	8.50	155	9.56	
1020	3.0	21.39	6.67	0.323	0.36	2.29	160	9.56	
1030	4.0	21.41	6.67	0.323	0.34	1.90	160	9.56	
1040	5.0	21.43	6.67	0.323	0.31	0.00	160	9.57	
1050	6.0	21.44	6.66	0.323	0.30	0.00	160	9.57	

Sample ID: 10281-MW-12 Time Collected: 1050 Technician Signature

Monitoring We Sampling Form

EPS Project: Capitol Adhesives **Date:** 10 · 12 · 10

Well ID: MW-13 **Field Conditions:** Sunny 65°

Sampling Performed By: G. Henry, R. Jones

Well Construction: 2" Flush mount **General Condition of Well:** good

Well Labeled: No **Well Cap:** Yes - OK **Well Locked:** No **Condition of surrounding area:** high weeds / grass

Well depth from TOC: 24.95 **Depth to Water from TOC:** 10.39

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 14.56

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 2.33 **Three Well Volumes (gal):** 6.98

Purging Method: Peristaltic - Low Flow **Time @ Start of Purge:** 8:18

Sample Method: Thumb **Sample Parameters:** VOC's

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
8:45	4.0	19.59	6.25	.282	1.11	34.6	230	12.18	
9:10	6.0	19.39	6.29	.278	0.90	6.79	234	12.17	
9:20	7.0	19.33	6.34	.277	0.76	3.84	236	12.17	
9:30	8.0	19.36	6.35	.277	0.75	4.78	234	12.10	

Sample ID: 10285 - MW-13
10285 - DUP 2

Time Collected: 9:32

Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives **Date:** 10/12/10

Well ID: MW-14 **Field Conditions:** Sunny 60-0

Sampling Performed By: G. Henry, R. Jones

Well Construction: 2" Flush Mount **General Condition of Well:** good

Well Labeled: No **Well Cap:** Yes - off **Well Locked:** No **Condition of surrounding area:** high weeds/grass

Well depth from TOC: 25.0 **Depth to Water from TOC:** 6.95

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 18.05

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 2.89 **Three Well Volumes (gal):** 8.660

Purging Method: Peristaltic - Low Flow **Time @ Start of Purge:** 8:10

Sample Method: Thumb **Sample Parameters:** VOCs

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
8:40	3	18.36	7.32	.370	.79	49.7	74	8.35
9:10	5.5	18.38	7.36	.367	.78	25.4	71	8.34
9:20	6.5	18.48	7.39	.366	.74	20.1	72	8.05 Battery Died - Switched
9:35	8.0	18.73	7.39	.365	.72	11.3	73	8.35 Battery
9:50	9.0	18.77	7.39	.365	.69	8.4	76	9.28.

Sample ID: 10285-MW-14 Time Collected: 9:52 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives Date: 10-12-10

Well ID: MW-15
Sampling Performed By: G. Henry, R. Jones
Well Construction: 2" Flush Mount
Well Labeled: No Well Cap: Yes Well Locked: No
Well depth from TOC: 24.8
Well Diameter (in): 2"
Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 20.5
Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 3.20
Purging Method: Peristaltic - Low Flow
Sample Method: Thrmfs

Field Conditions: Sunny 70°
General Condition of Well: Fair.
Condition of surrounding area: gravel parking
Depth to Water from TOC: 4.75
Method of measure: WLM
Three Well Volumes (gal): 9.62
Time @ Start of Purge: 10:12
Sample Parameters: VOC + 1,4 Dioxane

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
10:26	2.0	20.04	7.47	.368	0.86	65.3	68	
10:45	3.0	21.87	7.56	.364	6.97	43.5	55	Battery dying - switched Bat#s.
10:55	4.0	22.33	7.52	.340	6.66	19.3	52	
11:05	5.0	22.78	7.48	.337	0.48	8.54	46	
11:35	9.0	23.25	7.48	.337	0.42	3.99	36	
11:45	10.0	23.27	7.49	.336	0.39	4.51	30	

Sample ID: 10285-MW-15 Time Collected: 11:50 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives **Date:** 10-8-10

Well ID: MW-16 **Field Conditions:** Sunny 78°

Sampling Performed By: C. Henry, R. Jones

Well Construction: 2" Flush Mount **General Condition of Well:** Good

Well Labeled: No **Well Cap:** Yes **Well Locked:** No **Condition of surrounding area:** Weeds

Well depth from TOC: 25.1 **Depth to Water from TOC:** 4.52

Well Diameter (in): 2" **Method of measure:** WLM

Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 20.58

Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 3.29 **Three Well Volumes (gal):** 9.88

Purging Method: Peristaltic Pump - Low Flow **Time @ Start of Purge:** 12:40

Sample Method: Thumb **Sample Parameters:** VOC + 1,4 Dioxane

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
13:50	7.5	20.78	6.46	0.393	0.37	5.31	137	5.13	
13:59	8.5	20.74	6.47	0.394	0.37	2.68	137	5.13	
14:08	9.5	20.72	6.47	0.394	0.37	2.91	137	5.14	
14:13	10	20.72	6.48	0.395	0.37	2.98	137	5.14	

Sample ID: 10281-MW-16 Time Collected: 14:15 Technician Signature

Monitoring We. Sampling Form

EPS Project: Capitol Adhesives **Date:** 10.8.10

Well ID: MW-17
Sampling Performed By: C.Henry, R.Jones
Well Construction: 2" FLUSH MOUNT
Well Labeled: No **Well Cap:** Yes **Well Locked:** No
Well depth from TOC: 20.4
Well Diameter (in): 2" Riser pipe
Height (Ht) of water in well (Well depth from TOC - Static level from TOC): 12.71
Volume of water in well (Ht. x(.16 for 2")(.653 for 4")(1.469 for 6"): 2.03
Purging Method: Peristaltic-Low-Flow
Sample Method: Thumb

Field Conditions: Sunny 70°
General Condition of Well: Good
Condition of surrounding area: Concrete - Warehouse
Depth to Water from TOC: 7.69
Method of measure: WLM
Three Well Volumes (gal): 6.1
Time @ Start of Purge: 10:55
Sample Parameters:

Time	Volume (gal)	Temp (oC)	pH	Cond. (mS/cm)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW	Comments
11:05	1	21.45	6.8	.349	0.31	16.8	163	7.89	
11:15	2	21.46	7.11	.409	.34	18.5	169	8.89	
11:25	3	21.51	7.12	.408	.33	9.72	168	8.89	
11:35	4	21.55	7.11	.406	.32	2.77	164	8.90	
11:45	5	21.55	7.11	.405	.34	1.27	163	8.90	
11:55	6	21.55	7.10	.404	.38	0.35	161	8.90	

Sample ID: 10281-MW-17 Time Collected: 10:58 Technician Signature

APPENDIX I

Results from MIP Investigation

This appendix contains excerpts from the Source Area Investigation Report (EPS, 2008).

4.0 RESULTS

4.1 MIP Overview

The MIP borings, which capture a continuous profile of VOCs regardless of phase, i.e. adsorbed to soil or dissolved, provide a model of VOC distribution in the subsurface. As previously noted, the advantage of continuous profiling is that potential source areas or areas of elevated concentration are identified and accounted for during the corrective action phase of the project.

Interpretation of MIP profiles requires consideration of site features, for example, site lithology, water table elevation and measured contaminant concentrations in soil and groundwater. Water table elevation is a direct measurement that has the potential to be observed in MIP profiles if VOCs are dissolved in groundwater. For chlorinated VOCs, this will be observed as a response in the ECD as the MIP probe nears or enters the saturated zone. Note that fluctuating water table conditions have the potential to smear the transition from unsaturated to saturated soil conditions. Residual pore water containing VOCs retained in soil as the water table recedes or groundwater in the capillary fringe, both above the static water table, will be detected with the MIP. Therefore, the MIP profile will exhibit a detector response above the current static water table. During the current investigation, October 13, 2008, the local water table elevation based on site monitoring wells was approximately 6-8 feet bgs near the ASTs and 3-5 feet bgs north of the ASTs in the loading dock area. Current water table elevations at the Capitol Site are near a four-year low.

The MIP was advanced into the subsurface with a direct push rig at 19 locations surrounding the AST enclosure and north of the enclosure following the predominant groundwater flow direction. Two MIP points proposed within the interior of the facility were not completed due to obstructions and interference with facility operations. The total depth of each MIP boring (Table 1) closely matched the total depth of nearby site monitoring wells, 12 to 24 ft bgs, which are set at direct-push technology (DPT) refusal. Refusal at the Captiol Site closely mirrors the transition from surficial deposits to bedrock shale.

4.2 MIP Profiles

The MIP screening results for soil and the underlying aquifer are provided in Figure 4. As indicated by the MIP profiles, the periphery borings to the south and east of the AST enclosure do not exhibit detections for chlorinated VOCs with the exception of a small detection in MIP-4 at approximately 7 to 8 ft bgs. MIP profiles which exhibit ECD saturation (the ECD is sensitive to the chlorinated hydrocarbons) occur near the AST enclosure (MIP-1, MIP-2, MIP-11, MIP-12, MIP-13, MIP-14 and MIP-15) and downgradient from the AST enclosure in the loading dock area (MIP-8, MIP-10, MIP-16, MIP-17 and MIP-19).

MIP borings adjacent to the west side of the AST enclosure (MIP-13, and MIP-14) exhibit ECD saturation at approximately 5 to 6 feet bgs. Depth to water in this area, based on MW-7 and MW-2, is approximately 7 to 7.5 feet bgs. The occurrence of VOCs at depths above the current water table elevation is expected. Depth to water was less than two feet bgs in MW-7 in April 2008, indicating the soil column above the current water table elevation is likely to contain residual pore water with dissolved VOCs. ECD saturation in both MIP-13 and MIP-14 occurs over a wide depth interval of 4 to 7 feet.

MIP borings adjacent to the east side of the AST enclosure exhibit ECD saturation at approximately 2 feet bgs (MIP-2) and at a few discrete depths spanning the interval from 4 to 16 feet bgs in MIP-1. The tight intervals of VOC detection in the subsurface east of the ASTs may reflect the subsurface heterogeneity of the soil lithology and contaminant distribution at this location. This complex pattern is observed in most MIP borings northeast of the AST enclosure area, which is the predominant flow direction for site groundwater. At depth, the VOC profile in MIP-1 appears to stabilize near background ECD levels (17 feet bgs). Refusal of MIP borings occurred prior to reaching background ECD levels in MIP-2, MIP-13 and MIP-14. As noted, refusal of the MIP probe occurred at depths comparable to site monitoring wells. For example, in the area of the AST enclosure, MIP-13, which is adjacent to MW-7, reached refusal at 15.05 ft bgs; total depth of MW-7 is 16.1 ft bgs. Refusal depth of the MIP, as a general rule, is typically less than standard DPT rods due to the sensitivity of the MIP probe to hammering.

In the gravel area immediately north of the AST enclosure, MIP-11 and MIP-15 exhibit frequent transitions from low-to-high detection. As noted, this profile likely reflects heterogeneous subsurface lithology and contaminant distributions moving downgradient of the AST area. MIP-12, located between MIP-11 and MIP-15, however, exhibits a wide interval of ECD saturation extending from approximately 4 to 12 feet bgs. This ECD pattern is similar to the pattern observed in MIP-13 and MIP-14, which are upgradient of MIP-12. Adjacent to MIP-12, is MW-3 and MW-3D. These two wells have been identified in past groundwater sampling events to exhibit the highest site groundwater concentration for total VOCs. This is consistent with MIP-12 exhibiting the most extensive ECD saturation in comparison to all site MIP profiles.

Farther north and east of the AST enclosure is the site loading dock and parking area. MIP soil borings in this area continue to exhibit a complex array of detection intervals, again reflecting a high degree of subsurface heterogeneity and contaminant distribution. MIP-16 and MIP-17, in the southwest area of the loading dock, exhibit notable intervals of ECD saturation, with MIP-16 ECD saturation occurring near the surface. The water table elevation near MIP-16 is expected to be shallow due to its location as a low point in the loading dock area and storm drain collection area. Soil from the boring and slough on the DPT rods were noticeably saturated with groundwater (i.e. muddy). The detection of VOCs in MIP borings north and northeast of the AST enclosure is consistent with historical detections in site monitoring wells.

After completion of the MIP field screening, six soil cores where collected at small offsets (1 to 2 deet) to the completed MIP borings to quantify soil VOCs and their respective concentrations. Soil samples were collected to characterize a range of ECD responses from the MIP both above and below the measured water table. In samples that exhibit ECD response, but do not exhibit soil VOCs, the ECD response can be attributed to dissolved or aqueous VOCs only. This data is discussed in Section 3.3.

4.3 Soil Laboratory Results

All soil samples were analyzed with method 8260C for VOCs and 1,4 dioxane. The analytical results for all soil samples and all constituents that were detected are provided in Table 2. Twenty-four VOCs were detected with 12 detected above Georgia Hazardous Site Response Act (HSRA) Notification Criteria (§391-3-19-.04). VOCs are not screened with site specific Risk Reduction Standards since none are approved for the site.

The primary constituents detected in soil are chlorinated VOCs. Chlorinated ethenes and ethanes account for all detections above Georgia Notification Criteria except for 1,4-Dioxane. 1,4-Dioxane is a common stabilizer added to chlorinated solvents at concentrations up to 5% v/v.

4.3.1 Chloroethenes Summary

Chloroethenes (tetrachloroethylene [PCE], trichloroethylene [TCE], dichloroethylene compounds [DCEs] and vinyl chloride [VC]) were detected in unsaturated soil in three (SS-MIP1, SS-MIP8 and SS-MIP13) of the six soil borings (Figure 5). Chloroethenes were also detected below the water table at SS-MIP1, 9 feet bgs and at SS-MIP12, 12 feet bgs. Saturated soil samples were collected to aid in the interpretation of the MIP results. Spatially, unsaturated soil detections occurred immediately adjacent to both the east and west side of the AST enclosure and to the northeast following the prevailing groundwater flow direction (Figure 2). No chloroethene detections in vadose zone soil were observed upgradient (south) of the ASTs (SS-MIP5), immediately north of the ASTs (SS-MIP12) or northeast of the ASTs beyond SS-MIP8.

4.3.2 Chloroethanes Summary

Chloroethanes detections in unsaturated soil are spatially consistent with that of the chloroethenes. Detections in unsaturated soil occurred in four (SS-MIP1, SS-MIP8, SS-MIP13 and SS-MIP12) of six soil borings with SS-MIP12 limited to a single detection of 1,2-dichloroethane at 6 ft bgs near the water table (Figure 6). At SS-MIP1, the detection of chloroethanes was limited to shallow soil depths, less than five feet; at SS-MIP8, the detection of chloroethanes was also limited to shallow soil depths, less than four feet bgs. The MIP soil boring at SS-MIP13, located between the AST enclosure and the facility building, exhibited chloroethanes in soil at all depths above detectable

concentrations. No chloroethane detections in vadose zone soil were observed upgradient (south) of the ASTs (SS-MIP5) or northeast of the ASTs beyond SS-MIP8.

4.3.3 1,4-Dioxane

Detection of 1,4-dioxane in soil was limited to a single sample location, SS-MIP13. This location, between the AST enclosure and the facility building, exhibits the highest frequency of detection for both chloroethenes and chloroethanes. Soil samples at all depths in SS-MIP13 (1, 3 and 6 ft bgs) are above the Georgia Notification Criteria for 1,4-dioxane.

4.4 Evaluation of MIP and Soil Sample Results

SS-MIP1: Soil samples were collected at 2, 5, and 9 feet bgs at SS-MIP1, with the 9 foot sample collected below the current water table. Chloroethenes were observed at all depths, with the site's highest detection of PCE and TCE occurring at 2 feet bgs (15 mg/kg and 12 mg/kg, respectively). Detection of chloroethenes occurred at 5 feet bgs, but were below Georgia Notification Criteria. Chloroethanes were detected at 2 feet bgs at SS-MIP1, with no detection in the 5 or 9 foot bgs samples. The MIP profile does not capture the high soil PCE or TCE detections observed in the collected soil core. The soil core was collected in an offset borings about two feet closer to the AST enclosure than the MIP boring.

SS-MIP5: Soil samples were collected at 3 and 6 feet bgs at SS-MIP5, which is upgradient of the AST enclosure. No VOCs were detected in either soil sample, consistent with the MIP profile.

SS-MIP8: Soil samples were collected at 2 and 4 feet bgs at SS-MIP8. Sample depth was determined by an adjacent monitoring well, MW-4, which has a water table elevation of approximately 5 feet bgs. Chloroethenes and chloroethanes were detected in the 2-foot sample, with TCE measured at 2.4 mg/kg. The sample from 4 feet bgs did not detect any chloroethanes, but chloroethenes (PCE and TCE) where detected. The MIP profile for this location exhibits a sharp transition at approximately 2 and 3 feet bgs, consistent with the soil samples and nearby groundwater (MW-4) and displays high ECD response to approximately 12 feet bgs suggesting a dissolved plume phase.

SS-MIP12: Soil samples were collected at 4, 6 and 12 feet bgs at SS-MIP12, with the 12 foot sample collected below the current water table. Both the 4 foot and 6 foot soil

samples were non-detect for all VOCs except for a detection of 1,1-dichloroethane in the 6 foot sample. The water table in the adjacent wells, MW-3 and MW-3D, are both approximately 6 feet bgs. Based on the soil results and the sharp transition to ECD saturation at 4 feet bgs, a couple feet above the current water table, the MIP profile identifies VOCs occurring in the dissolved phase and not in the soil.

SS-MIP13: Soil samples were collected at 1, 3 and 6 feet bgs at SS-MIP13, with the local water table elevation (MW-7) at approximately 7.5 feet bgs. Chloroethenes and chloroethanes were detected in all soil samples in this location, with the highest detection occurring in the 6-foot sample. Only trace levels (<0.011 mg/kg) of VOC were detected in the 1 and 3-foot samples except for vinyl chloride. Vinyl chloride was detected in the soil at 0.54 and 0.79 mg/kg. This is consistent with the MIP profile, which exhibits a sharp transition between 5 and 6 feet bgs as the VOC soil concentrations increase and as the MIP probe approaches the saturated zone.

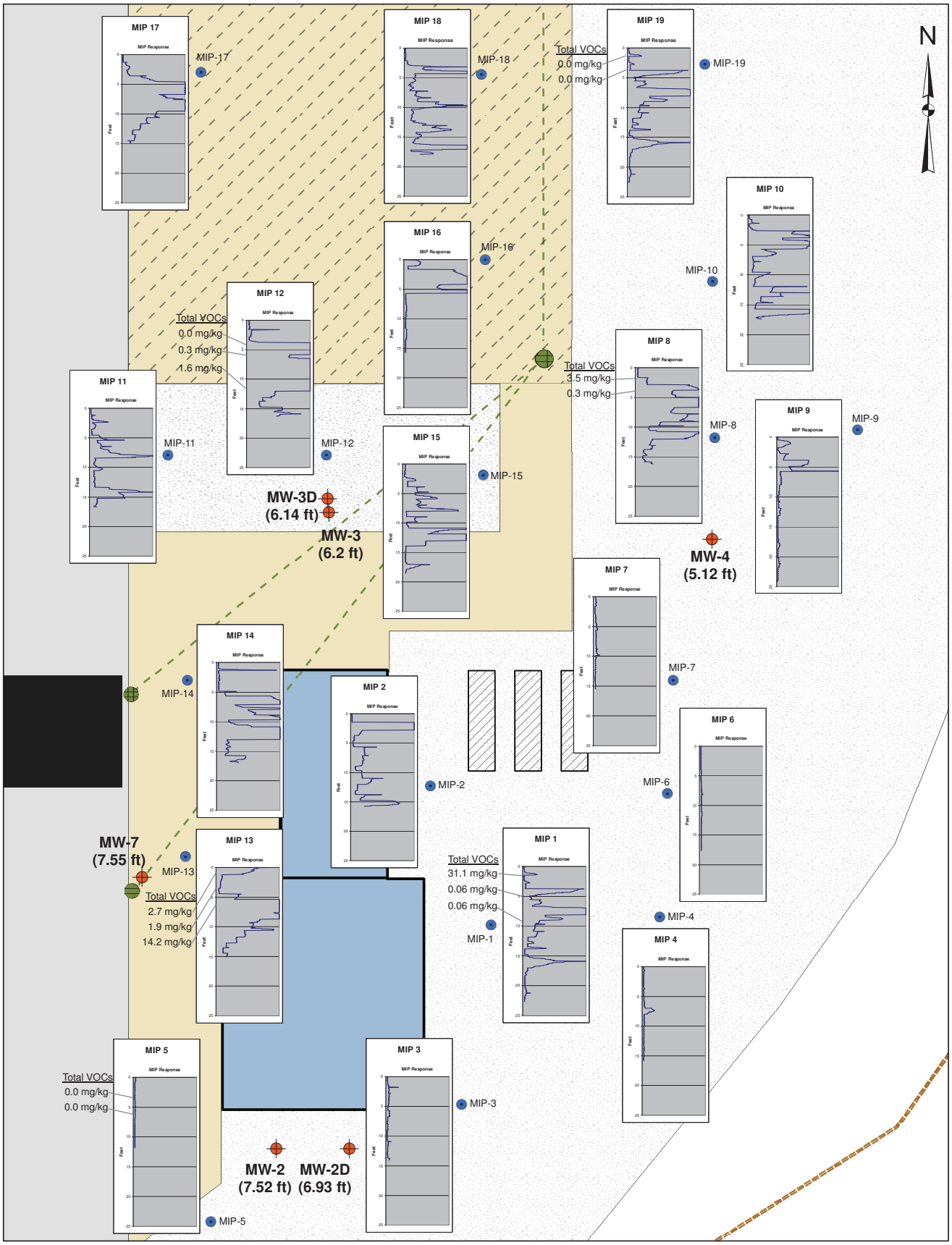
SS-MIP19: Soil samples were collected at 1 and 3 feet bgs at SS-MIP19. No soil VOCs were detected at this location. The MIP profile at less than 4 feet exhibits relatively low ECD detections. At depths greater than 4 feet, consistent with expected water levels, the profile exhibits several elevated detections beginning at the water table, one at saturation indicating the profile is measuring VOC levels in groundwater.

5.0 SUMMARY

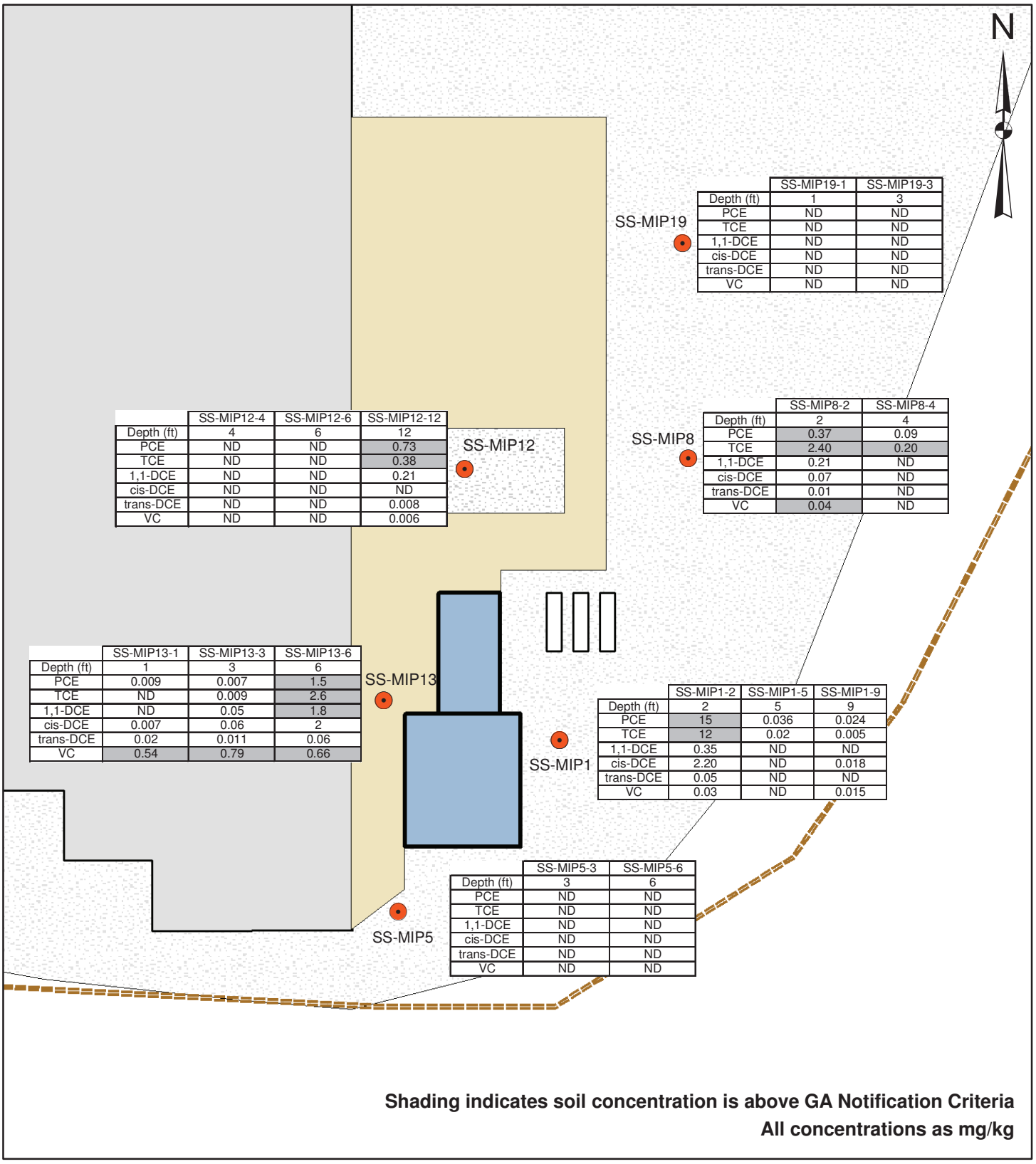
Soil samples collected in the vadose zone adjacent to the AST enclosure (SS-MIP1 and SS-MIP13) and northeast of the enclosure (SS-MIP8) exhibit chloroethanes and chloroethenes above Georgia Notification Criteria. Soil samples from SS-MIP19, north of SS-MIP8 were non-detect for soil VOCs. The detection of VOCs in soil collected near the AST enclosure may explain the poor response of the subsurface system to the current corrective action, since ongoing leaching of VOCs from soil may be occurring. Soil and groundwater beneath and to the west of the AST enclosure was not directly treated in the current corrective action. Soil VOCs were not observed in the MIP profile and soil boring samples upgradient of the AST enclosure (SS-MIP5).

MIP profiles tend to exhibit peak ECD response near the transition from unsaturated to saturated soil (water table elevation). MIP profiles, including profiles near the AST tend to decrease with depth, suggesting residual VOC product, if present, is entrained in the upper surficial deposits and has not been released in sufficient quantities to remain mobile and transport to deep depths. The MIP profiles also indicate a very staggered and intermittent VOC profile, in particular for profiles downgradient of the AST enclosure, which is a probable reflection of preferential flow paths in the subsurface suggesting a dissolved phase plume.

Membrane Interface Probe
Total Volatile Organic Compounds Soil Profiles



Soil Chloroethenes



	SS-MIP19-1	SS-MIP19-3
Depth (ft)	1	3
PCE	ND	ND
TCE	ND	ND
1,1-DCE	ND	ND
cis-DCE	ND	ND
trans-DCE	ND	ND
VC	ND	ND

	SS-MIP12-4	SS-MIP12-6	SS-MIP12-12
Depth (ft)	4	6	12
PCE	ND	ND	0.73
TCE	ND	ND	0.38
1,1-DCE	ND	ND	0.21
cis-DCE	ND	ND	ND
trans-DCE	ND	ND	0.008
VC	ND	ND	0.006

	SS-MIP8-2	SS-MIP8-4
Depth (ft)	2	4
PCE	0.37	0.09
TCE	2.40	0.20
1,1-DCE	0.21	ND
cis-DCE	0.07	ND
trans-DCE	0.01	ND
VC	0.04	ND

	SS-MIP13-1	SS-MIP13-3	SS-MIP13-6
Depth (ft)	1	3	6
PCE	0.009	0.007	1.5
TCE	ND	0.009	2.6
1,1-DCE	ND	0.05	1.8
cis-DCE	0.007	0.06	2
trans-DCE	0.02	0.011	0.06
VC	0.54	0.79	0.66

	SS-MIP1-2	SS-MIP1-5	SS-MIP1-9
Depth (ft)	2	5	9
PCE	15	0.036	0.024
TCE	12	0.02	0.005
1,1-DCE	0.35	ND	ND
cis-DCE	2.20	ND	0.018
trans-DCE	0.05	ND	ND
VC	0.03	ND	0.015

	SS-MIP5-3	SS-MIP5-6
Depth (ft)	3	6
PCE	ND	ND
TCE	ND	ND
1,1-DCE	ND	ND
cis-DCE	ND	ND
trans-DCE	ND	ND
VC	ND	ND

Shading indicates soil concentration is above GA Notification Criteria

All concentrations as mg/kg

0 10 20 40

Feet

Soil Sample

Gravel - Laydown Area

Above-ground Storage Tanks

Concrete

Drainage Ditch

Propane Tanks

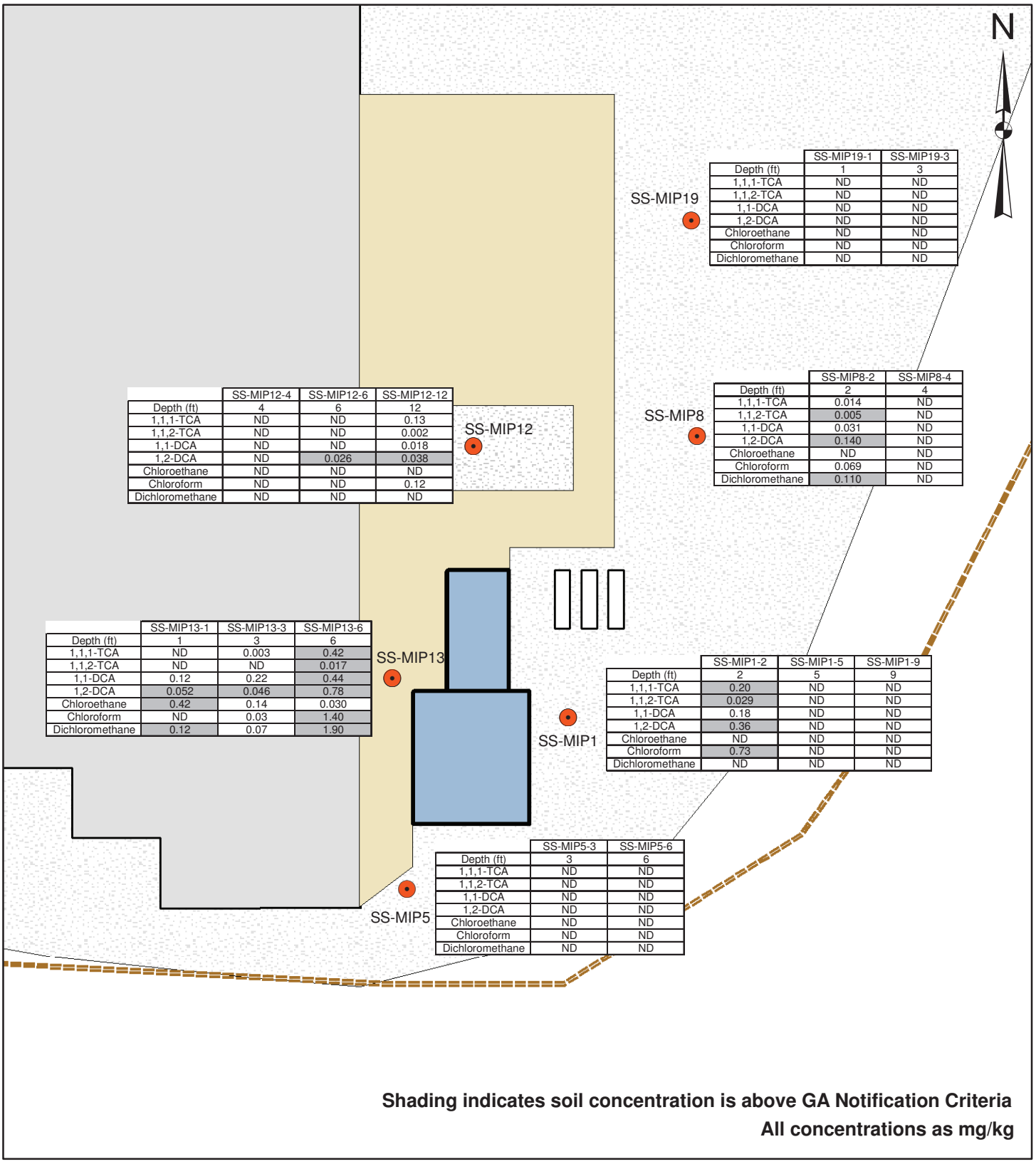
Facility Building

Gravel - Transportation

Environmental Planning Specialists, Inc.

Figure No.5

Soil Chloroethanes



	SS-MIP19-1	SS-MIP19-3
Depth (ft)	1	3
1,1,1-TCA	ND	ND
1,1,2-TCA	ND	ND
1,1-DCA	ND	ND
1,2-DCA	ND	ND
Chloroethane	ND	ND
Chloroform	ND	ND
Dichloromethane	ND	ND

	SS-MIP12-4	SS-MIP12-6	SS-MIP12-12
Depth (ft)	4	6	12
1,1,1-TCA	ND	ND	0.13
1,1,2-TCA	ND	ND	0.002
1,1-DCA	ND	ND	0.018
1,2-DCA	ND	0.026	0.038
Chloroethane	ND	ND	ND
Chloroform	ND	ND	0.12
Dichloromethane	ND	ND	ND

	SS-MIP8-2	SS-MIP8-4
Depth (ft)	2	4
1,1,1-TCA	0.014	ND
1,1,2-TCA	0.005	ND
1,1-DCA	0.031	ND
1,2-DCA	0.140	ND
Chloroethane	ND	ND
Chloroform	0.069	ND
Dichloromethane	0.110	ND

	SS-MIP13-1	SS-MIP13-3	SS-MIP13-6
Depth (ft)	1	3	6
1,1,1-TCA	ND	0.003	0.42
1,1,2-TCA	ND	ND	0.017
1,1-DCA	0.12	0.22	0.44
1,2-DCA	0.052	0.046	0.78
Chloroethane	0.42	0.14	0.030
Chloroform	ND	0.03	1.40
Dichloromethane	0.12	0.07	1.90

	SS-MIP1-2	SS-MIP1-5	SS-MIP1-9
Depth (ft)	2	5	9
1,1,1-TCA	0.20	ND	ND
1,1,2-TCA	0.029	ND	ND
1,1-DCA	0.18	ND	ND
1,2-DCA	0.36	ND	ND
Chloroethane	ND	ND	ND
Chloroform	0.73	ND	ND
Dichloromethane	ND	ND	ND

	SS-MIP5-3	SS-MIP5-6
Depth (ft)	3	6
1,1,1-TCA	ND	ND
1,1,2-TCA	ND	ND
1,1-DCA	ND	ND
1,2-DCA	ND	ND
Chloroethane	ND	ND
Chloroform	ND	ND
Dichloromethane	ND	ND

Shading indicates soil concentration is above GA Notification Criteria

All concentrations as mg/kg

0 10 20 40

Feet

Soil Sample

Gravel - Laydown Area

Above-ground Storage Tanks

Concrete

Drainage Ditch

Propane Tanks

Facility Building

Gravel - Transportation

TABLES

Table 1	MIP Boring Summary
Table 2	Soil Volatile Organic Compounds

Table 1
MIP Boring Summary

MIP Boring	Date	Depth (ft)	ECD Activity
1	10/14/2008	15.5	Yes
2	10/14/2008	15.5	Yes
3	10/14/2008	14	No
4	10/14/2008	16	Yes
5	10/14/2008	12	No
6	10/14/2008	17.5	No
7	10/14/2008	15	No
8	10/14/2008	16	Yes
9	10/15/2008	24	Yes
10	10/15/2008	17	Yes
11	10/15/2008	17	Yes
12	10/15/2008	16	Yes
13	10/15/2008	15	Yes
14	10/15/2008	17	Yes
15	10/15/2008	18	Yes
16	10/16/2008	16	Yes
17	10/16/2008	15	Yes
18	10/16/2008	18	Yes
19	10/16/2008	22	Yes

ECD - electron capture detector

Table 2
Soil Volatile Organic Compounds

Location	Notification Criteria (mg/kg)	MIP-1	MIP-1	MIP-1	MIP-5	MIP-5	MIP-8	MIP-8	MIP-12	MIP-12	MIP-12	MIP-13	MIP-13	MIP-13	MIP-19	MIP-19
Depth (feet)		2	5	9	3	6	2	4	4	6	12	1	3	6	1	3
Below Water Table				Yes							Yes			Yes		
Tetrachloroethene	0.18	15	0.04	0.02	0	0	0.37	0.09	0	0	0.73	0.01	0.01	1.50	0	0
Trichloroethene	0.13	12	0.02	0.01	0	0	2.40	0.20	0	0	0.38	0	0.01	2.60	0	0
cis-1,2-Dichloroethene	NA	2.20	0	0.02	0	0	0.07	0	0	0	0	0.01	0.06	2.00	0	0
trans-1,2-Dichloroethene	0.53	0.05	0	0	0	0	0.01	0	0	0	0.01	0.02	0.01	0.06	0	0
1,1-Dichloroethene	0.36	0.35	0	0	0	0	0.21	0	0	0	0.21	0	0.05	1.80	0	0
Vinyl chloride	0.04	0.03	0	0.01	0	0	0.04	0	0	0	0.01	0.54	0.79	0.66	0	0
1,4-Dioxane	0.03	0	0	0	0	0	0	0	0	0	0	1.40	0.51	0.64	0	0
1,1,1-Trichloroethane	0.2	0.20	0	0	0	0	0.01	0	0	0	0.13	0	0	0.42	0	0
1,1,2-Trichloroethane	0.005	0.03	0	0	0	0	0.005	0	0	0	0.00	0	0	0.02	0	0
1,1-Dichloroethane	0.36	0.18	0	0	0	0	0.03	0	0	0	0.02	0.12	0.22	0.44	0	0
1,2-Dichloroethane	0.02	0.36	0	0	0	0	0.14	0	0	0.03	0.04	0.05	0.05	0.78	0	0
Trichloromethane (Chloroform)	0.68	0.73	0	0	0	0	0.07	0	0	0	0.12	0	0.03	1.40	0	0
Dichloromethane (Methylene chloride)	0.08	0	0	0	0	0	0.11	0	0	0	0	0.12	0.07	1.90	0	0
Chloroethane	0.17	0	0	0	0	0	0	0	0	0	0	0.42	0.14	0.03	0	0
Benzene	0.02	0	0	0	0	0	0	0	0	0	0	0.01	0	0.01	0	0
Toluene	14.4	0.03	0	0	0	0	0.01	0.01	0	0	0	0.10	0.02	0.02	0	0
2-Butanone (MEK)	0.79	0	0	0	0	0	0	0	0	0	0	0.12	0	0	0	0
4-Methyl-2-pentanone	3.3	0	0	0	0	0	0	0	0	0	0	0.01	0	0	0	0
Acetone	2.74	0	0	0	0	0	0.54	0	0	0	0	0	0	0	0	0
Freon-11	NA	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0	0
Freon-113	6.92	0	0	0	0	0	0	0	0	0	0	0.07	0	0	0	0
Methylcyclohexane	NA	0.01	0	0	0	0	0.01	0	0	0	0	0.18	0.03	0.01	0	0
Cyclohexane	25	0	0	0	0	0	0	0	0	0	0	0.01	0	0	0	0

Shading indicates soil concentration is above Georgia Notification Criteria.
All concentrations reported as mg/kg (milligrams/kilogram)

APPENDIX J

BIOCHLOR Modeling Results

EPS

BIOCHLOR Modeling Results

Introduction

BIOCHLOR Natural Attenuation Decision Support System (version 2.2) was used to model biodegradation of chlorinated ethanes and ethenes at the Property. BIOCHLOR is an analytical model approved by the U.S. Environmental Protection Agency that is used to simulate the degradation of chlorinated ethanes and ethenes. It is an Excel-based program based on the Domenico analytical solute transport model. BIOCHLOR simulates advection, 3-D dispersion, linear adsorption and biotransformation via reductive dechlorination.

The purpose of this modeling is two-fold. The first purpose is to provide further evidence that natural attenuation (reductive dechlorination) is occurring at the Property. The second is to use the model to predict concentrations at the hypothetical Point of Exposure 1000' downgradient of the plum edge.

Model Development and Calibration

The input parameters used in the model are presented in Figure J-1. The advection parameters (e.g., hydraulic conductivity) were based on site-specific values. The dispersion and adsorption parameters were primarily based on EPA default values. The biotransformation decay coefficients were based on typical values presented in EPA guidance and adjusted during the model calibration. The model assumes that there is a continuous source, which was from the truck spill (just north of the AST containment area) in 1995. The modeled source concentrations were developed during model calibration. Historical groundwater data (from 2004 through early 2007) were used to adjust the source concentrations and decay coefficients to develop a model that best represented the conditions at the Property. The source concentrations were chosen primarily to model the data from 2004, which results in an overestimation of modeled concentrations in subsequent years. However, this results in a model that is conservative. Because of their locations downgradient of the spill area and because chlorinated ethenes or ethanes were detected at these locations, data collected following wells or locations (see Figure J-1) were used in the model: MW-3, MW-3D, MW-4, MW-5, MW-15, DPGW-2 and DPGW-4.

Sensitivity Analysis

A sensitivity analysis was conducted to evaluate the influence or relative importance of key input variables and assumptions on the predicted concentrations. The parameters evaluated in the sensitivity analysis included the biotransformation decay coefficients, the retardation factor, hydraulic conductivity and porosity. This analysis was run for model year 2004 and 2030 at two distances: 528 feet (which represents MW-16, the Point of Demonstration well) and 264 feet

(half the distance to MW-16). The predicted concentrations (shown on Table J-2) at each of these distances were determined for three different conditions for each parameter being considered: baseline, a value higher than baseline and a value lower than baseline. The resulting concentrations are also compared to the Type 1 RRSs for an additional frame of reference.

The most sensitive parameter was shown to be the decay coefficient, which has an impact of one to two orders of magnitude on the concentrations. Porosity and hydraulic conductivity were also sensitive parameters with one order of magnitude difference in predicted concentrations. Changes in the retardation factor did not make an appreciable difference in the concentrations. It is important to note that in all these simulations, the concentrations predicted at 528 feet (MW-16) were below the Type 1 RRSs, and in most cases were zero.

Chlorinated Ethane Results

Figure J-2 shows output screens from the BIOCHLOR model for each year from 2004 through 2010. The curves on the figure represent the model's predicted concentrations of TCA, DCA, and CA at distances along the centerline of the plume. There is also a curve that represents the total chlorinated ethane concentration if no biodegradation were to occur. The symbols (squares, diamonds and triangles) on the figures represent actual groundwater data collected at the Property during that year. Figure J-3 shows the same results for just the year 2010 with a separate figure for each constituent. Here the yellow and black squares represent the actual groundwater data collected at the Property. These figures show that the model simulations in most instances is an overestimation of the actual conditions at the Property. Thus, this model is conservative and will likely predict higher concentrations than will be found in analytical results.

Figure J-4 shows predicted concentrations for each constituent in model year 2030. These figures show the "no degradation" concentrations and predicted concentrations due to first order biodegradation over distances along the centerline of the plume. Also shown on these figures are the Type 1 Risk Reduction Standards and the location of well MW-16 (the Point of Demonstration well at the property boundary). These figures show that predicted concentrations of TCA and DCA at MW-16 are well below the Type 1 RRSs.

Chlorinated Ethene Results

Similar to the figures mentioned above, Figure J-5 shows output screens from the BIOCHLOR model for each year from 2004 through 2010 for chlorinated ethenes. Figure J-6 shows the same results for just the year 2010 with a separate figure for each constituent. These figures show that the model, although not perfect, is a good representation of actual conditions (especially through 2007) at the Property and can be used to predict future concentrations. After 2007 the model simulations appear to overestimate the concentrations of PCE and TCE. This may be due in part

to the injections of EHC® in 2007, which may have resulted in stimulating reductive dechlorination. Thus the model will conservatively estimate the concentrations of PCE and TCE into the future.

Figure J-7 shows predicted concentrations for each constituent in model year 2030. These figures show the "no degradation" concentrations and predicted concentrations due to first order biodegradation over distances along the centerline of the plume. Also shown on these figures are the Type 1 Risk Reduction Standards and the location of well MW-16 (the Point of Demonstration well at the property boundary). These figures show that predicted concentrations of PCE, TCE, DCE and VC at MW-16 are well below the Type 1 RRSs.

Preliminary Conclusions

The model developed provides further evidence the biodegradation of chlorinated ethanes and ethenes is occurring at the Property. Comparison of the model predictions to actual groundwater results at the Property indicates that the model can be used to conservatively predict future concentrations. According to the modeling results for year 2030, the concentrations at well MW-16 will be well below the Type 1 RRSs. MW-16 can be used as a Point of Demonstration for the hypothetical Point of Exposure since 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 downgradient from the location of the spill and 230 feet downgradient from the edge of the plume.) Thus, the model predicts that groundwater concentrations at the Point of Exposure will not exceed Type 1 RRSs.

Table J-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	500	ft	Assumption
	Zone length	500	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

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.

Table J-2. Sensitivity Analysis (Year 2004)

Decay Coefficients (1/yr)							
	Concentrations (mg/L) at 264 ft			Concentrations (mg/L) at 528 ft			
Constituent	2x Baseline	Baseline	0.1 x Baseline	2x Baseline	Baseline	0.1 x Baseline	Type 1 RRS
PCE	0	0.002	0.116	0	0	0	0.005
TCE	0	0.006	0.287	0	0	0	0.005
DCE	0	0.003	0.079	0	0	0	0.07
VC	0	0.002	0.032	0	0	0	0.002
TCA	0	0.005	0.246	0	0	0	0.2
DCA	0.014	0.073	0.117	0	0	0	1

Retardation Factor							
	Concentrations (mg/L) at 264 ft			Concentrations (mg/L) at 528 ft			
	R=5	R=3.95 (Baseline)	R=1.4	R=5	R=3.95 (Baseline)	R=1.4	Type 1 RRS
PCE	0.002	0.002	0.003	0	0	0	0.005
TCE	0.004	0.006	0.007	0	0	0	0.005
DCE	0.002	0.003	0.003	0	0	0	0.07
VC	0.002	0.002	0.003	0	0	0	0.002
TCA	0.004	0.005	0.006	0	0	0	0.2
DCA	0.038	0.073	0.12	0	0	0.004	1

Hydraulic Conductivity (cm/s)							
	Concentrations (mg/L) at 264 ft			Concentrations (mg/L) at 528 ft			
	K=9.28e-4	K=1.93e-3 (Baseline)	K=2.85e-3	K=9.28e-4	K=1.93e-3 (Baseline)	K=2.85e-3	Type 1 RRS
PCE	0	0.002	0.013	0	0	0	0.005
TCE	0	0.006	0.032	0	0	0	0.005
DCE	0	0.003	0.013	0	0	0	0.07
VC	0	0.002	0.012	0	0	0	0.002
TCA	0	0.005	0.028	0	0	0	0.2
DCA	0.001	0.073	0.228	0	0	0.003	1

Porosity							
	Concentrations (mg/L) at 264 ft			Concentrations (mg/L) at 528 ft			
	n=0.38	n=0.3 (Baseline)	n=0.15	n=0.38	n=0.3 (Baseline)	n=0.15	Type 1 RRS
PCE	0.001	0.002	0.023	0	0	0	0.005
TCE	0.002	0.006	0.057	0	0	0	0.005
DCE	0.001	0.003	0.024	0	0	0	0.07
VC	0.001	0.002	0.021	0	0	0	0.002
TCA	0.002	0.005	0.05	0	0	0	0.2
DCA	0.041	0.073	0.204	0	0	0	1

Basis for values selected:

Decay coefficients - 2x and 0.1x baseline are based on an example presented in 2000 Guidance.

Retardation Factor - R-1.4 based on the example presented in the 2000 Guidance, R=5 is slightly higher than that presented in the 2000 Guidance because the baseline value is higher than that shown in the Guidance.

Hydraulic Conductivity - based on the lowest and highest values calculated at the Site (from the 2006 CAP)

Porosity - based on low and high values reasonable for the lithological formation

Table J-3. Sensitivity Analysis (Year 2030)

Decay Coefficients (1/yr)							
	Concentrations (mg/L) at 264 ft			Concentrations (mg/L) at 528 ft			
Constituent	2x Baseline	Baseline	0.1 x Baseline	2x Baseline	Baseline	0.1 x Baseline	Type 1 RRS
PCE	0	0.003	0.319	0	0	0.079	0.005
TCE	0	0.007	0.79	0	0	0.195	0.005
DCE	0	0.003	0.259	0	0	0.078	0.07
VC	0	0.003	0.143	0	0	0.061	0.002
TCA	0	0.006	0.678	0	0	0.169	0.2
DCA	0.016	0.12	0.521	0	0.005	0.294	1
Retardation Factor							
	Concentrations (mg/L) at 264 ft			Concentrations (mg/L) at 528 ft			
	R=5	R=3.95 (Baseline)	R=1.4	R=5	R=3.95 (Baseline)	R=1.4	Type 1 RRS
PCE	0.003	0.003	0.003	0	0	0	0.005
TCE	0.007	0.007	0.007	0	0	0	0.005
DCE	0.003	0.003	0.003	0	0	0	0.07
VC	0.003	0.003	0.003	0	0	0	0.002
TCA	0.006	0.006	0.006	0	0	0	0.2
DCA	0.12	0.12	12	0.005	0.005	0.005	1
Hydraulic Conductivity (cm/s)							
	Concentrations (mg/L) at 264 ft			Concentrations (mg/L) at 528 ft			
	K=9.28e-4	K=1.93e-3 (Baseline)	K=2.85e-3	K=9.28e-4	K=1.93e-3 (Baseline)	K=2.85e-3	Type 1 RRS
PCE	0	0.003	0.013	0	0	0	0.005
TCE	0	0.007	0.032	0	0	0	0.005
DCE	0	0.003	0.014	0	0	0	0.07
VC	0	0.003	0.012	0	0	0	0.002
TCA	0	0.006	0.028	0	0	0	0.2
DCA	0.016	0.12	0.258	0	0.005	0.024	1
Porosity							
	Concentrations (mg/L) at 264 ft			Concentrations (mg/L) at 528 ft			
	n=0.38	n=0.3 (Baseline)	n=0.15	n=0.38	n=0.3 (Baseline)	n=0.15	Type 1 RRS
PCE	0.001	0.003	0.029	0	0	0.001	0.005
TCE	0.002	0.007	0.07	0	0	0.002	0.005
DCE	0.001	0.003	0.029	0	0	0.001	0.07
VC	0.001	0.003	0.026	0	0	0.001	0.002
TCA	0.002	0.006	0.061	0	0	0.001	0.2
DCA	0	0.12	0.361	0	0.005	0.053	1

Basis for values selected:

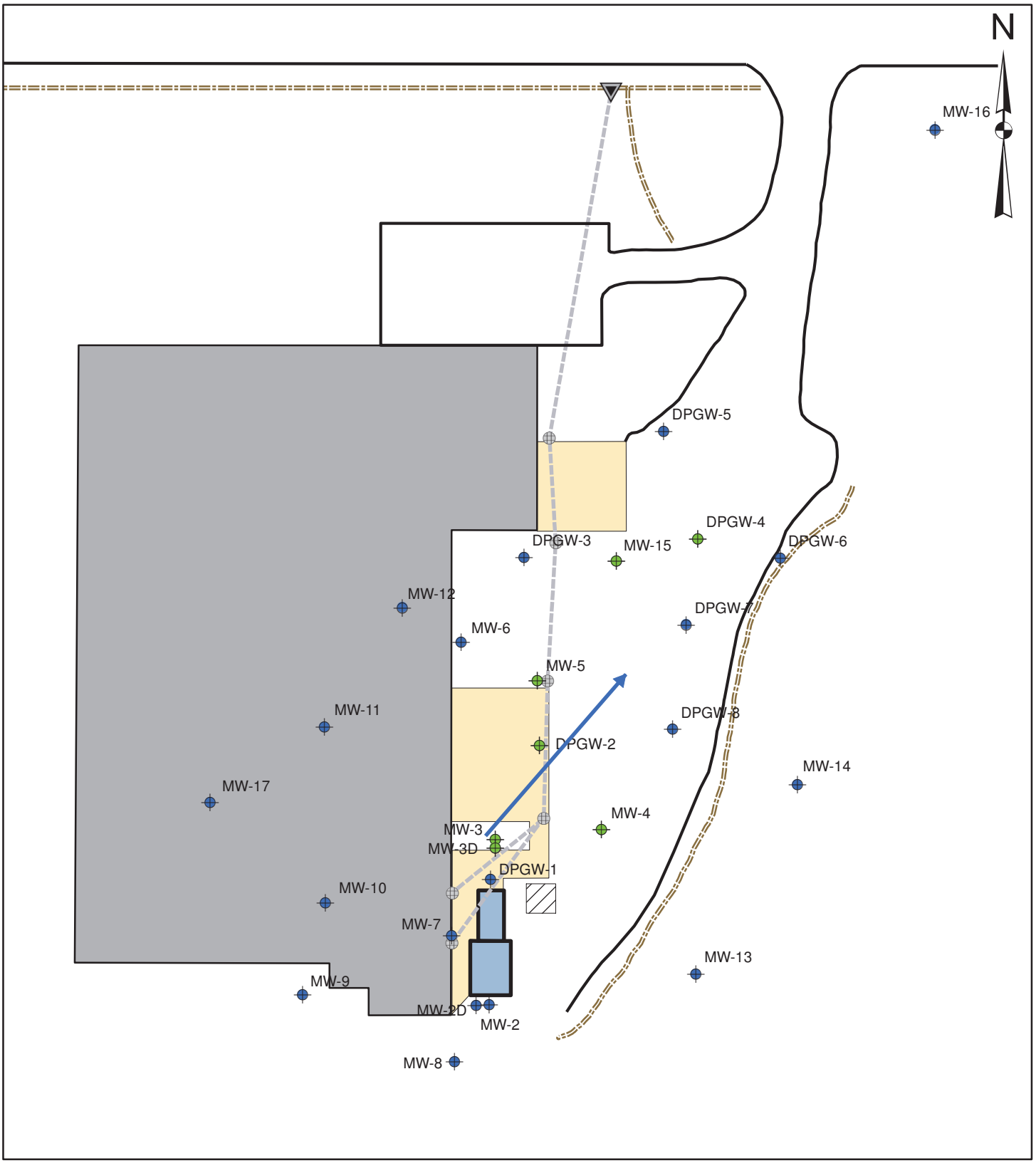
Decay coefficients - 2x and 0.1x baseline are based on an example presented in 2000 Guidance.

Retardation Factor - R-1.4 based on the example presented in the 2000 Guidance, R=5 is slightly higher than that presented in the 2000 Guidance because the baseline value is higher than that shown in the Guidance.

Hydraulic Conductivity - based on the lowest and highest values calculated at the Site (from the 2006 CAP)

Porosity - based on low and high values reasonable for the lithological formation

Capitol Adhesives
Wells Used for BIOCHLOR Model



0 50 100
Feet

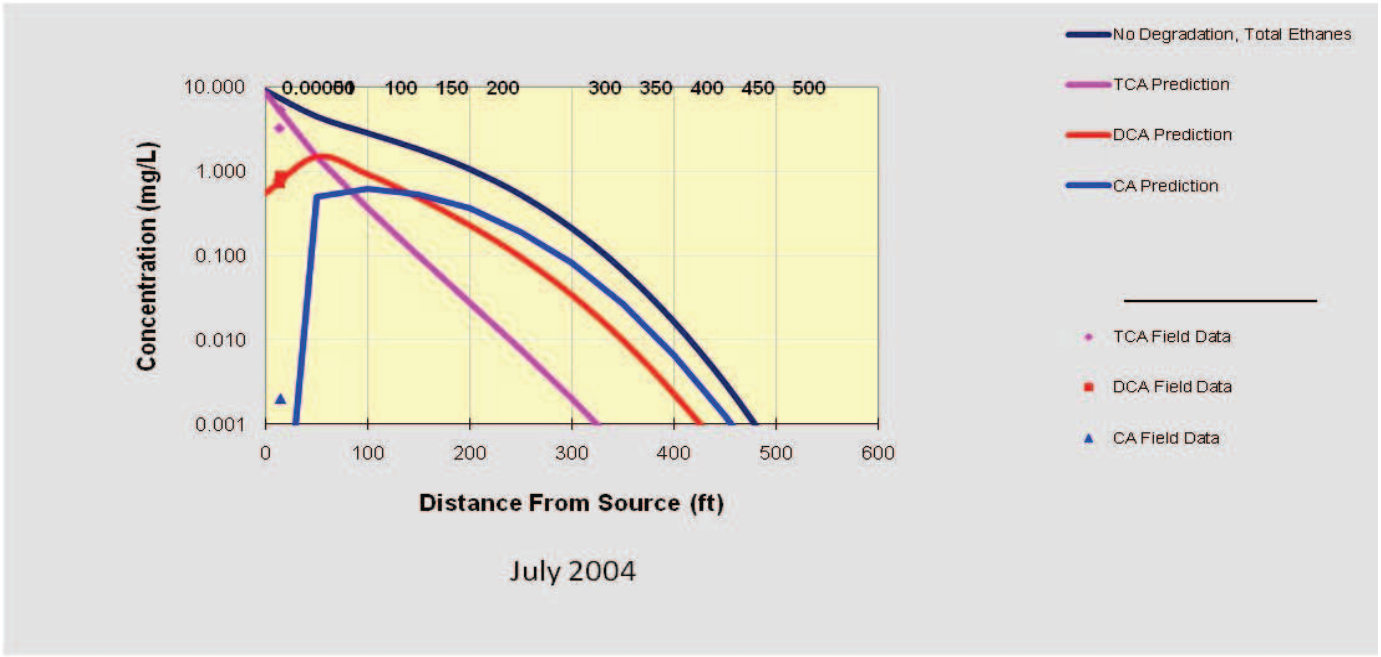
Legend

- Groundwater Locations Used in Modeling
- Groundwater Locations
- Location of Spill
- Approximate Direction of Groundwater Flow
- Surface Drainage Ditch
- Transportation Area
- Subgrade Storm/Drain Lines
- Open Drains
- Storm Water Outfall
- AST Containment
- Facility
- Concrete Surface
- Propane Tanks

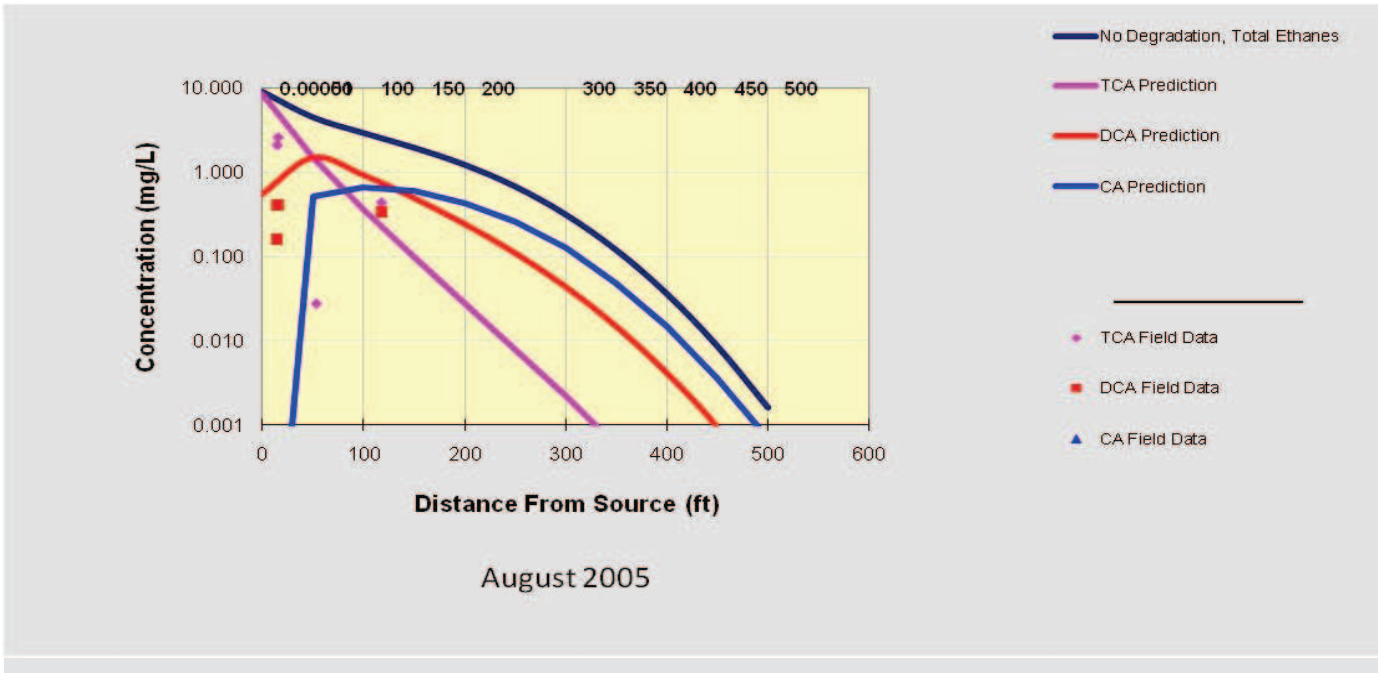
Environmental Planning Specialists, Inc.
G:\River Associates\Capitol Adhesives\VRP\Revised\GIS\FigJ1_Biochlor.mxd

Figure No. J-1

FIGURE J-2
Historical Dissolved Chlorinated Ethane Concentrations Along Plume Centerline

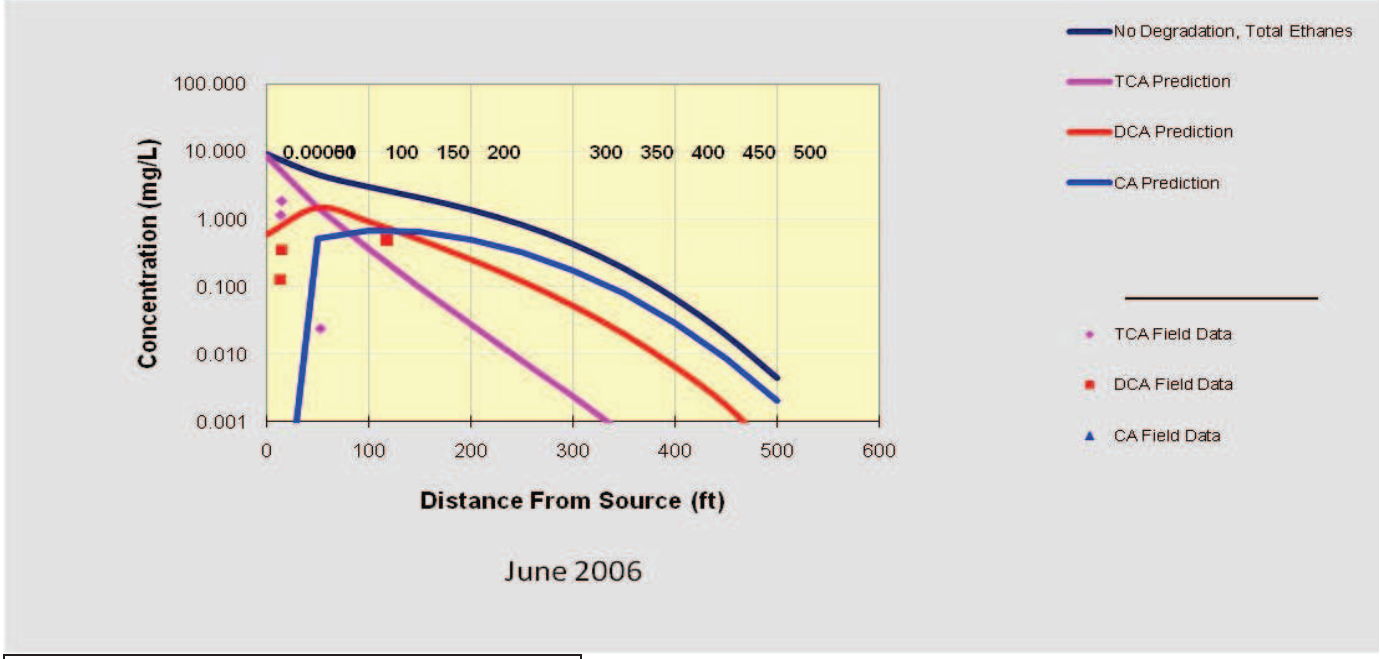


	MW-3	MW-3D
TCA Conc. (mg/L)	3.26	5.40
DCA Conc. (mg/L)	0.73	0.87
CA Conc. (mg/L)		0.00

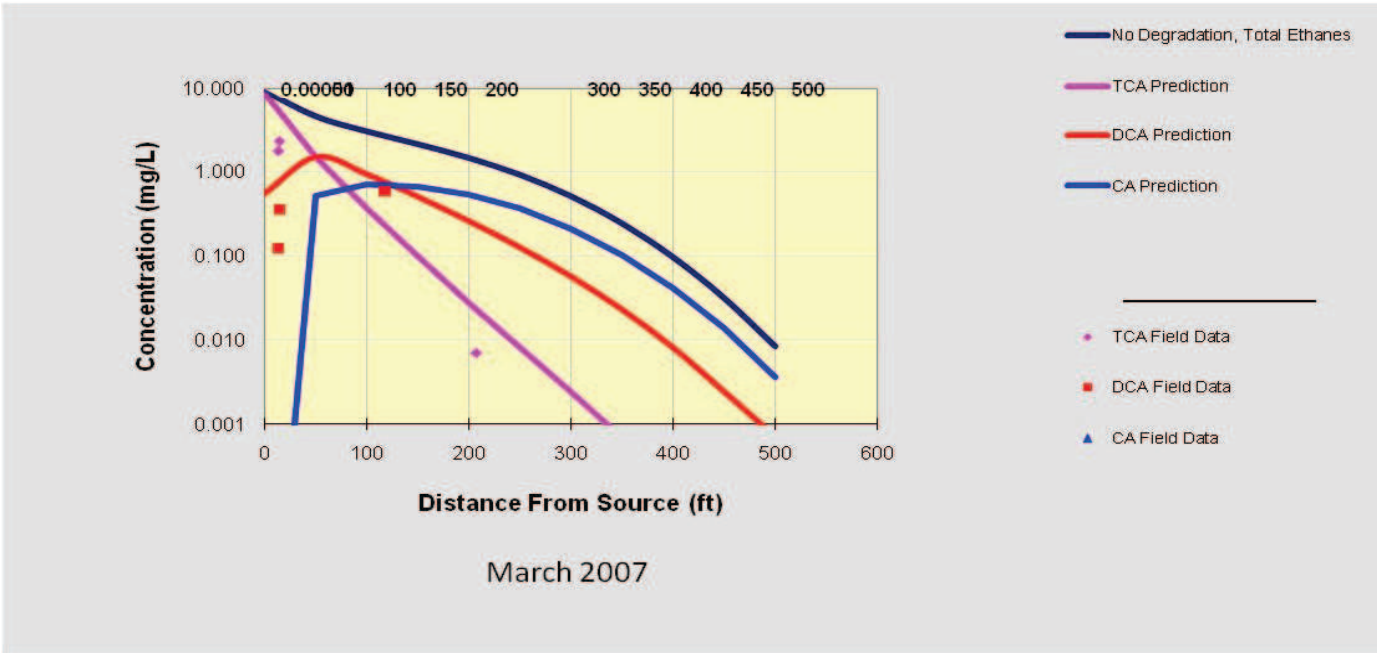


	MW-3D	MW-3	MW-4	MW-5
TCA Conc. (mg/L)	2.10	2.60	0.028	0.44
DCA Conc. (mg/L)	0.16	0.41		0.34
CA Conc. (mg/L)				

FIGURE J-2
Historical Dissolved Chlorinated Ethane Concentrations Along Plume Centerline

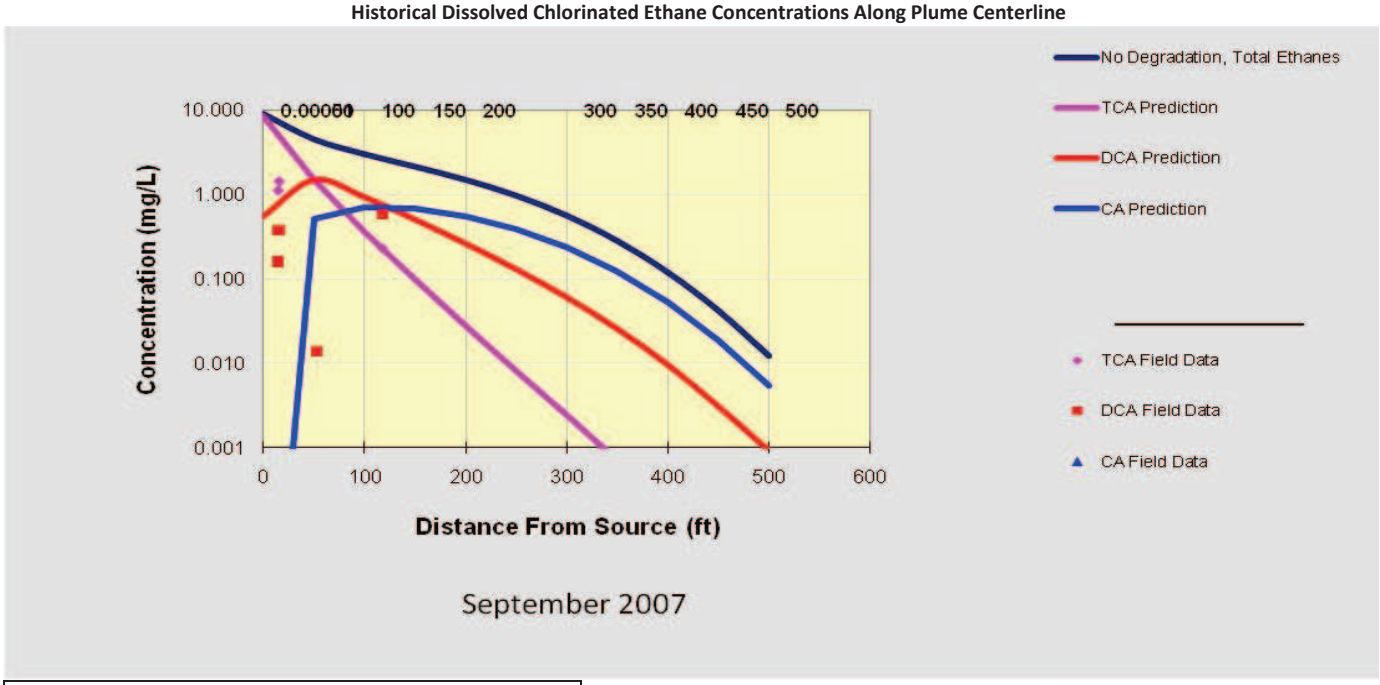


	MW-3	MW-3D	MW-4	MW-5
TCA Conc. (mg/L)	1.85	1.15	0.024	0.51
DCA Conc. (mg/L)	0.35	0.13		0.49
CA Conc. (mg/L)				

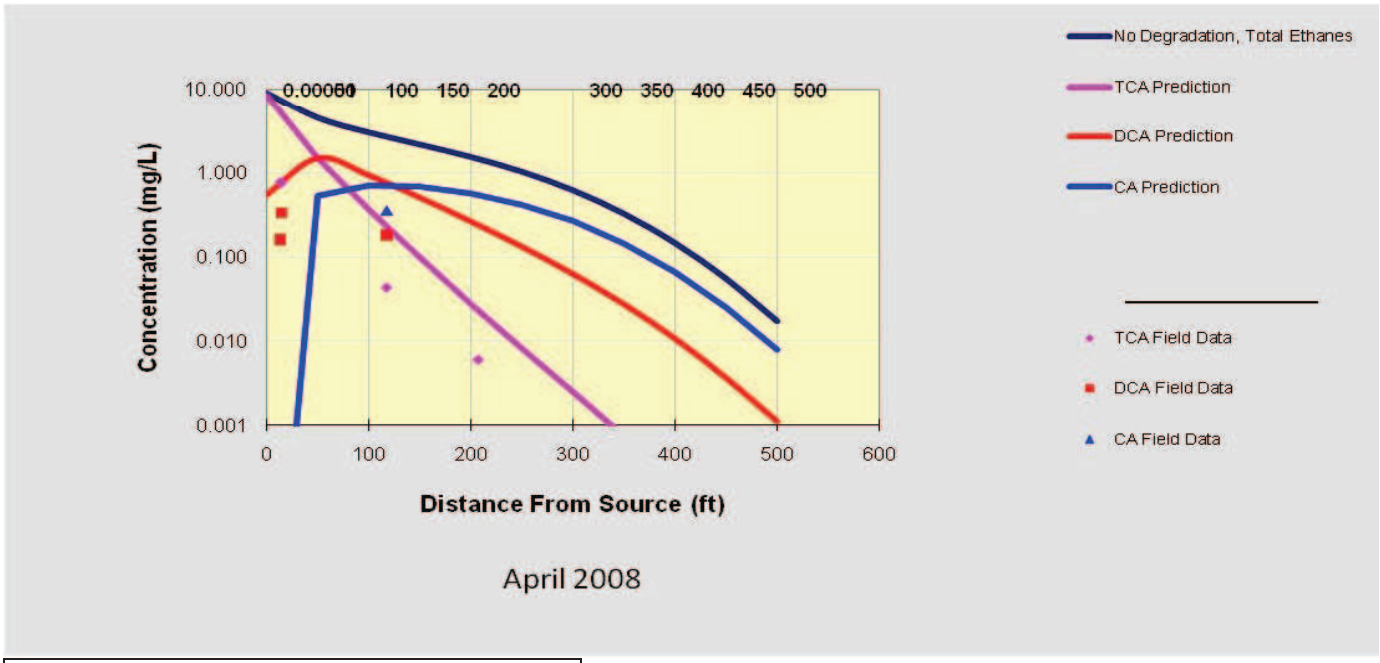


	MW-3	MW-3D	MW-5	MW-15
TCA Conc. (mg/L)	2.27	1.74		0.007
DCA Conc. (mg/L)	0.35	0.12	0.58	
CA Conc. (mg/L)				

FIGURE J-2
Historical Dissolved Chlorinated Ethane Concentrations Along Plume Centerline

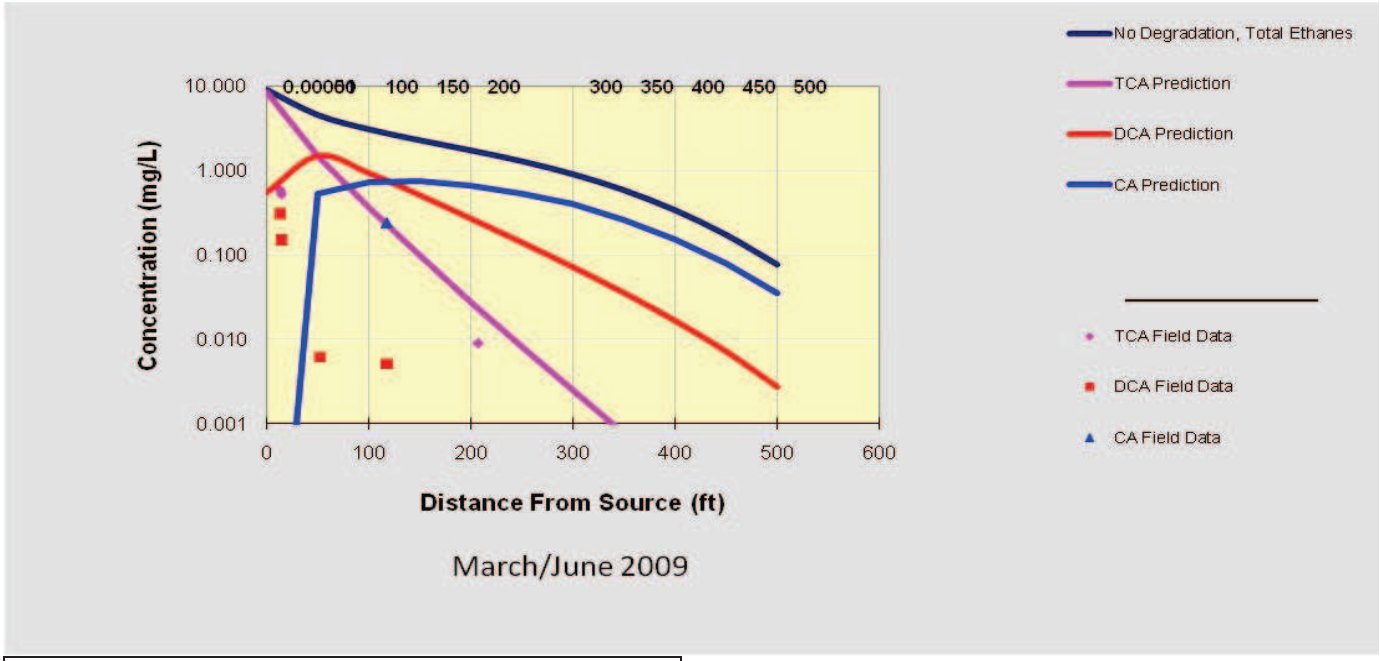


	MW-3	MW-3D	MW-4	MW-5
TCA Conc. (mg/L)	1.43	1.12		0.23
DCA Conc. (mg/L)	0.38	0.16	0.014	0.59
CA Conc. (mg/L)				

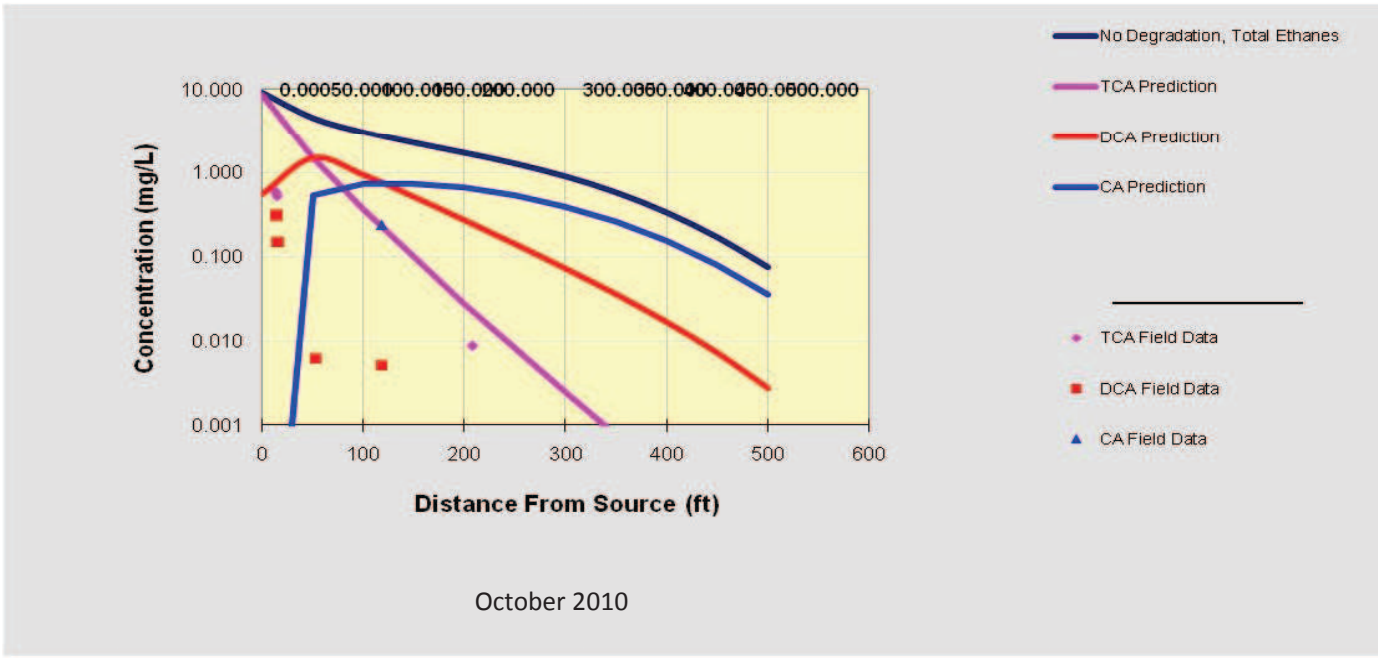


	MW-3	MW-3D	MW-5	MW-15
TCA Conc. (mg/L)	0.76	0.76	0.043	0.006
DCA Conc. (mg/L)	0.33	0.16	0.18	
CA Conc. (mg/L)			0.36	

FIGURE J-2
Historical Dissolved Chlorinated Ethane Concentrations Along Plume Centerline

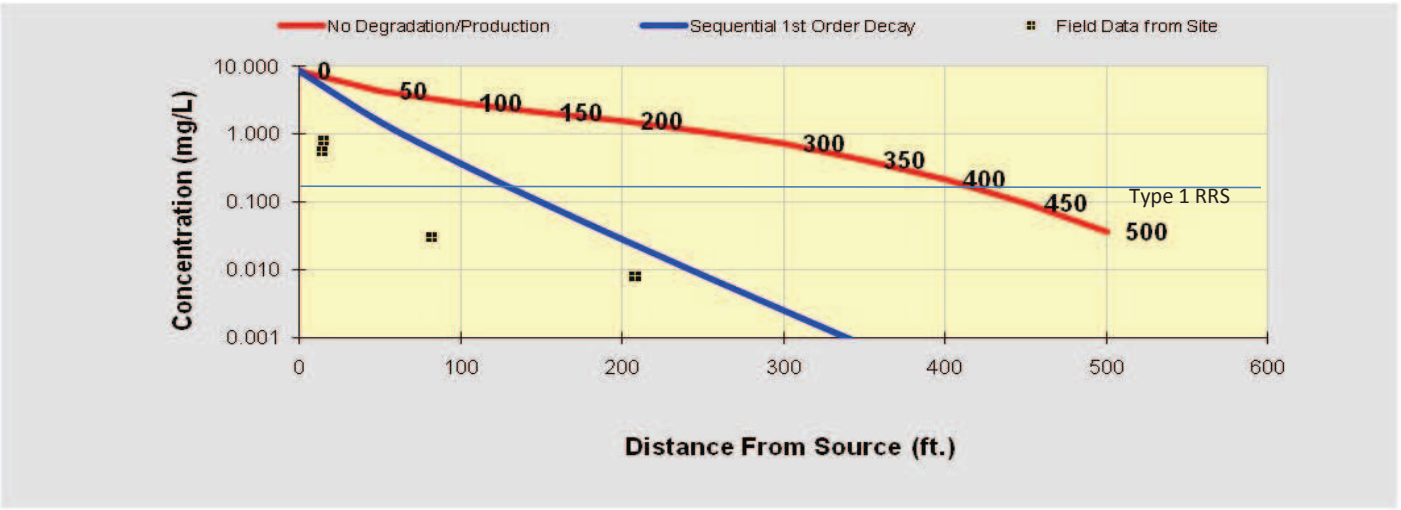


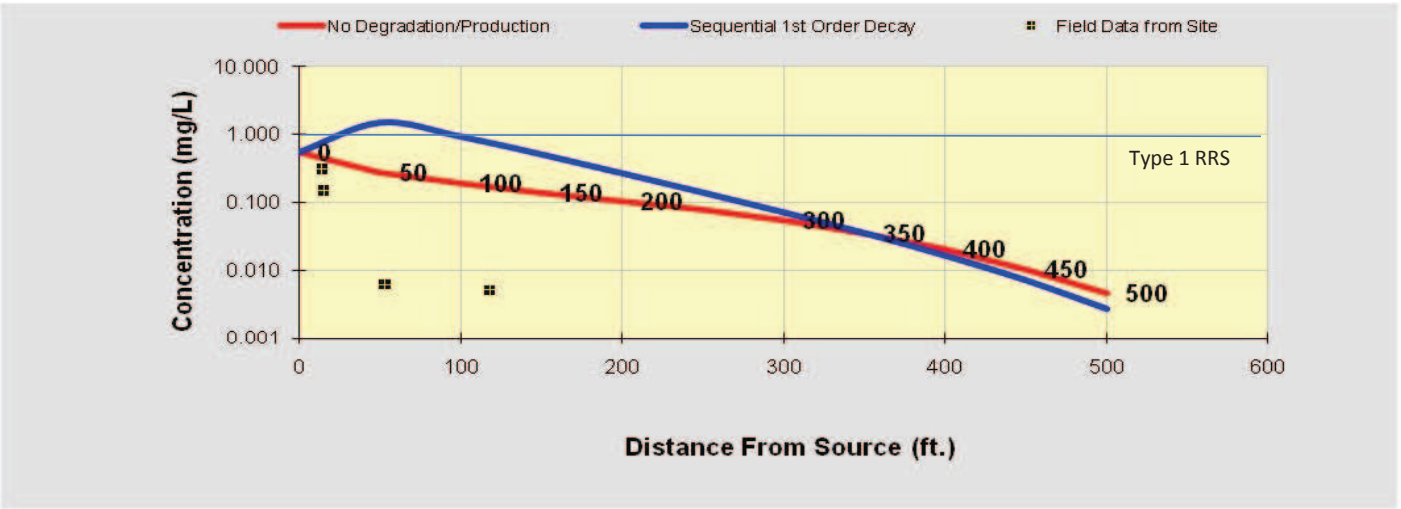
	MW-3	MW-3	DPGW-2	MW-5	MW-15
TCA Conc. (mg/L)	0.79	0.55	0.03		0.008
DCA Conc. (mg/L)	0.31	0.13	0.24	0.017	
CA Conc. (mg/L)			0.61	0.25	



	MW-3D	MW-3	MW-4	MW-5	MW-15
TCA Conc. (mg/L)	0.53	0.59			0.009
DCA Conc. (mg/L)	0.15	0.31	0.01	0.005	
CA Conc. (mg/L)				0.24	

Figure J-3
October 2010 Modeled Dissolved Chlorinated Ethane Concentrations Along Plume Centerline





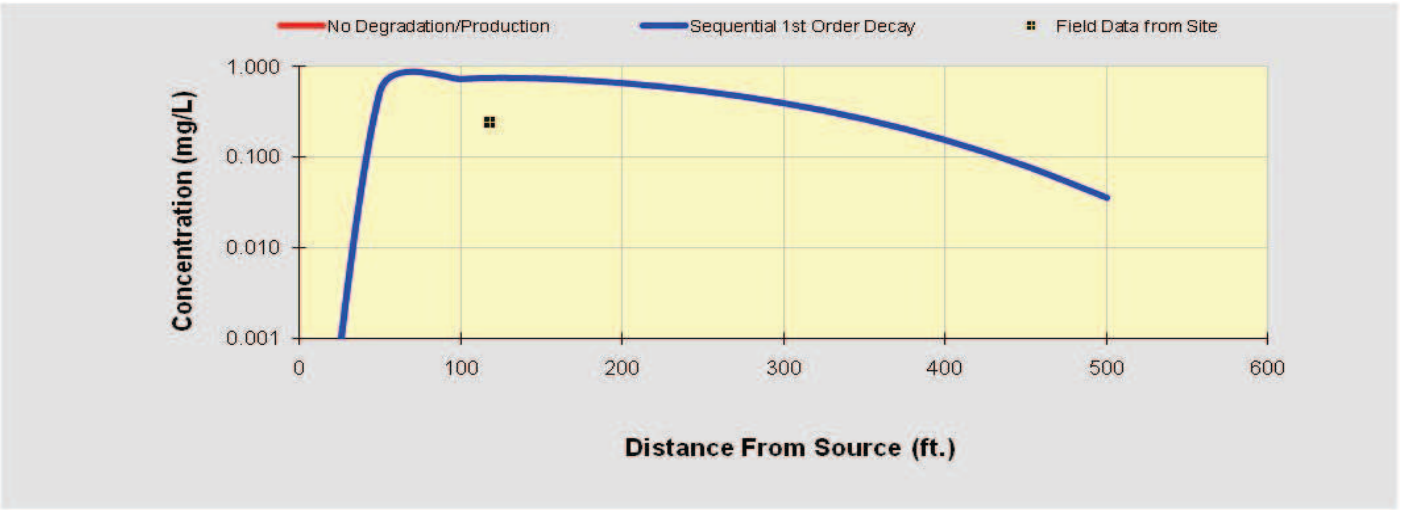


Figure J-4
Future Modeled Chlorinated Ethane Degradation

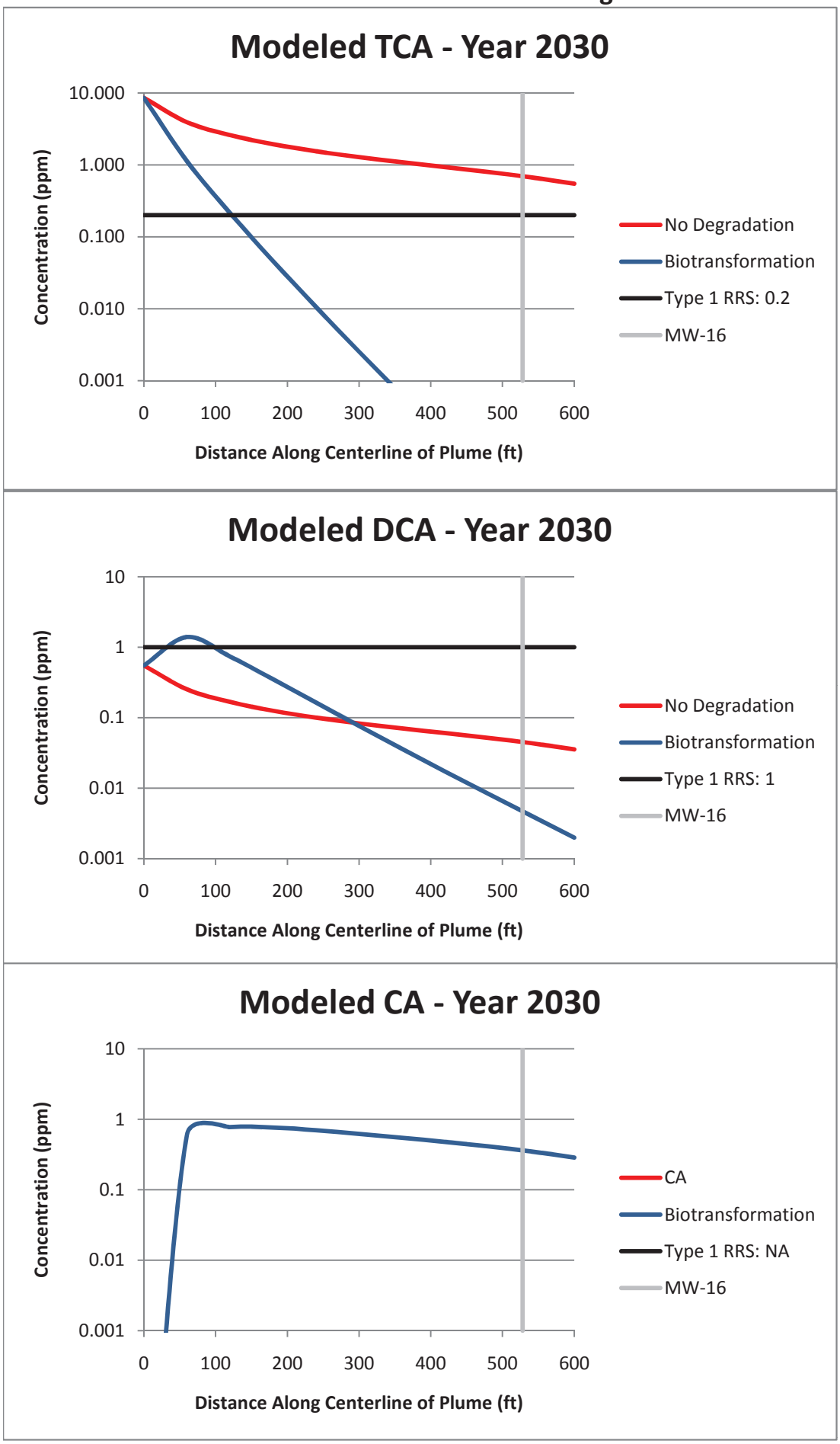
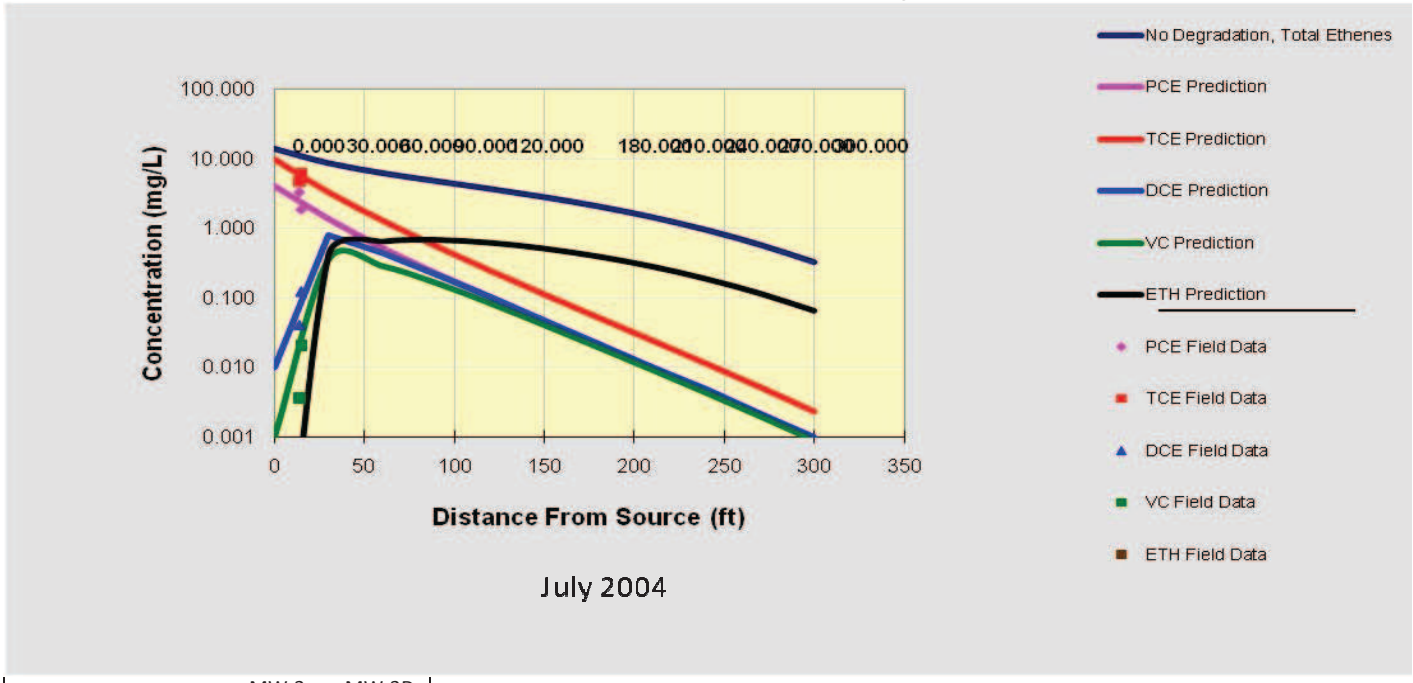
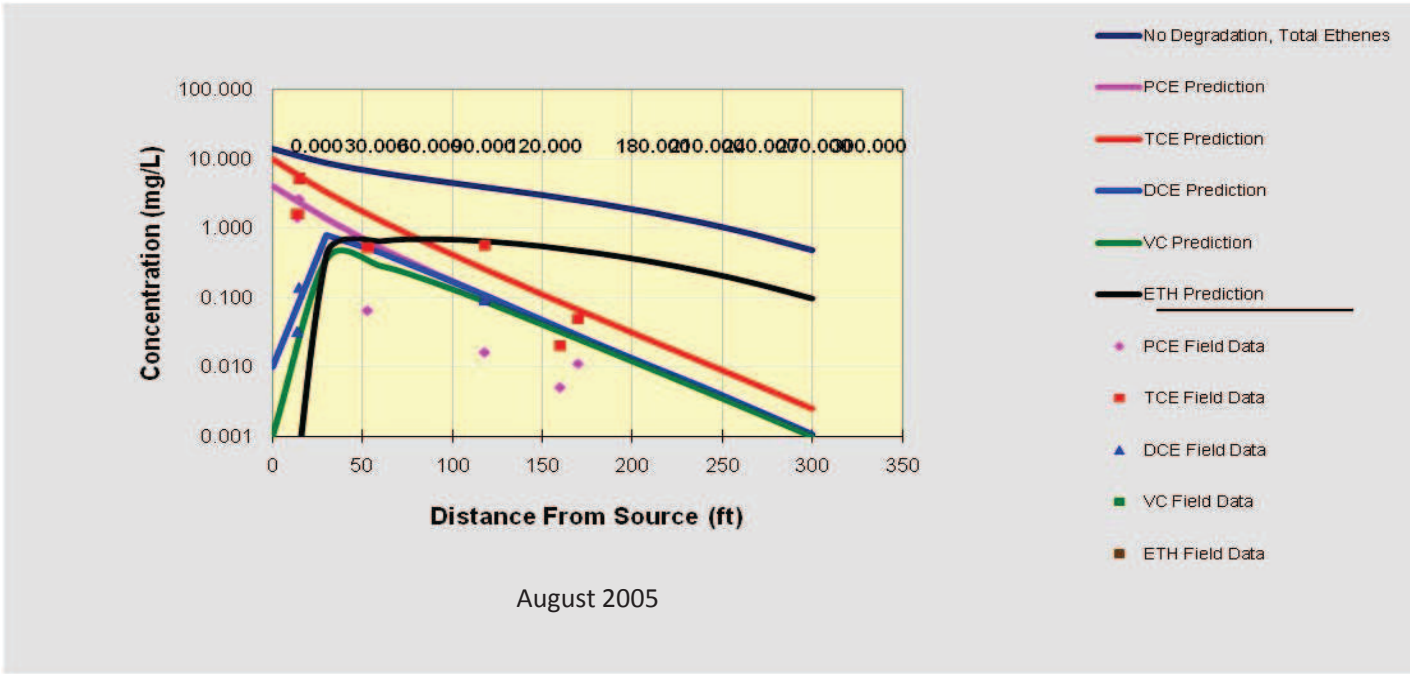


FIGURE J-5
Historical Dissolved Chlorinated Ethene Concentrations Along Plume Centerline



July 2004

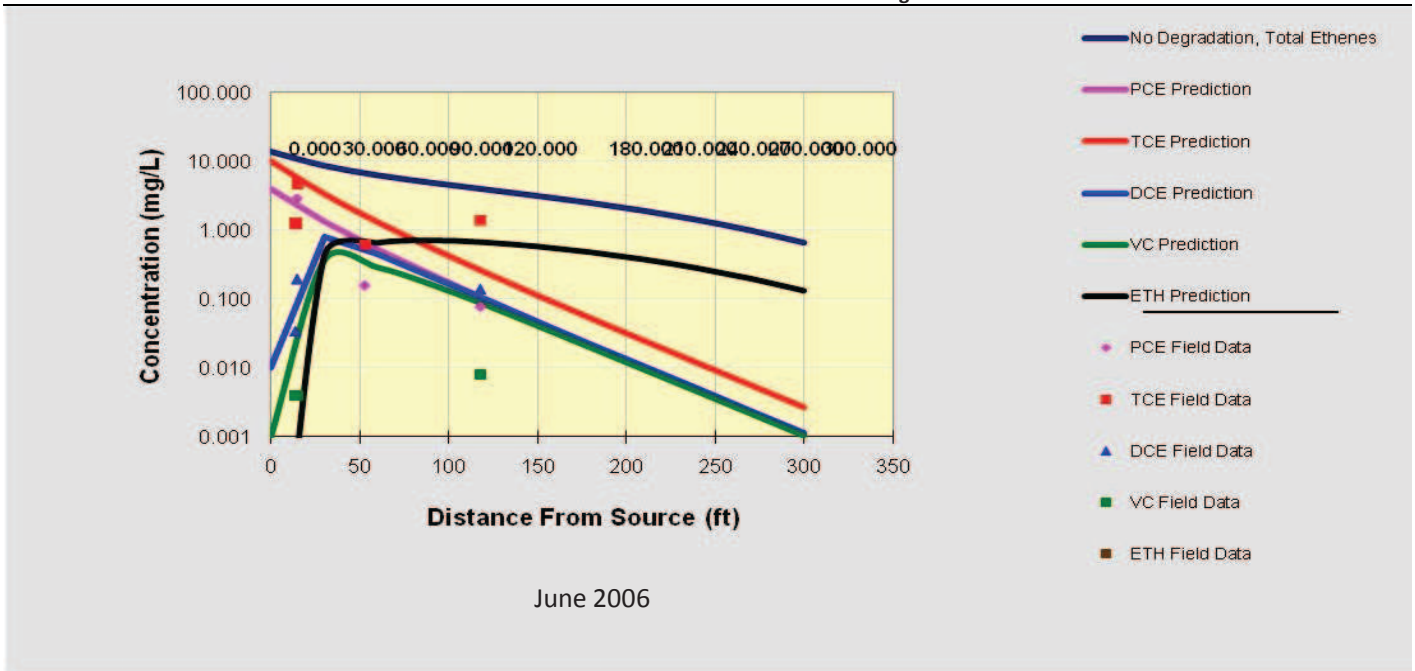
	MW-3	MW-3D
PCE Conc. (mg/L)	1.86	3.32
TCE Conc. (mg/L)	6.15	4.72
DCE Conc. (mg/L)	0.123	0.040
VC Conc. (mg/L)	0.020	0.0036



August 2005

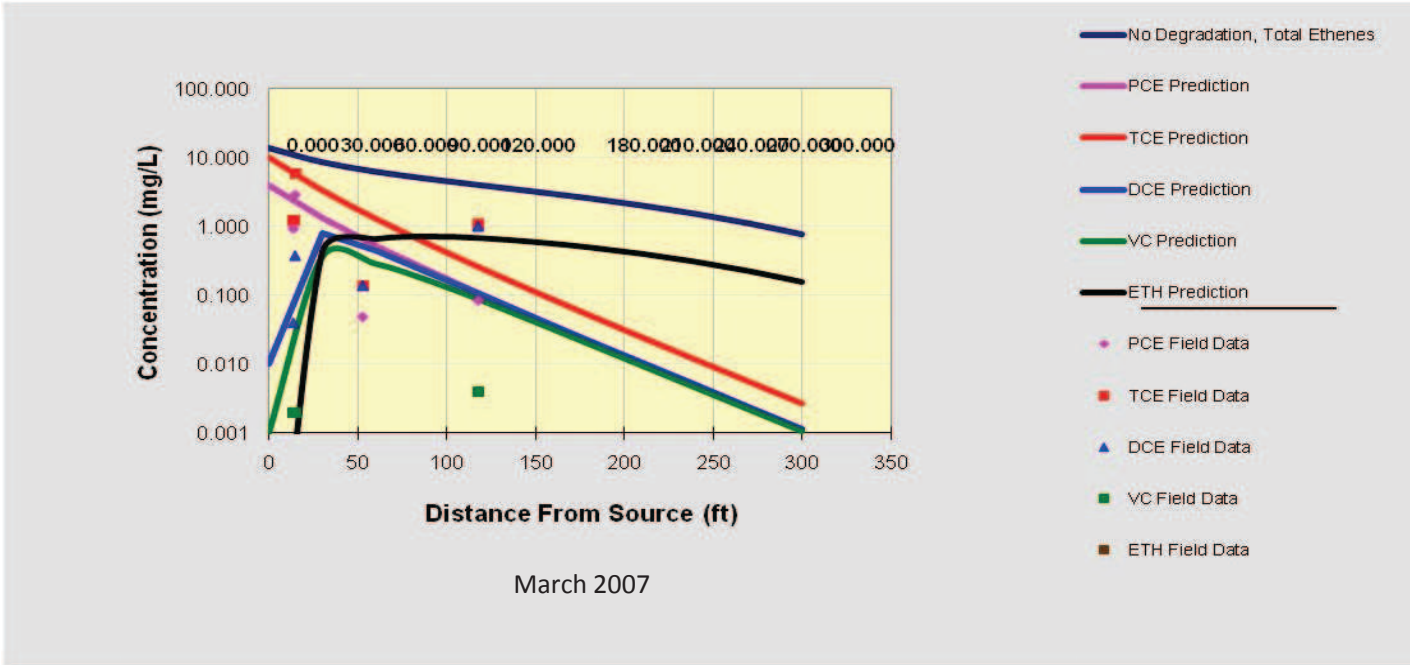
	MW-3	MW-3D	MW-4	MW-15	MW-1D	MW-1
PCE Conc. (mg/L)	2.60	1.40	0.06	0.02	0.01	0.01
TCE Conc. (mg/L)	5.20	1.60	0.52	0.56	0.02	0.05
DCE Conc. (mg/L)	0.140	0.032		0.093		
VC Conc. (mg/L)						

FIGURE J-5
Historical Dissolved Chlorinated Ethene Concentrations Along Plume Centerline



June 2006

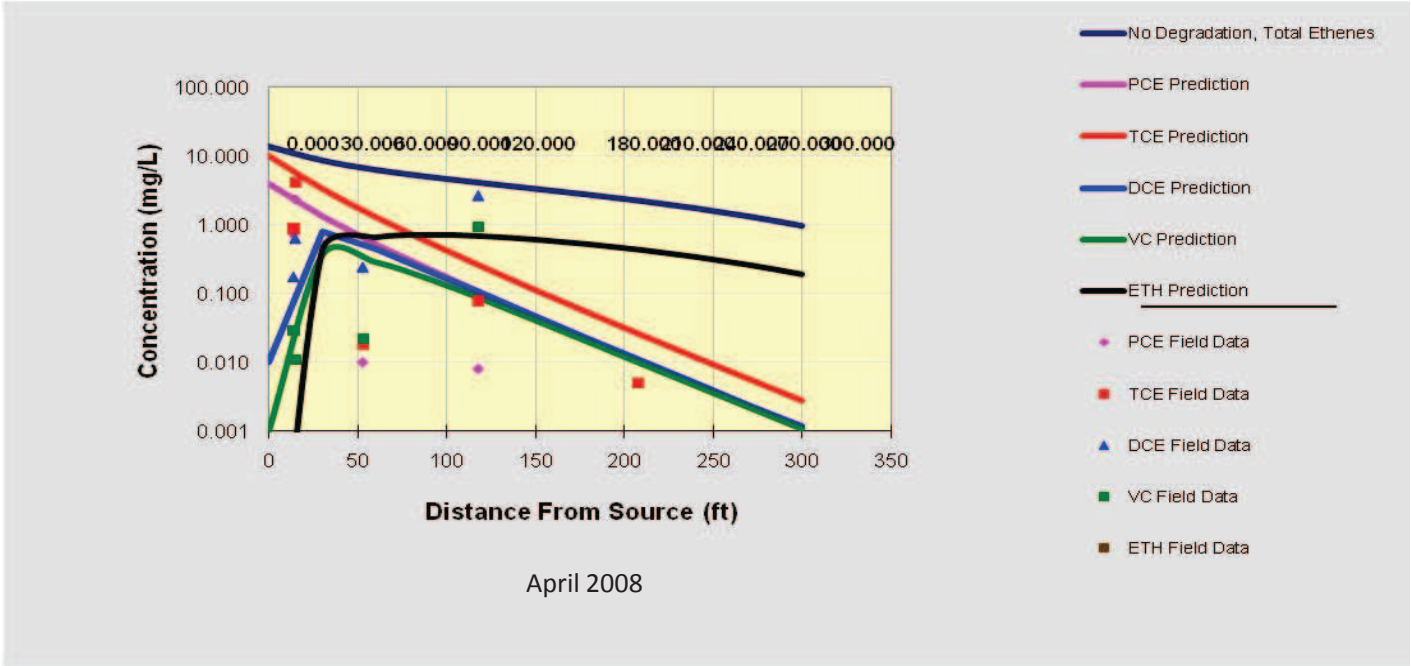
	MW-3	MW-3D	MW-4	MW-15
PCE Conc. (mg/L)	2.92	1.21	0.16	0.08
TCE Conc. (mg/L)	4.71	1.25	0.62	1.37
DCE Conc. (mg/L)	0.197	0.034		0.141
VC Conc. (mg/L)	0.004	0.004		0.0080



March 2007

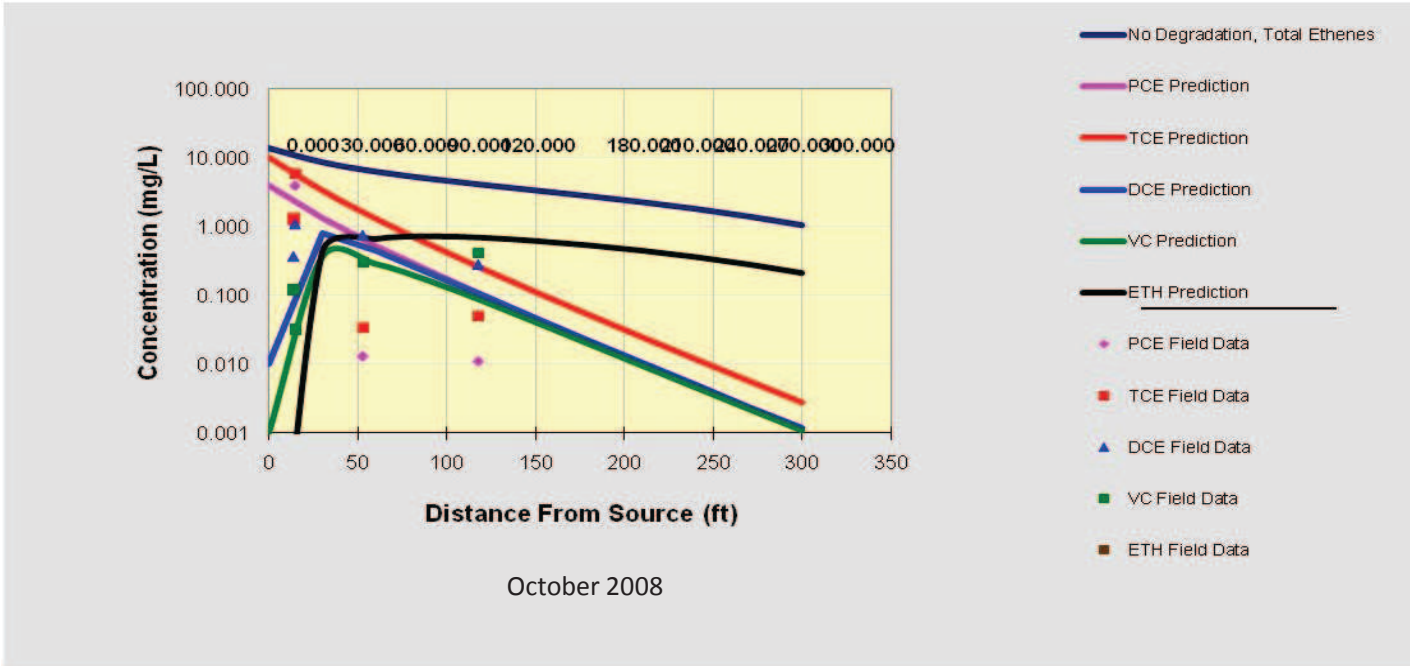
	MW-3	MW-3D	MW-4	MW-15
PCE Conc. (mg/L)	2.90	0.94	0.05	0.09
TCE Conc. (mg/L)	5.83	1.22	0.14	1.07
DCE Conc. (mg/L)	0.378	0.040	0.139	1.000
VC Conc. (mg/L)	0.002	0.002		0.0040

FIGURE J-5
Historical Dissolved Chlorinated Ethene Concentrations Along Plume Centerline



April 2008

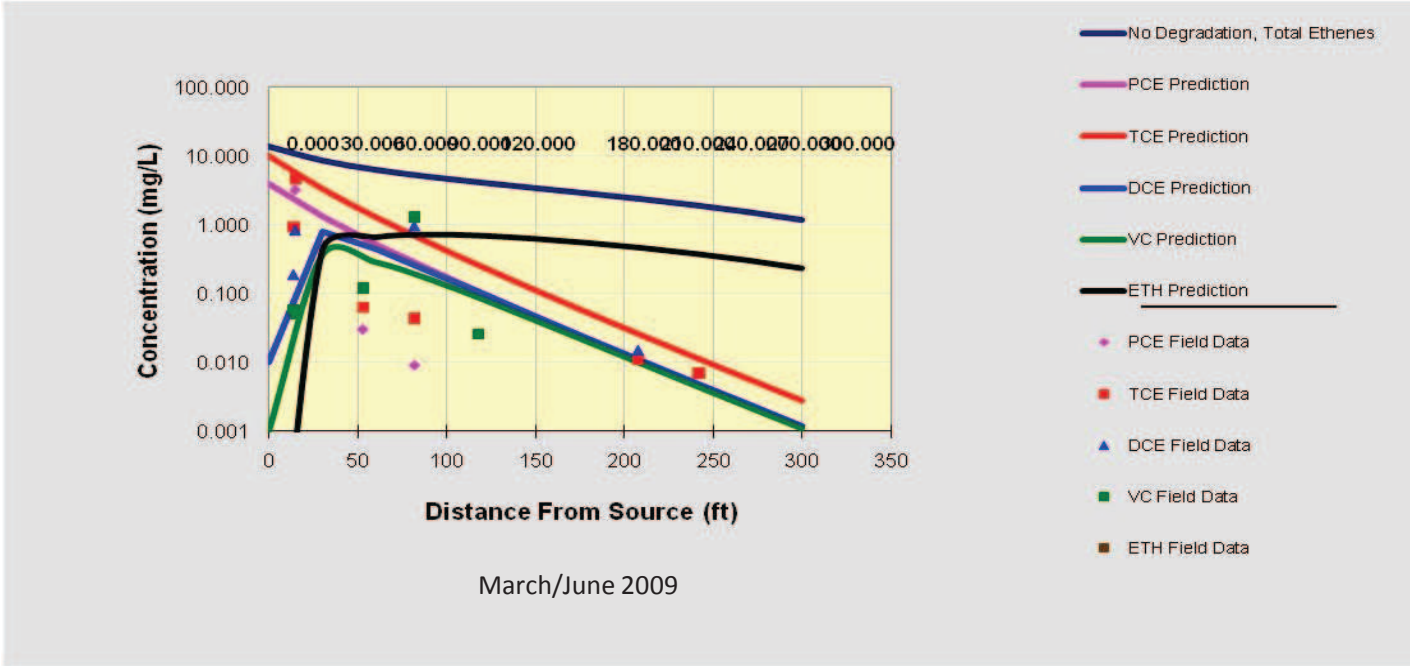
	MW-3	MW-3D	MW-4	MW-15	MW-15
PCE Conc. (mg/L)	2.41	0.75	0.01	0.01	
TCE Conc. (mg/L)	4.10	0.89	0.02	0.08	0.01
DCE Conc. (mg/L)	0.636	0.175	0.244	2.690	
VC Conc. (mg/L)	0.011	0.029	0.022	0.931	



October 2008

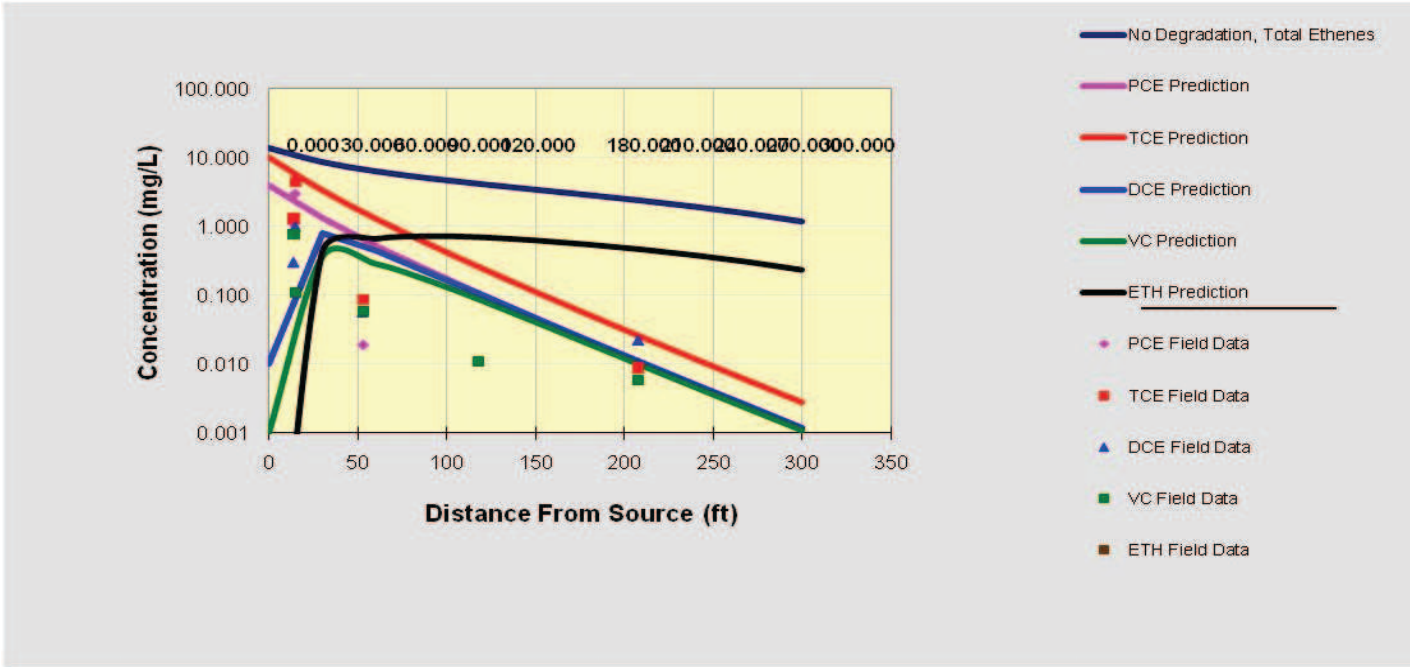
	MW-3	MW-3D	MW-4	MW-15
PCE Conc. (mg/L)	3.90	1.10	0.01	0.01
TCE Conc. (mg/L)	5.90	1.30	0.03	0.05
DCE Conc. (mg/L)	1.100	0.370	0.760	0.280
VC Conc. (mg/L)	0.032	0.120	0.300	0.4100

FIGURE J-5
Historical Dissolved Chlorinated Ethene Concentrations Along Plume Centerline



March/June 2009

	MW-3	MW-3D	MW-4	DPGW-2	MW-5	MW-15	DPGW-4
PCE Conc. (mg/L)	3.20	0.93	0.03	0.01			
TCE Conc. (mg/L)	4.60	0.94	0.06	0.04		0.01	0.01
DCE Conc. (mg/L)	0.840	0.190	0.120	0.970		0.015	
VC Conc. (mg/L)	0.050	0.058	0.120	1.300	0.026		

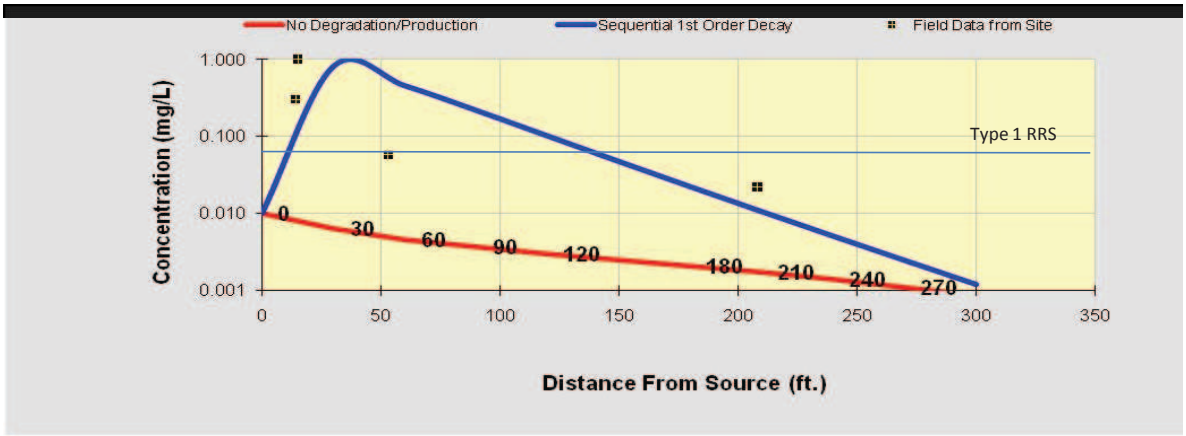


	MW-3	MW-3D	MW-4	MW-5	MW-15
PCE Conc. (mg/L)	1.10	3.00	0.02		
TCE Conc. (mg/L)	1.30	4.50	0.09		0.01
DCE Conc. (mg/L)	0.300	1.000	0.057		0.022
VC Conc. (mg/L)	0.770	0.110	0.059	0.011	0.0059

Figure J-6
October 2010 Modeled Dissolved Chlorinated Ethene Concentrations Along Plume Centerline







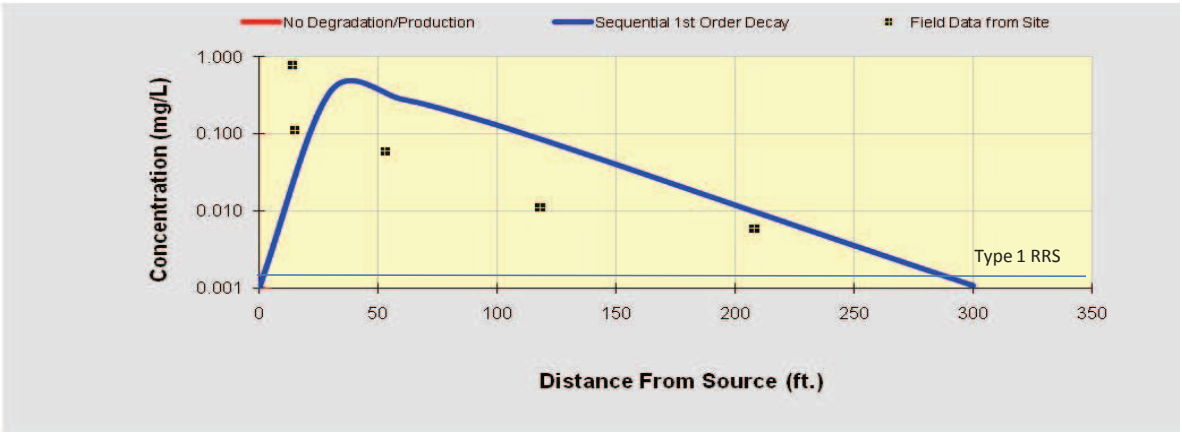
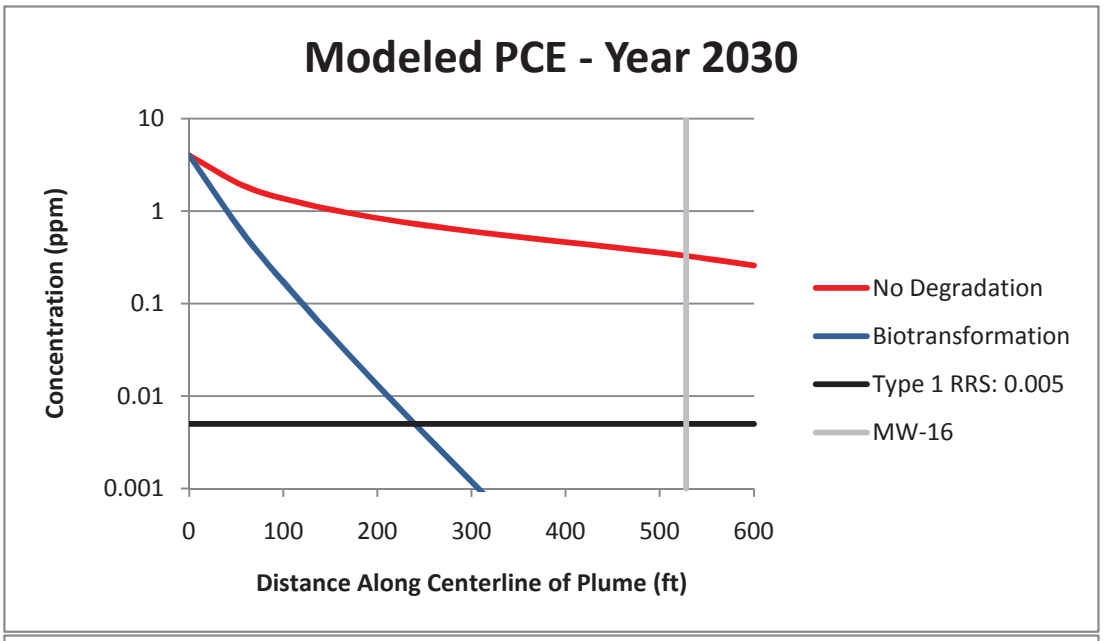


Figure J-7
Future Modeled Chlorinated Ethene Degradation



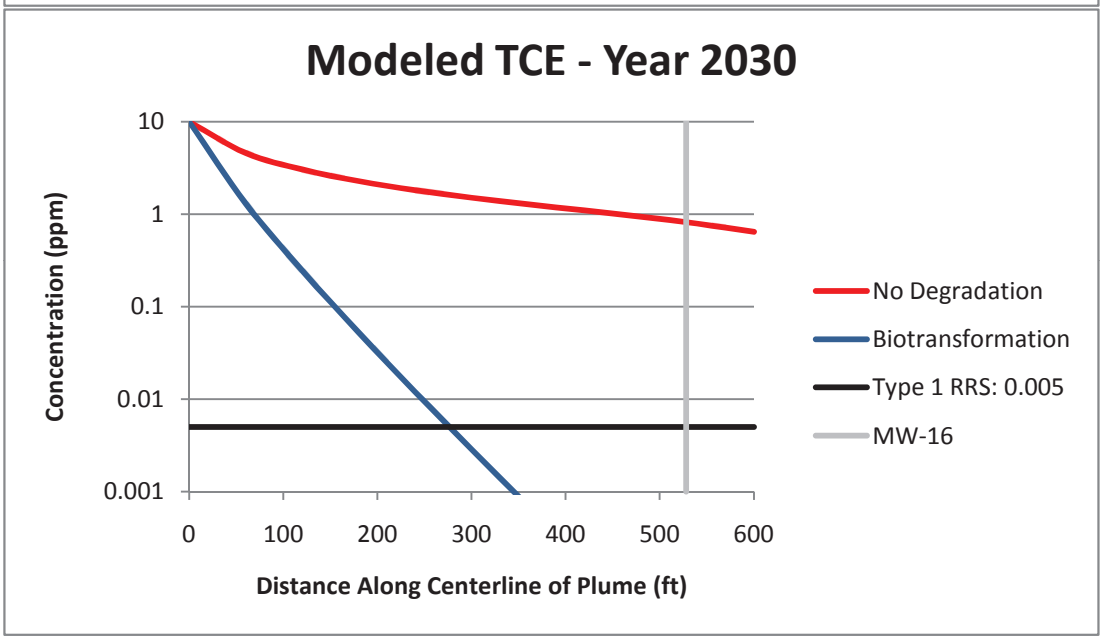


Figure J-7
Future Modeled Chlorinated Ethene Degradation

