Prepared for:

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2680 Lakeland Road
Dalton, GA 30721

VOLUNTARY REMEDIATION PROGRAM APPLICATION
COLOR SPECTRUM
29 Probasco Street
LaFayette, GA 30728

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December 2011

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EPS

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APPENDICES

1 INTRODUCTION

1.1 Overview

This Voluntary Remediation Program (VRP) Application is being submitted for Color Spectrum, Hazardous Site Inventory #10831, located at 29 Probasco Street, LaFayette, Walker County, Georgia, referred to herein as the "Site." The Site Location Map is included as Figure 1 in Appendix C. The U.S.G.S. Topographic Map is included as Figure 2.

The address for the Site listed on the Hazardous Site Inventory is 15 Probasco Street which is the mailing address for the Site facility and the address for the parcel located to the south of the Site. Because the Site is actually limited to the parcel located at 29 Probasco Street and does not include 15 Probasco Street, this VRP Application uses 29 Probasco Street as the Site address.

The Site is currently owned by CSI Realty, LLC (CSI Realty), which purchased the Site in 2005. The release of all hazardous substances detected on Site predates CSI Realty's acquisition of the property. The VRP 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. The Warranty Deed covers multiple properties with the Site being referred to as Tract 1 Parcel B.

A Compliance Status Report (CSR) was submitted to the Georgia EPD on December 29, 2009. In a letter dated June 24, 2011, the EPD concurred that the Site is in compliance with Type 1 Risk Reduction Standards (RRS) for soil, but not for groundwater.

1.2 Site Location and Description

The Site is located at 29 Probasco Street in LaFayette, Walker County, Georgia at latitude 34° 42' 47" N and 85° 17' 20" W. According to the Walker County Tax Assessor Office, the Site consists of two parcels as follows:

- Parcel ID 1023 087, 1.38 acres
- Portions of the Chattooga and Chickamauga Railway Right-of-Way, located within the fenceline of the facility.

The first known development of the Site was as a cotton mill, which operated from the late 1800s until the mid 1980s when it was damaged by fire. Site operations were then converted to yarn dying and winding which continues to the present day.

The Site is improved with one building, referred to as the Preheat Building. The Site Plan is included as Figure 3.

Historically, two fuel oil ASTs and one gasoline UST were utilized at the Site. The UST was used for fueling facility vehicles. The ASTs were used as a secondary fuel source for the facility's steam boilers. All tanks were removed in 2006.

The preheat building is located where a former cotton mill was originally constructed. Several expansions have occurred with the most recent being the addition of the warehouse in the mid-1990s. The Site also contains a pond on the northeastern property boundary that is not in use.

Properties immediately adjacent to the Site are shown on Figure 3 and include:

- Towards the North: Vacant land, West Indiana Street, and the City of LaFayette maintenance department.
- Towards the South: A related manufacturing facility, followed by a vacant lot and a school (Head Start)
- Towards the East: A railroad right-of-way followed by a wooded, low lying area with an unnamed tributary.
- Towards the West: Residential to the northwest and west, an auto repair shop and auto salvage yard, fire station, and residences to the southwest

1.3 Source Description

Based on the location of the groundwater plume, the historical source of groundwater impacts appears to have occurred before the current building was constructed, adjacent to the preheat building.

1.4 Constituents of Interest

Soil and groundwater samples have been collected for VOC analysis using EPA Method 8260B, and PAHs by 8270B. PAH constituents detected were related to a petroleum release from the former ASTs. The release from the ASTs is regulated by the Georgia Water Resources Branch and is not addressed in this document. Regulated substances detected at the Site include 1,1,1-trichloroethane (TCA), 1,1-dichloroethane (DCA), 1,1-dichloroethene (DCE), Freon-113, dichlorodifluoromethane (Freon-12), tetrachloroethene (PCE), acetone, and isopropylbenzene (IPB). Lead and arsenic have also been analyzed in recent soil and groundwater samples by 6010B. Lead and arsenic detections appear to be naturally occurring background concentrations and not indicative of a release. The soil is in compliance with Type 1 RRS. With the exception of PCE, the groundwater is in compliance with Type 4 RRS. Thus, PCE in groundwater is the constituent of interest at the Site.

1.5 Purpose

The purpose of this document is to support an application for enrollment into the Voluntary Remediation Program. This document presents a current understanding of conditions at the Site along with a Conceptual Site Model (CSM). The document also proposes a preliminary Remedial Action Plan.

1.6 Property Eligibility

The Site meets the eligibility criteria for the Voluntary Remediation Program. A release of regulated substances on the Site has been confirmed. The Site 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 (USEPA), and is not required to have a permit under Code Section 12-8-66. Qualifying the Site under the 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 USEPA. There are no, and never have been any, outstanding liens filed against the Site pursuant to Code Sections 12-8-96 and 12-13-12.

1.7 Participant Eligibility

CSI Realty is the Voluntary Remediation Program applicant and is in compliance with all orders, judgments, statutes, rules, and regulations subject to the enforcement authority of the Director with respect to this Site.

2 CONCEPTUAL SITE MODEL

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

Figures 5 through 13 are plan view and profile diagrams depicting the extent of constituents in the subsurface. Viewed in total, these figures give a three-dimensional representation of the site conditions.

2.1 Subsurface Features

2.1.1 Geology and Hydrogeology

Walker County is located in the Ridge and Valley Province, as shown on Figure 4 Geologic Location Map, which includes an area that extends southwest into Alabama to around Birmingham and northeast in Tennessee from Chattanooga to Knoxville and beyond to New York. In Georgia, the eastern and southern boundary of the Valley and Ridge is the Cartersville-Great Valley fault system, which runs south from Chatsworth to a point southeast of Cartersville and then west to the Polk-Haralson County line. Across this major fault system, metamorphic grade increases into the Blue Ridge and/or Piedmont.

Depth to shallow groundwater in the Ridge and Valley ranges from a few feet below ground surface to depths of 50 feet and greater in some locations. The water bearing zone where groundwater occurs, generally referred to as the water table, may consist of weathered soils, saprolite, or fractured bedrock. Shallow groundwater flow in the Ridge and Valley often mimics surface topography; however, significant flow may occur along preferential pathways created by heterogeneities in the soil, fill materials, fractures, or other relict bedrock features.

Groundwater is commonly discharged as base flow to streams and creeks depending on the degree of hydraulic connection. Recharge occurs from rainfall penetrating unpaved areas and from up-gradient water bodies. The map also indicates that the Site is not located in any significant groundwater recharge areas.

The geologic and hydrogeologic characteristics of the Site and surrounding area are described in this section. This section also includes a discussion of regional physiography and Site topography. The discussion of regional characteristics was derived from published sources. Site specific characteristics were determined based on a review of field data.

2.1.1.1 Regional Physiography and Topography

A review of the *Physiographic Map of Georgia* (Clark and Zisa, 1976) indicates that Walker County is located in the northwestern portion of the Valley and Ridge Physiographic Province. This physiographic province is generally characterized by a series of linear ridges with elevations in lowland areas about 200 - 800 ft above sea level, but the higher ridges may be above 1,600 ft. Plant species vary from area to area, based on local soil type, elevation, moisture, and disturbances (Holder, 1986).

The Ridge and Valley Province is bounded on the south by the Piedmont Province, to the east by the Blue Ridge Province, and on the north and west by the Appalachian Plateau Province. The Valley and Ridge province consists of Paleozoic sedimentary rocks that have been folded and faulted to cause long northeast-southwest trending valleys and ridges that give the region its name.

2.1.1.2 Site Topography

The topography of the property and surrounding areas was reviewed on a USGS Quadrangle Map for the LaFayette Quadrangle (Figure 2). The map shows the elevation of the property ranging from 240 to 250 feet above the NGVD. The high point of the Site is located at the western property boundary adjacent to Probasco Street. The grade slopes gently down the parking lots to the eastern property boundary to the drainage ditch on the Chattooga and Chickamauga Railway property. The storm water drainage flows as sheet flow across the property to the drainage ditch. Storm water from the roofs of the two buildings is controlled by gutters/downspouts where it's directed towards the drainage ditch on the eastern portion of the property. The drainage ditch flows into an unnamed tributary that flows south where it joins Town Creek approximately 1.5 miles south of the Site. Where the tributary joins Town Creek it forms the Chattooga River.

The pond located in the northern portion of the property discharges to a drainage ditch and flows to the east underneath the railroad tracks.

2.1.2 Regional and Site Geology

2.1.2.1 Regional Geology

The strata of the Valley and Ridge include numerous carbonate units, such as the Cambro-Ordovcian Knox Dolostone and the Ordovician Chickamauga Limestone, and thus caves and karst terrane exist across large parts of the region. The Chickamauga Valley District is characterized by a series of gently rolling, discontinuous, northeast-trending valleys interrupted by low, linear, parallel ridges. The valley floors are predominantly limestone and dolomite of Cambro-Ordovician age while the ridges are capped by the more resistant cherty units of the Knox Group, also of Cambro-Ordovician age. The ridge tops are approximately 1000 feet in elevation and stand 200-300 feet above the intervening valleys. Rectangular drainage patterns in this district are indicative of structural control.

Geologic resources of the Valley and Ridge include construction-grade limestone, which is quarried by such companies as Vulcan Materials. Barite and ochre have been mined from the Lower Cambrian Shady Dolomite near Cartersville. Coal was once mined from Pennsylvanian strata in far northwest Georgia also.

Residual soils in the Ridge and Valley Province are composed predominantly of Udults with some Ochrepts. Paleudults dominate upland areas underlain by limestone. Hapludults are in valleys underlain by shale. Dystrochrepts are common on side slopes of ridges. Hapludolls and Eutrochrepts are on bottom lands. Soils have an udic moisture regime and thermic or mesic temperature regime. Almost all soils are well drained. Soils range from shallow on sandstone and shales to very deep on limestone formations (US Forest Service, 1993). The soils grade into a saprolite or partially weathered bedrock with depth.

A review of the *Geologic Map of Georgia (Georgia Geological Survey, 1976)* indicates that the bedrock underlying LaFayette and nearby areas consists of a Conasauga Group dolostone. Dolostone is a sedimentary carbonate rock that contains a high percentage of the mineral dolomite. It is usually referred to as dolomite rock. Most dolostone formed as a magnesium replacement of limestone or lime mud prior to lithification. It is resistant to erosion and can either contain bedded layers or unbedded layers. It is less soluble than limestone in weakly acidic groundwater, but it can still develop solution features over time.

2.1.2.2 Site Geology

The Site geology has been investigated through the advancement of soil borings and the installation of shallow and deep monitoring wells. The shallow monitoring wells were installed at depths ranging from 12 ft-bls to 16 ft-bls through soil and saprolite residuum. The deep well (DW-1) was installed to a depth of 46 ft-bls.

To illustrate the subsurface geology of the Site, two vertical cross-sections were created using information obtained from the boring logs. Figure 5 shows the locations of cross-section lines A-A' and B-B'. Cross-section A-A' and B-B' are shown on Figures 6 and 7. Cross-section A-A' was prepared in an east-west orientation approximately parallel to the direction of groundwater flow. Cross-section B-B' was prepared in a southwest-northeast orientation generally perpendicular to groundwater flow.

A review of the boring logs and associated cross-sections indicate that the subsurface geology consists of multi-colored clays with some gravel grading to the bedrock. Bedrock was reached in DW-1 at approximately 20 ft-bls. Based on the hardness of the soils in other borings at the Site, it appears that bedrock exists approximately 20 ft-bls across the Site.

2.1.3 Regional and Site Hydrogeology

2.1.3.1 Regional Hydrogeology

The upper boundary of unconfined groundwater in the Ridge and Valley is formed by the water table or surficial water bearing zones. The water table can be loosely defined as the boundary between saturated and unsaturated soil zones. The depth to the water table may range from a few feet below ground surface to up to 50 feet along mountainous terrain. In the Ridge and Valley

province, the water table is usually situated within the soil-saprolite residuum and the upper portion of the fractured dolomite bedrock. In areas where saprolite thicknesses are minimal, the water table may reside almost entirely in fractured bedrock. The soil-saprolite residuum generally has a relatively large storage capacity with a moderate transmissivity. The bedrock fracture system generally has a relatively high storage capacity with a high transmissivity where fracture systems are interconnected (Swain, 2004). If bedrock fracturing is significant, a hydraulic connection between the surficial water bearing zone and deeper groundwater aquifers may occur at varying depths within the bedrock.

Groundwater flow in the soil-saprolite/fractured bedrock zone often mimics the ground surface topography except where controlled by subsurface geologic structures or preferential pathways. These pathways may be caused by heterogeneities in the soil, weathering patterns of the saprolite, foliated bedding planes, faults, fractures, or other relict bedrock features. Groundwater flow is usually unconfined with recharge occurring from rainfall penetrating upland areas and discharge occurring as baseflow to streams and creeks in low lying areas. These flow regimes are commonly referred to as slope aquifer systems. Depending on the interconnection of fracture zones, a downward gradient is commonly observed in upland areas with an upward gradient present in lowlands.

Productive groundwater wells in the Ridge and Valley may be located in the saprolite residuum, fractured crystalline bedrock, or a combination of both. Water in the bedrock is transmitted via connected fractures within the rock unit. The quantity, size, and degree of connection between these fractures or discontinuities are generally more significant than the lithology in determining the amount of water available for withdrawal. Rates of withdrawal are often higher along contact zones between rock units. Secondary permeability and fracture size generally decrease with depth due to overburden pressures except in areas where deep thrust fractures are present. The Ridge and Valley province, in the northwestern corner of Georgia, is underlain by layers of sandstone, limestone, dolostone, and shale. Wells tapping limestone and dolomite aquifers in this province can be very productive (Tyson, 1993)

2.1.3.2 Site Hydrogeology

The surficial water bearing zone or uppermost aquifer beneath the Site includes the soil-saprolite unit above the bedrock interface. It is likely that this aquifer is interconnected to the bedrock aquifer beneath it via fractures in the rock. The vertical extent of the uppermost bedrock aquifer below 50 ft-bls has not been investigated. The soil and bedrock aquifers appear to be capable of storing groundwater in pore volumes and transmitting groundwater by porous flow and along secondary foliated pathways.

The groundwater under the Site flows from the high elevation at the western property boundary towards the east/northeast to the drainage ditch to an unnamed creek flowing into Town Creek. Considering the surface topography of the Site and the potential influence of the low lying area and the unnamed tributary of Town Creek, the groundwater at the Site is expected to join the surface water system at the drainage ditch along the eastern boundary or in the low lying area to the east of the railroad tracks.

2.1.4 Groundwater Conditions

2.1.4.1 Groundwater Elevations

The depth to groundwater at the Site was measured by EPS on August 16, 2011 in existing monitoring wells. Groundwater elevations were calculated by subtracting the measured depth to groundwater from the surveyed top-of-well casing elevations. The groundwater depths and calculated elevations for the August 2011 sampling event and the previous (June 28, 2007) sampling event are shown in Table 1. A Potentiometric Surface Map is included as Figure 8.

Generally, in Ridge and Valley slope aquifer systems an upward vertical flow gradient occurs near creeks or in valley areas and a downward vertical flow gradient occurs on hill sides (Lohman, 1972). The groundwater elevation for MW-7 was 793.89 ft and the elevation for DW-1 was 793.27 ft. The lower elevation in DW-1 suggests that a downward vertical gradient may be present between the surficial soil aquifer and deeper bedrock aquifer.

2.1.4.2 Groundwater Flow Direction and Gradient

As shown on the Potentiometric Surface Map, groundwater flows towards the east/northeast in the direction of the drainage ditch and low lying area on the adjacent property. This gradient is consistent with respect to the surface topography and appears to be influenced by the drainage ditch and unnamed tributary located east of the Site.

Based on the August 2011 sampling event, the horizontal hydraulic gradient between MW-10 and MW-2 is as follows:

$$dh/dl = (792.84 – 791.27)ft / 72\ ft = 0.022\ ft/ft$$

2.1.4.3 Hydraulic Conductivity Data

On June 28, 2007 EPS performed slug tests on wells MW-4, MW-6, and MW-9 to evaluate the hydraulic conductivity of the upper aquifer. Hydraulic conductivity was determined using the Bower and Rice Graphical Method and the results are shown below.

Well No.	K value (cm/sec)	K value (ft/day)
MW-4	7.4×10^{-5}	0.21
MW-6	1.2×10^{-4}	0.33
MW-9	1.5×10^{-4}	0.42
Average	1.1×10^{-4}	0.32

The average hydraulic conductivity value was calculated to be of 1.1×10^{-4} centimeters per second (cm/sec) or 0.32 feet per day (ft/day). This is consistent with published values for clayey soils. The Bower and Rice graphs are included in Appendix E of the CSR (EPS, 2009).

2.1.4.4 Groundwater Flow Velocity

The seepage velocity or groundwater flow velocity is the average speed of groundwater movement by advective processes in the water-bearing zone. The seepage velocity is calculated by multiplying the hydraulic conductivity by the hydraulic gradient and dividing by the effective porosity. The effective porosity is sometimes referred to as the "drainable porosity" and is considered roughly equivalent to specific yield for sandy soils in unconfined units. This parameter is generally estimated using published values.

The groundwater flow velocity was calculated using the following formula:

$$V = \left[\frac{K \frac{dh}{dl}}{n} \right]$$

Where:

k = the average hydraulic conductivity (0.32 ft./day)
dh/dl = the hydraulic gradient between MW-10 and MW-2 (0.022 ft./ft.)
n = the estimated effective porosity (0.15 from Fetter, 1988)

Using this formula, a calculated groundwater flow velocity of 0.05 ft/day was determined. It should be noted that this calculated value was derived under the assumption that groundwater flow at the Site occurs through a homogeneous, isotropic, porous medium. Since groundwater flow beneath the Site likely occurs through a heterogeneous matrix that may contain secondary fracture pathways, this calculated flow value should be considered only an estimate of the actual groundwater flow velocity.

2.2 Environmental Conditions

2.2.1 Risk Reduction Standards

Soil and groundwater RRS were presented in the CSR. The RRS for arsenic and lead have been revised per the June 24, 2011 letter from the EPD. Additionally, the RRS for Freon-113 were corrected and the RRS for Freon-12 were added. The revised soil and groundwater RRS are presented in Tables 2 and 3 for soil and groundwater.

2.2.2 Delineation Criteria

Based on Section 12-8-108 of the Georgia Voluntary Remediation Program Act, the soil and groundwater are delineated to default residential cleanup standards. Type 1 RRS are used as the delineation standards and are highlighted in Tables 2 and 3 for soil and groundwater. Delineation of soil and groundwater are discussed in Section 2.2.4.2 and Section 2.2.5.2.

2.2.3 Cleanup Criteria

The non-residential RRS (i.e., higher of the Type 3 and 4 RRS) will be used as the cleanup criteria.

2.2.4 Nature and Extent of Soil Contamination

A description of the investigations that have been conducted at the Site is provided in Appendix E. Soil boring logs and well construction diagrams are provided in Appendix F.

2.2.4.1 Summary of Soil Investigations

EPS conducted soil investigations from December 2006 through October 2009, during which 29 samples were collected for VOC analysis and 6 samples were collected for arsenic and lead analysis. This section presents a summary of the analytical findings from the soil investigations and a discussion of the data. More information about the soil investigations is provided in Appendix E.

The soil analytical data is presented in Table 4 and shown on Figure 8. Freon-113 was detected in all soil samples analyzed except SB-36 at 1 ft-bls. The highest Freon-113 concentrations were detected beneath the concrete pad (SB-37) where a dumpster is currently stored and beneath the adjacent building (SB-34). The highest concentrations of TCA, DCE, and PCE were also detected in SB-37. The highest concentration of acetone was detected in SB-32, and the highest concentration of DCA was detected in SO-4. The highest concentrations of arsenic and lead were detected under the building in SO-3, and appear to be naturally-occurring. Based on the location of the highest VOC detections, the apparent source areas are beneath the dumpster area and the adjacent preheat building, and are due to historical operations at the property before construction of the current building.

2.2.4.2 Delineation and Comparison to Risk Reduction Standards

As mentioned previously, the delineation criteria for the VRP program are the Type 1 RRS. As shown on Table 4, all of the soil results (except Arsenic in SO-3) are below the Type 1 RRS; thus, delineation to the Type 1 RRS has been obtained.

Arsenic was detected at a maximum concentration of 22.4 mg/kg in SO-3, which is slightly above the Type 1 RRS of 20 mg/kg. Arsenic is not a contaminant of concern for this Site and is believed to be naturally-occurring. The concentrations of arsenic seen at this Site (10.3 to 22.4 mg/kg) are within the range of background values (0.3 to 72 mg/kg) observed by Boerngen and Shacklette (1981) in the state of Georgia.

2.2.5 Nature and Extent of Groundwater Contamination

2.2.5.1 Summary of Groundwater Investigation

EPS conducted groundwater investigations from October 2005 through November 2011. This section presents a summary of the analytical findings from the groundwater investigations and a discussion of the data. More information about the investigations is provided in Appendix E. The groundwater analytical data is presented in Table 5 and shown on Figure 10.

The results of the groundwater investigations show that PCE, TCA, Freon-113, Freon-12, DCA, DCE, and IPB were detected in the groundwater samples collected near the northeastern portion of the preheat building.

The source of the PCE appears to have been located beneath the dumpster pad, based on the elevated concentrations detected in the groundwater and soil. The only chlorinated solvent currently in use at the Site is in a single parts cleaner located in the maintenance area. The washer uses Safety Kleen 105, which is a recycled cleaning solution that may contain up to 0.2 % PCE. However, there has been no record of releases from the parts cleaner, all waste is removed from the washer and recycled by Safety Kleen, and samples in the vicinity of the parts cleaner do not indicate that it is a potential source. Therefore, the source of the VOCs detected in groundwater is likely to be historical releases predating the construction of the current building.

2.2.5.2 Delineation and Comparison to Risk Reduction Standards

During the groundwater investigations conducted from October 2005 to November 2011, seven regulated VOC constituents and one RCRA metal were detected in groundwater above laboratory detection limits. The regulated VOCs detected at this Site include PCE, TCA, Freon-113, Freon-12, DCA, DCE, and IPB. A comparison of the groundwater results to delineation criteria (Type 1 RRS) and cleanup criteria (Type 4 RRS) is shown below:

- TCA has been detected in 17 of 61 samples. However, only one sample (collected from SB-23) exceeds the Type 1 RRS of 200 µg/l. All samples are below the Type 4 RRS of 13,600 µg/l. None of the groundwater samples collected in 2011 exceeded the Type 1 RRS.
- DCA has been detected at or above the detection limit of 5 µg/l in 14 of 61 samples with a maximum concentration of 260 µg/l. All concentrations are below the Type 1 RRS of 4,000 µg/l.
- DCE has been detected in 14 of 61 with concentrations ranging from 5.5 µg/l to 290 µg/l. Twelve of the sample concentrations exceed the Type 1 RRS of 7 µg/l. All samples are below the Type 4 RRS of 520 µg/l.
- Freon-113 has been detected in 40 of 61 groundwater samples. However, none exceeded the Type 1 RRS concentration of 1,000,000 µg/l.
- Freon-12 has been detected in 2 of 61 groundwater samples at concentrations (110 and 680 µg/l) below the Type 1 RRS of 1,000 µg/l.
- PCE has been detected in 17 of 61 groundwater samples, all above the Type 1 and 4 RRS of 5 µg/l.

- IPB has been detected in 7 of 61 samples. No Type 1 RRS for IPB has been established; therefore, the applicable Type 1 RRS is the laboratory detection limit of 5.0 µg/l. All samples are below the Type 4 RRS of 1,050 µg/l.
- Lead was detected in MW-11 at 15.6 µg/l which is slightly above the Type 1 RRS of 15 µg/l. However, the well was not able to be properly developed due to extremely slow recharge, and the turbidity of the sample was 800 NTUs. The sample is therefore, not considered to be valid. A filtered sample was also collected. Lead was not detected in the filtered sample.

Delineation had been demonstrated to background (non-detect for VOCs) in the CSR. However, based on additional groundwater data collected since the CSR was submitted, horizontal delineation for DCE, PCE and IPB is currently to Type 1 RRS. See Figures 11-13. Vertical delineation is demonstrated by DW-1, which has no detectable VOCs.

2.2.6 Compliance Status

2.2.6.1 Compliance Status - Soil

The Site is in compliance with Type 1 Residential RRS for all regulated constituents of concern in soil, as acknowledged by EPD in its letter dated June 24, 2011.

2.2.6.2 Compliance Status - Groundwater

Table 3 presents the Type 1 and Type 4 RRS. As shown on Table 5, with the exception of PCE, all groundwater results are below the Type 4 RRS.

2.3 Conceptual Model

The constituent of interest at this Site is PCE. In its product state PCE is a dense non-aqueous phase liquid (DNAPL), which can be classified as either mobile or immobile. In the groundwater, it is 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 DNAPL in this trail is incapable of further migration. Eventually, the entire DNAPL mass becomes immobile as the gravity head is lost.

When the groundwater comes in contact with a DNAPL, an aqueous phase plume is created and slowly fed by the sorbed, residual or pooled DNAPL. A residual-phase DNAPL source offers a large surface contact area (as compared to a pooled DNAPL) for contact with the groundwater, which results in a higher flux from the DNAPL state to the dissolved phase. This in turn results in an accelerated rate of DNAPL depletion. Once in the dissolved-phase, the solvents are transported in the water primarily along in the direction of the groundwater flow, but also

horizontally (cross- or up-gradient) due to dispersion and diffusion. The aqueous phase plumes become elongated in the hydraulically down-gradient direction and are subject to attenuation process such as dispersion, sorption, matrix diffusion and biodegradation (discussed in the next section). All aqueous plumes will eventually reach a steady-state condition where the leading edge and side edges no longer expand. For this Site, the predominant groundwater flow is laterally downgradient (to the northeast). PCE has been measured as high as 350 µg/L at SB-23; however, the highest concentration measured in a monitoring well is 130 µg/L in MW-10. Both of these locations are in northeastern portion of the preheat building. These concentrations are significantly less than 1% of the aqueous solubility (206 mg/L). According to Cherry and Feenstra (1991), concentrations exceeding 1% of the compound's aqueous solubility indicates the possible presence of DNAPL. Thus, there is no indication of a DNAPL at this Site.

Data collected from groundwater at the Site support the lateral movement of dissolved-phase solvents by groundwater. The analytical results of the downgradient wells indicate that the plume has migrated slightly to the east/northeast (in the direction of groundwater flow). The dissolved plume has been delineated in the downgradient direction. The plume has not migrated off the Site.

Chlorinated solvents can also degrade biologically in the subsurface through reductive dechlorination. As mentioned previously, a parent compound can be degraded biologically into daughter products. The primary daughter products for PCE are Trichloroethene (TCE), cis-1,2-Dichloroethene (cis-DCE) and Vinyl Chloride (VC). These daughter products have not been detected in the groundwater at the Site. This indicates that biological degradation may not be occurring or is occurring slowly such that the concentrations of the daughter products are lower than the detection limit.

2.4 Potential Receptors and Exposure Pathways

2.4.1 Evaluation of Vapor Intrusion

Potential risks associated with PCE and Freon-113 vapor intrusion were assessed using advanced versions of the Johnson and Ettinger Model specific to soil and groundwater sources. This model, published by the US EPA Office of Emergency and Remedial Response (OERR), is an enhanced implementation of the OSWER's Subsurface Vapor Intrusion Guidance (2002).

Vapor intrusion was assessed using the highest soil and groundwater concentrations detected for Freon-113 and PCE under the existing building during all previous sampling events. Exposure parameters listed in Appendix H were derived from Table 3 of the HSRA Appendix III. The default air exchange rate of 0.25 volumes per hour was used in the models.

Incremental risk associated with vapor intrusion of PCE was assessed using the maximum measured soil and groundwater concentrations. Risk was greater using groundwater concentrations (350 µg/L) with an estimated value of $1.2x10^{-6}$ and associated hazard quotient of $7.9x10^{-4}$. Using measured concentrations of PCE in soil resulted in a risk value of $4.5x10^{-8}$ and a

hazard quotient of $3x10^{-5}$. The target risk of $1.0x10^{-5}$ and hazard quotient of 1 were not exceeded.

Since Freon-113 is not considered a potent carcinogen, hazard quotient (HQ) was estimated using a groundwater concentration of 27,000 µg/L. Model results estimated hazard quotients of $2.4x10^{-2}$ for Freon-113 in groundwater and $1.1x10^{-3}$ for Freon-113 in soil. Hazard quotients below HQ=1 are considered acceptable. Model results are listed in Table 6. Model parameters can be found in Appendix H.

2.4.2 Receptor Survey

This section describes potential environmental and human exposures including a discussion of common exposure routes (i.e. inhalation, ingestion, or dermal contact), where applicable.

2.4.2.1 Environmental Receptors

The Site and adjacent properties are located in a predominantly residential and industrial setting. Common environmental receptors in this type of setting may include protected species, wetland areas, public drinking water wells, and surface water bodies.

2.4.2.1.1 Protected Species

Information compiled by the Georgia Natural Heritage Program (GNHP) was reviewed for Walker County, Georgia to identify sensitive wildlife receptors or protected species near the Site. The protected species identified in the Walker County include the following:

Animals

- Bachman's Sparrow
- Green Salamander
- Chickamauga Crayfish
- Chattooga River Crayfish
- Blackbarred Crayfish
- Spotfin Shiner
- Coosa Darter
- Blueside Darter
- Greenbreast Darter
- Redline Darter
- Banded Darter
- Northern Studfish
- Tennessee Cave Salamander
- Finelined Pocketbook
- Four-toed Salamander
- Flame Chub
- Lined Chub
- Tennessee Heelsplitter
- Spotted Spreadwing
- Sweetflag Spreadwing
- Scarlet Shiner
- Mountain Shiner
- Alabama Moccasinshell
- Gray Myotis
- Eastern Small-footed Myotis
- Southern Appalachian Woodrat
- Popeye Shiner
- Burrhead Shiner
- Telescope Shiner
- Yellowfin Madtom
- Dusky Darter
- Red-cockaded Woodpecker
- Pigeon Mountain Salamander
- Southern Pigtoe
- Skirted Hornsnail
- Tapered Cave Beetle
- Georgian Cave Beetle
- Pygmy Shrew
- Mountain Creekshell

Plants

- Ohio Buckeye
- Purple Foxglove
- Heath Aster
- Phlox-leaved Aster
- Willow-leaf Aster
- Wild Daisy
- Glade Blue Indigo
- Bluehearts
- Wild Hyacinth
- White Bear Lake Sedge
- Broadleaf Sedge
- Purple Sedge
- Tussock Sedge
- Shellbark Hickory
- Alabama Lipfern
- American Smoketree
- Three-flowered Hawthorn
- Pink Ladyslipper
- Tennessee Fragile Fern
- Gattinger Prairie Clover
- Mullein Foxglove
- Cream-flowered Tick-trefoil
- American Dropseed
- Log Fern
- Harbinger-of-spring
- Mountain Witch-alder
- Blue Ash
- Goldenseal
- Glade St. Johnswort
- Twinleaf
- Texas Plains Rush
- Naked-fruit Rush
- Least Gladecress
- Gladecress
- Wood Lily
- Broadleaf Gromwell
- Climbing Fern
- Fraser's Loosestrife
- Limerock Milkvine
- Virginia Bluebells
- Sprouting Muhly
- Alabama Snow-wreath
- Marble-seed
- Limestone Adder-tongue Fern
- American Ginseng
- Silverling
- Miami-mist
- Hairy Mockorange
- Broadleaf Phlox
- Tennessee Leafcup
- Shadow-witch Orchid
- Bigleaf Pondweed
- Granite Gooseberry
- Cumberland Rose Gentian
- Large-flowered Skullcap
- Roundleaf Catchfly
- Virginia Spirea
- Nuttall's Hedge-nettle
- Celandine Poppy
- Silky Aster
- Downy Bush-pea
- Appalachian Filmy Fern
- Dwarf Filmy Fern
- Bent Trillium
- Lanceleaf Trillium
- Barksdale Trillium
- September Elm
- Ozark Bunchflower
- Limerock Arrow-wood
- Glade Violet
- Appalachian Cliff Fern

A letter from the Wildlife Resources Division of the Georgia Department of Natural Resources indicated that there are no records of species of concern with the project area. The letter is attached as Appendix I.

2.4.2.1.2 Wetlands and Surface Water Bodies

A review of a National Wetland Inventory (NWI) Map for Estelle, Georgia, prepared by the U.S. Fish and Wildlife Service, indicates that the Site and adjacent properties are not located in identified wetland areas.

The groundwater under the Site flows from the high elevation at the western property boundary towards the east to the drainage ditch, then to an unnamed tributary that flows south where it joins Town Creek approximately 1.5 miles south of the Site. Considering the surface topography of the Site and the potential influence of the low lying area and the unnamed tributary of Town Creek, the groundwater at the Site is expected to join the surface water system at the drainage ditch along the eastern boundary.

To verify that on-site regulated substances in groundwater have not migrated into the unnamed tributary, temporary monitoring well TW-3 was installed east of the Chattooga and Chickamauga Railway Right-of-Way. VOCs were not detected in the groundwater sample collected from this well. In addition, a surface water sample was collected from the on-site pond. VOCs were not detected in this sample.

2.4.2.2 Potential Human Receptors

Human receptors include building occupants and others that may utilize the property and be potentially exposed to contaminated vapors or groundwater. Potential human receptors in the area include the facility personnel. Other potential human receptors include contractors, property maintenance personnel, and underground utility workers. The Site is secured/restricted and the potential for the exposure of the regulated substances to the general public is limited.

2.4.2.2.1 Site Structures

The Site is currently part of an active yarn dying facility. The preheat building, located on the Site, is used for winding yarn after the dying process is complete. Adjacent to the maintenance area is the loading dock and the dumpster area.

The parking lot is covered with asphalt and gravel. Exposure to the soils, having concentrations less than the Type 1 RRS, beneath the building and/or asphalt could only occur in the event that the floor or parking lot was penetrated.

2.4.2.2.2 Underground Utilities

Underground utilities can act as receptors by intercepting migrating regulated substances through a vapor phase or dissolved phase in the groundwater. In both cases, accumulation may occur inside a hollow pipe or along a preferential pathway created from permeable backfill materials used during placement of the utilities. Human exposures may occur in large diameter utility pipes, manholes, culverts, storm grates, or related access points.

The location of underground utilities in the vicinity of the groundwater plume is shown on Figure 2. The utilities identified include electrical and roof drain storm water. These utilities are likely located at depths between two and three ft-bls. Based on the measured depth to groundwater of 4-5 ft-bls, these underground utilities could be potential groundwater receptors during periods of high groundwater levels.

2.4.2.2.3 Water Well Usage

In November 2005, a water well survey was performed by EPS to identify potential nearby private or public water wells. The survey involved a records search of the EPD files, communications with the City of LaFayette Water Department, a drive-by survey of the properties within a mile of the Site, and a USGS database search. The records search of the EPD files did not identify any water wells in the vicinity of the Site. EPS also reviewed the USGS water well database. No wells were identified in the USGS database within a three mile radius of the Site.

Mr. Jim Speir, the City of LaFayette Director of Water & Sewer Utilities, confirmed that the intake location for the City of LaFayette's public water supply is located on a spring

approximately 0.4 miles north of the Site. Figure 2 shows the location of the City of LaFayette drinking water intake relative to the Site. Mr. Speir stated that he was not aware of any private drinking water wells present within one mile of the Site. No other public water wells or intake locations are present in the City of LaFayette.

On November 28, 2005, EPS performed a drive-by survey of the properties within a 1-mile radius of the Site. No private drinking water wells were observed. EPS confirmed the City of LaFayette drinking water intake as being located approximately 0.4 miles north of the Site.

The only drinking water source receptor identified during this survey was the City of LaFayette water intake located along a spring approximately 0.4 miles north of the Site. The intake is located topographically up-gradient and upstream of the Site and therefore, human exposure to the VOCs in the groundwater appears unlikely.

2.4.2.2.4 Nearest Resident Individual

The nearest residence is located on Probasco Street, a single-family residence approximately 200 feet west, or up-gradient, of the Site.

3 PRELIMINARY REMEDIAL ACTION PLAN

As mentioned previously, with the exception of PCE, the groundwater is in compliance with Type 4 RRS. No action is required for soil as the soil has already been certified to be in compliance with Type 1 RRS.

3.1 Groundwater Demonstration

Due to the low concentrations and limited extent of PCE across the Site, it is anticipated that after a demonstration period the Site will be able to certify compliance of groundwater to Type 1 RRS at the Point of Exposure. According to the VRP, 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 1,000 feet downgradient of the plume edge. As mentioned previously, the nearest known drinking water intake is 0.4 miles north of the Site and is not downgradient of the Site. The Site is in an area serviced by a public water supply. Thus, the Point of Exposure for this Site is a hypothetical point 1,000 feet downgradient from the plume. It is proposed that the Point of Demonstration be MW-2 (which is located just inside the site's fenceline) and TW-1 (which is located on the northeastern corner of the Site within the fenceline). MW-2 and TW-1 are located approximately 70 feet and 185 feet, respectively, downgradient from the highest PCE concentrations. PCE has not been detected in groundwater collected from MW-2 or TW-1.

The demonstration period will be 12 months. During that time, quarterly groundwater sampling will be conducted. The groundwater sampling will consist of sampling specific wells (MW-2, MW-5, MW-10, and TW-1) and analyzing the samples for VOCs using Method 8260B. The results from the Point of Demonstration wells (MW-2 and TW-1) will be compared to the Type 1 and 4 RRS.

As an additional demonstration, modeling will be conducted to determine the estimated concentrations of PCE at the hypothetical Point of Exposure 1000 feet down gradient. The computer model BIOCHLOR will be used. BIOCHLOR is a computer model that simulates natural attenuation of dissolved chlorinated solvents.

It is anticipated that following the 12 month groundwater monitoring period, the Site will be able to certify compliance with Type 1 RRSs at the Point of Exposure using analytical results collected from the Point of Demonstration wells (MW-2 and TW-1) and by groundwater modeling of the hypothetical Point of Exposure. At the end of the 12 month monitoring period, a CSR will be submitted and groundwater monitoring will cease. If the Site cannot certify compliance, additional recommendations will be evaluated and presented in a final remediation plan as part of the third progress report (at the end of 12 months).

At the end of the demonstration period, PCE may remain above the RRS on the Site property. In this case, it is anticipated that property compliance will be achieved through the use of environmental covenants.

3.2 Reporting

Semiannual progress reports will be submitted to the EPD. The progress reports will summarize all work completed since the previous progress report.

3.3 Schedule

The anticipated schedule (shown in Table 7) is benchmarked according to acceptance into the VRP.

4 REFERENCES

Boerngen, J.G., and Shacklette, H.T., 1981, *Chemical analysis of soils and other surficial materials of the conterminous United States*: U.S. Geological Survey Open-File Report 81-197, 143 p.

Clark & Zisa, *A Physiographic Map of Georgia*, Department of Natural Resources, Georgia Geologic Survey, 1987.

EPS, Inc. 2009, *Revised Compliance Status Report: Color Spectrum (HSI#10831)*. December.

Fetter, C. W., 1988, *Applied Hydrogeology*, 2nd Edition, Macmillan Publishing Company, New York, 592 p.

Holder, T.W. and H.A. Schretter. 1986. *The Atlas of Georgia*. University of Georgia Press, Athens.

Lohman, S. W., 1972, *Ground-Water Hydraulics*, Professional Paper 708, U.S. Department of the Interior, Geological Survey, 67 p.

U.S. Forest Service, *Ecological Subregions of the U.S*., November 5, 1993 http://www.fs.fed.us/land/pubs/ecoregions/ch20.html#231D

Swain, L.A., Mesko, T.O., Hollyday, E.F., 2004, *A summary of the Valley and Ridge, Blue Ridge, and Piedmont physiographic provinces in the Eastern United States*: U.S. Geological Survey Professional Paper 1422-A, 23 p.

Tanner, J.D., et al, *Geologic Map of Georgia*, Department of Natural Resources, Geologic and Water Resources Division, Georgia Geologic Survey, 1976.

Tyson, Anthony W., 1993, *Georgia's Ground Water Resources*, University of Georgia College of Agricultural and Environmental Sciences, Bulletin 1096 October 1993.

U.S. Environmental Protection Agency, Region 4, *Field Branches Quality System and Technical Procedures*, Athens, Georgia.

APPENDIX A

VOLUNTARY REMEDIATION PROGRAM APPLICATION FORM AND CHECKLIST

Voluntary Investigation and Remediation Plan Application Form and Checklist

VRP APPLICANT INFORMATION

COMPANY NAME	CSI Realty, LLC				
CONTACT PERSON/TITLE	Tom Watters				
ADDRESS	PO Box 5695, Rome, GA 30162				
PHONE	706-290-4179	**FAX**	770-351-3092	**E-MAIL**	tomwatters@syntecind.com

GEORGIA CERTIFIED PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER OVERSEEING CLEANUP

NAME	Justin Vickery	**GA PE/PG NUMBER**	PG# 1745
COMPANY	Environmental Planning Specialists, Inc.		
ADDRESS	900 Ashwood Pkwy, Ste 350		

PHONE	404-315-9113	**FAX**	404-315-8509	**E-MAIL**	jvickery@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	for Tom Watters		
APPLICANT'S NAME/TITLE (PRINT)	**Tom Watters**	**DATE**	**12/29/11**

QUALIFYING PROPERTY INFORMATION (For additional qualifying properties, please refer to the last page of application form)				
HAZARDOUS SITE INVENTORY INFORMATION (if applicable)				
HSI Number	10831	Date HSI Site listed	February 10, 2006	
HSI Facility Name	Color Spectrum	NAICS CODE	424990	
PROPERTY INFORMATION				
TAX PARCEL ID	1023 087	PROPERTY SIZE (ACRES)	1.38	
PROPERTY ADDRESS	29 Probasco Street			
CITY	LaFayette	COUNTY	Walker	
STATE	Georgia	ZIPCODE	30728	
LATITUDE (decimal format)	34.713056	LONGITUDE (decimal format)	85.288889	
PROPERTY OWNER INFORMATION				
PROPERTY OWNER(S)	CSI Realty, LLC	PHONE #	706-290-4179	
MAILING ADDRESS	438 Lavender Drive			
CITY	Rome	STATE/ZIPCODE	GA 30164	

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. (PLEASE LIST CHECK DATE AND CHECK NUMBER IN COLUMN TITLED "LOCATION IN VRP." PLEASE DO NOT INCLUDE A SCANNED COPY OF CHECK IN ELECTRONIC COPY OF APPLICATION.)	Attached to front Chk Date 12/29/11 Chk # 1060	
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	Body of Text and Appendices	

	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:		
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;	Section 2.2	
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;	Section 2.2	
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	To be completed	
5.d.	Within 60 months after enrollment, the participant must submit the compliance status report required under the VRP, including the requisite certifications.	To be completed	
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." Justin Vickery, GA PG # 1745 — Printed Name and GA PE/PG Number 12/29/11 — Date Signature and Stamp		

APPENDIX B

TAX MAP AND WARRANTY DEED

Walker County Assessor			
Parcel: 1023 087 Acres: 1.38			
Name:	CSI REALTY LLC	Land Value	$27,600.00
Site:	29 PROBASCO STREET	Building Value	$1,142,613.00
Sale:	$0 on 10-2005 Reason=6 Qual=U	Misc Value	$0.00
Mail:	1906 SOUTH HAMILTON STREET DALTON, GA 30720	Total Value:	$1,170,213.00

Date printed: 12/22/11 : 13:03:29

1,100.00 Pd

Doc ID: 000288410004 Type: GLR
Filed: 11/07/2005 at 08:29:01 AM
Fee Amt: Page 1 of 4
Walker, Ga. Clerk Superior Court

BK 1370 PG 497-500

[Space above this line for recording data.]

After Recording Return to:
Karen W. Ingle
Minor, Bell & Neal
1301 Battlefield Parkway
Ft. Oglethorpe, GA 30742

Walker County, Georgia
Real Estate Transfer Tax
Paid $ 1,100.00
Date 11-7-05
Brenda S. Daniel
Clerk of Superior Court

WARRANTY DEED

Georgia, Whitfield County

THIS INDENTURE made this 28th day of October, 2005, between **C.H.T. Properties**, a Georgia Limited Liability Partnership, Grantor, and **CSI Realty, 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.

C.H.T. Properties

_____ (Seal)
James A. Crane, Jr., Managing Partner

_____ (Seal)
Neil F. Houston, Partner

_____ (Seal)
G. Lynn Tunnell, Partner

_____ (Seal)
Robert Park, Partner

Signed, Sealed and delivered
in the presence of:

_____
Unofficial Witness

_____
Notary Public (Please affix seal)
My commission expires:

File No. 2005101723

TANISE PATCHETT
NOTARY PUBLIC
MY COMMISSION EXPIRES
FEB. 5, 2008
MURRAY COUNTY, GEORGIA

EXHIBIT "A"

TRACT NO. 1:
Parcel A:
All that tract or parcel of land lying and being Land Lot No. 28, of the 7th District and 4th Section of Walker County, Georgia, and being more particularly described by a plat of survey prepared by Bakkum-DeLoach & Associates, Inc., dated December 12, 1986, as follows:

BEGINNING at a point where the north right of way line of Black Road intersects the east right of way line of Probasco Street; thence north 01 degree 55 minutes 00 seconds east, along the east right of way line of Probasco Street, 170.00 feet to an iron pin; thence north 89 degrees 49 minutes 59 seconds east, 232.59 feet to an iron pipe located in the west right of way line of Black Road and the west right of way line of the Central of Georgia Railroad; thence along the west right of way line of said Railroad and Black Road, the following courses and distances: south 09 degrees 54 minutes 43 seconds west, 95.15 feet; south 05 degrees 41 minutes 38 seconds west, 122.48 feet; thence continuing along the right of way of Black Road, the following courses and distances: south 34 degrees 31 minutes 03 seconds west, 26.63 feet; south 80 degrees 20 minutes 50 seconds west, 24.41 feet; north 72 degrees 57 minutes 06 seconds west, 27.18 feet; north 61 degrees 13 minutes 20 seconds west, 55.96 feet; north 66 degrees 02 minutes 02 seconds west, 58.33 feet and north 73 degrees 33 minutes 44 seconds west, 44.06 feet to the point of beginning.

Parcel B:
All that tract or parcel of land lying and being in Land Lot No. 28, of the 7th District and 4th Section of Walker County, Georgia, and being more particularly described by a plat of survey prepared by Bakkum-DeLoach & Associates, Inc., dated December 12, 1986, as follows:

BEGINNING at the point where the southern right of way line of Black Road intersects the eastern right of way line of Probasco Street; thence along the southerly right of way line of said Black Road the following courses and distances: south 72 degrees 01 minute 42 seconds east, 36.08 feet; south 65 degrees 49 minutes 08 seconds east, 53.55 feet; south 61 degrees 17 minutes 29 seconds east, 57.10 feet; south 74 degrees 00 minutes 07 seconds east, 38.39 feet and north 87 degrees 19 minutes 29 seconds east, 37.68 feet to the westerly right of way line of the Central of Georgia Railroad Company; thence the following courses and distances along the western right of way line of said Central of Georgia Railway Company: south 02 degrees 56 minutes 33 seconds west, 33.98 feet; south 00 degrees 01 minute 06 seconds east, 104.34 feet; south 01 degree 13 minutes 42 seconds east, 101.49 feet; and south 01 degree 45 minutes 48 seconds east, 166.74 feet to an iron pin; thence north 85 degrees 29 minutes 46 seconds west, 221.79 feet to an iron pipe located on the eastern right of way line of said Probasco Street; thence north 00 degrees 58 minutes 46 seconds east, along the eastern right of way line of said Probasco Street, a distance of 461.80 feet to the southeastern corner of the intersection of said Probasco Street and Black Road, and the point of beginning.

For prior title see Deed Book 836, Page 186, Walker County, Georgia Land Records.

TRACT NO. 2:
All that tract or parcel of land lying and being in Land Lot No. 28, in the 7th District and 4th Section of Walker County, Georgia, being in the town of Linwood and being more particularly described by a plat of survey prepared by Peter L. Bakkum, Georgia Registered Land Surveyor No. 1096, dated April 6, 1988,

as follows:

BEGINNING at an iron pin in the east right of way of Probasco Street, a distance of 461.80 feet south of the southeast corner of the intersection of Black Road with Probasco Street as measured along the east right of way of said Probasco Street; thence south 85 degrees 29 minutes 46 seconds east along the south line of property conveyed to Color Spectrum, Inc. by the Town of Linwood, a distance of 221.79 feet to an iron pin found on the west right of way of Central of Georgia Railroad; thence south 01 degree 30 minutes east along the west right of way of said railroad, a distance of 571.04 feet; thence south 88 degrees 39 minutes 20 seconds west along property now or formerly belonging to Walker County Board of Education, a distance of 221.44 feet to the east right of way of Probasco Street; thence north 01 degree 25 minutes west along the east right of way of Probasco Street, a distance of 593.63 feet to an iron pin and the point of beginning.

Also conveyed herein is that 20 feet in width easement for ingress and egress which was reserved by Multicolor Processors, Inc. in its deed to Town of Linwood of record in Deed Book 527, Page 775, Walker County Clerk's Records, reference to said deed being herein made for a full and complete description of said easement area.

For prior title see Deed Book 591, Page 280, Walker County, Georgia Land Records.

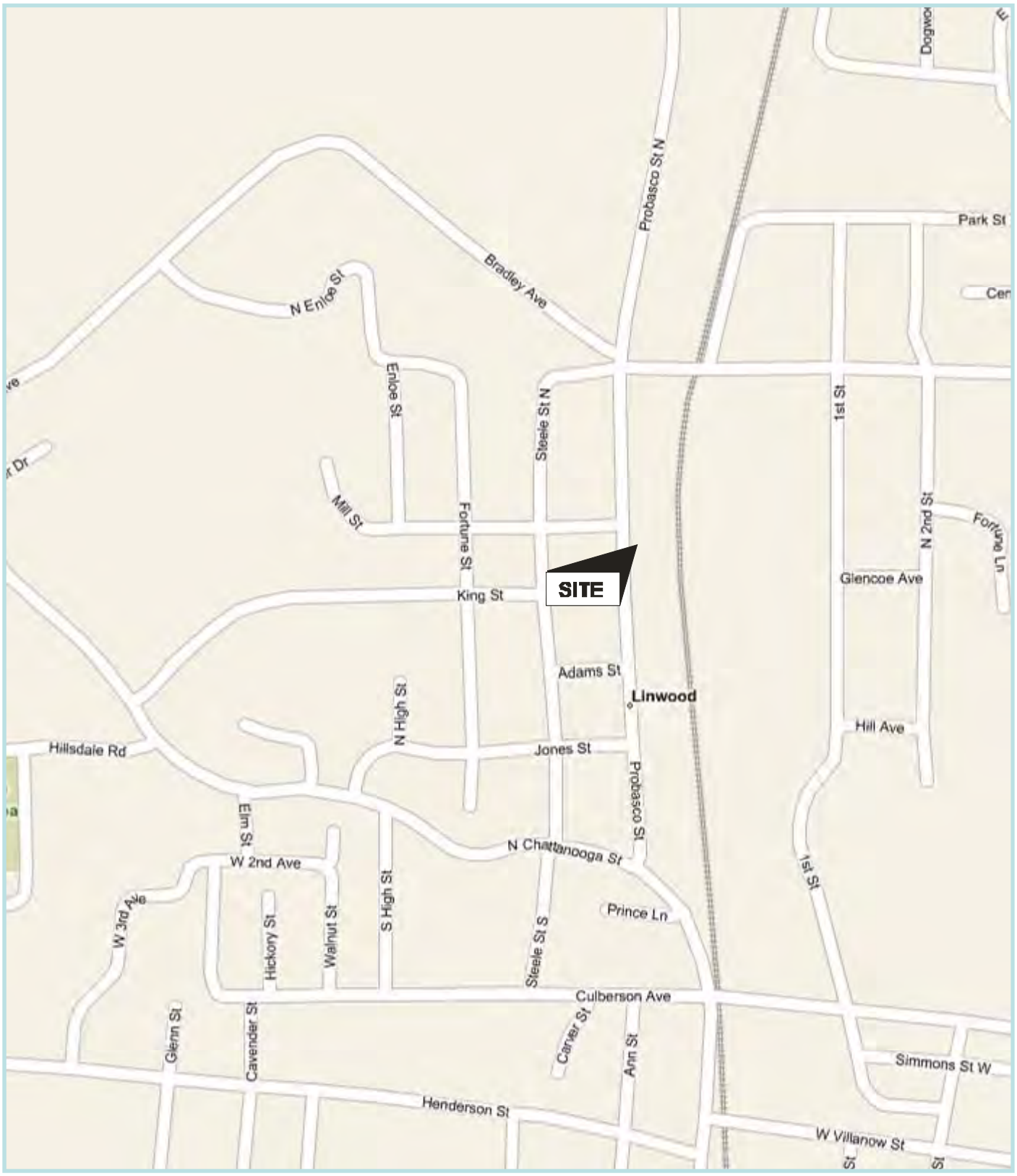
TRACT NO. 3:
All that tract or parcel of land lying and being in Land Lot No. 28, in the 7th District and 4th Section of Walker County, Georgia and being more particularly described as follows:

BEGINNING at the east right of way line of Probasco Street at an iron pin being located north 01 degree 17 minutes 17 seconds west, a distance of 517.68 feet from its intersection with the northeast right of way line of Chattanooga Street; thence north 02 degrees 17 minutes 17 seconds west, along the east right of way line of Probasco Street, a distance of 150.0 feet to an iron pin found at the southwest corner of the property conveyed to James A. Crane Jr., Neil F. Houston, G. Lynn Tunnell and Robert Park, d/b/a C.H.T. Properties, a Georgia General Partnership by deed recorded in Book 574, Page 428, Walker County, Georgia Land Records; thence north 88 degrees 16 minutes 34 seconds east, along the south line of the aforesaid property, a distance of 220.68 feet to an iron pin found in the southeast corner thereof, said point being in the west right of way line of the Central of Georgia Railroad Company; thence south 01 degree 58 minutes 21 seconds east, along the west right of way line of the Central of Georgia Railway Company, a distance of 150.0 feet to an iron pin; thence south 88 degrees 16 minutes 40 seconds west, a distance of 219.84 feet to the point of beginning.

For prior title see Deed Book 731, Page 660, Walker County, Georgia Land Records.

APPENDIX C

FIGURES



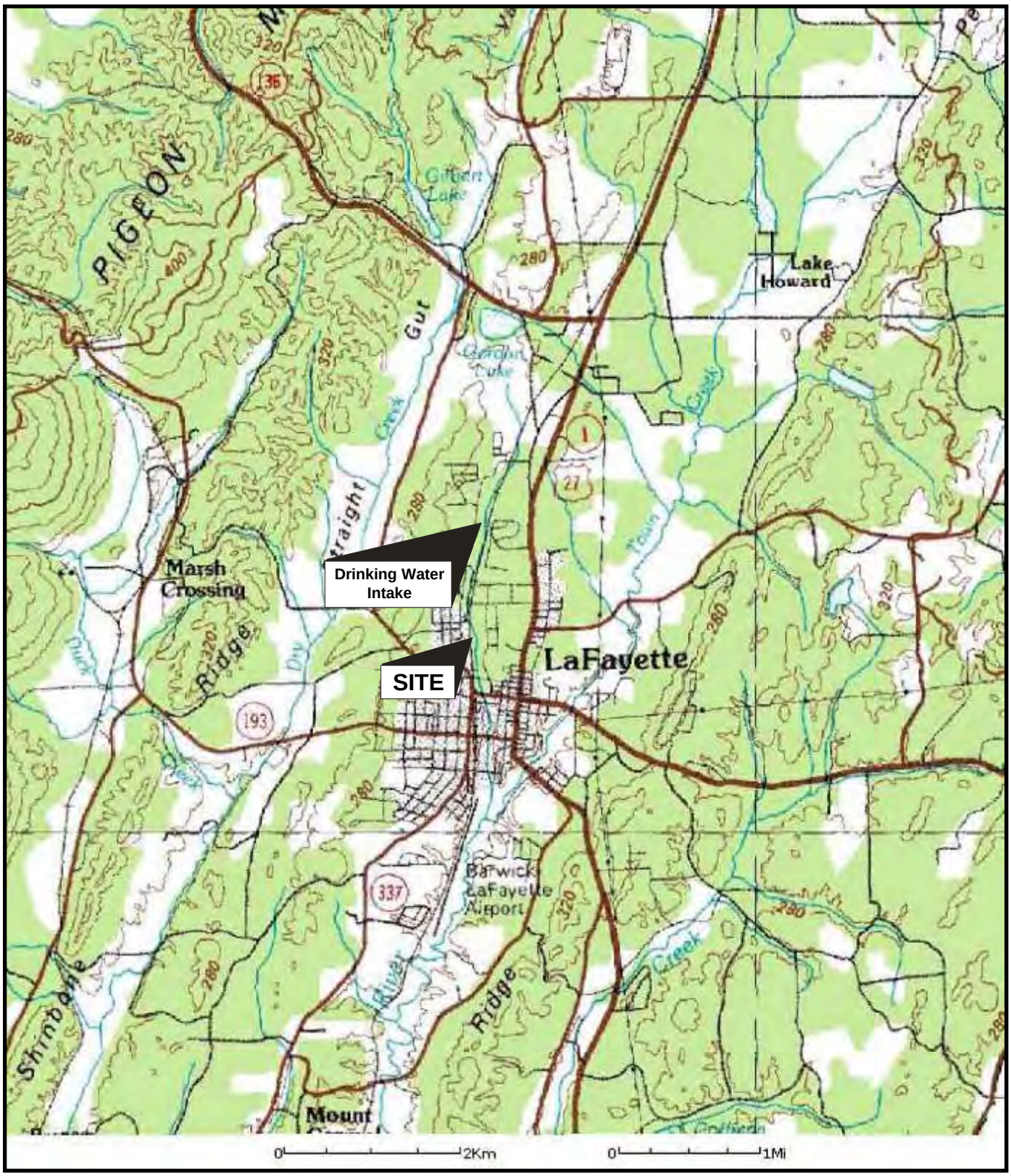
USGS. "LaFayette quadrangle, Georgia" 1:24,000

N

EPS

COLOR SPECTRUM
29 PROBASCO ST.
LAFAYETTE, GA 30728

FIGURE 1.
SITE LOCATION MAP



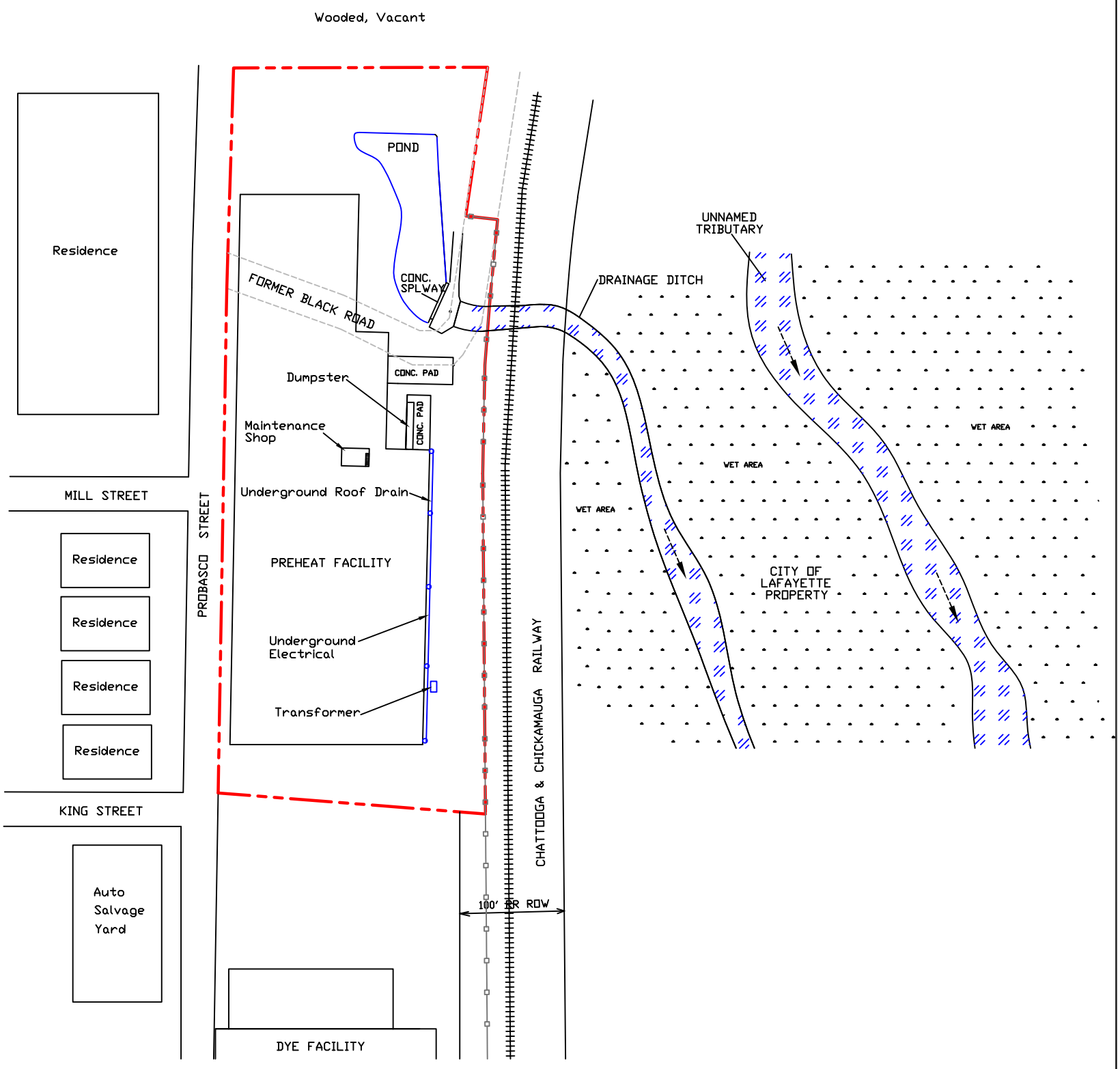
LAFAYETTE QUADRANGLE

N

EPS

COLOR SPECTRUM
29 PROBASCO ST.
LAFAYETTE, GA 30728

FIGURE 2.
TOPOGRAPHIC MAP



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Color Spectrum
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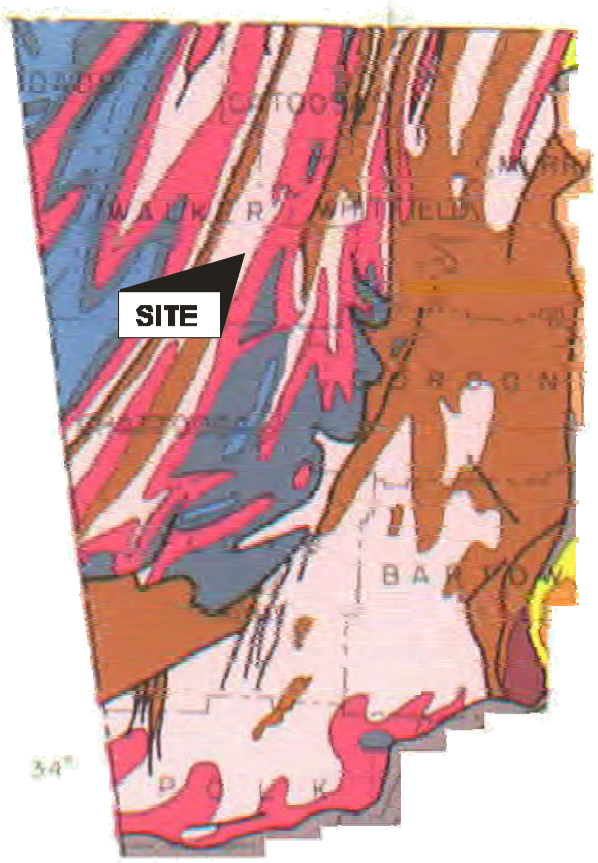
Site Plan

FIGURE 3

Geologic Map of Georgia -- Ridge and Valley

Georgia Geologic Survey
1977

David E. Lawton



PENNSYLVANIAN ROCKS

MISSISSIPPIAN ROCKS

DEVONIAN ROCKS

CAMBRIAN AND ORDOVICIAN ROCKS

CAMBRIAN ROCKS

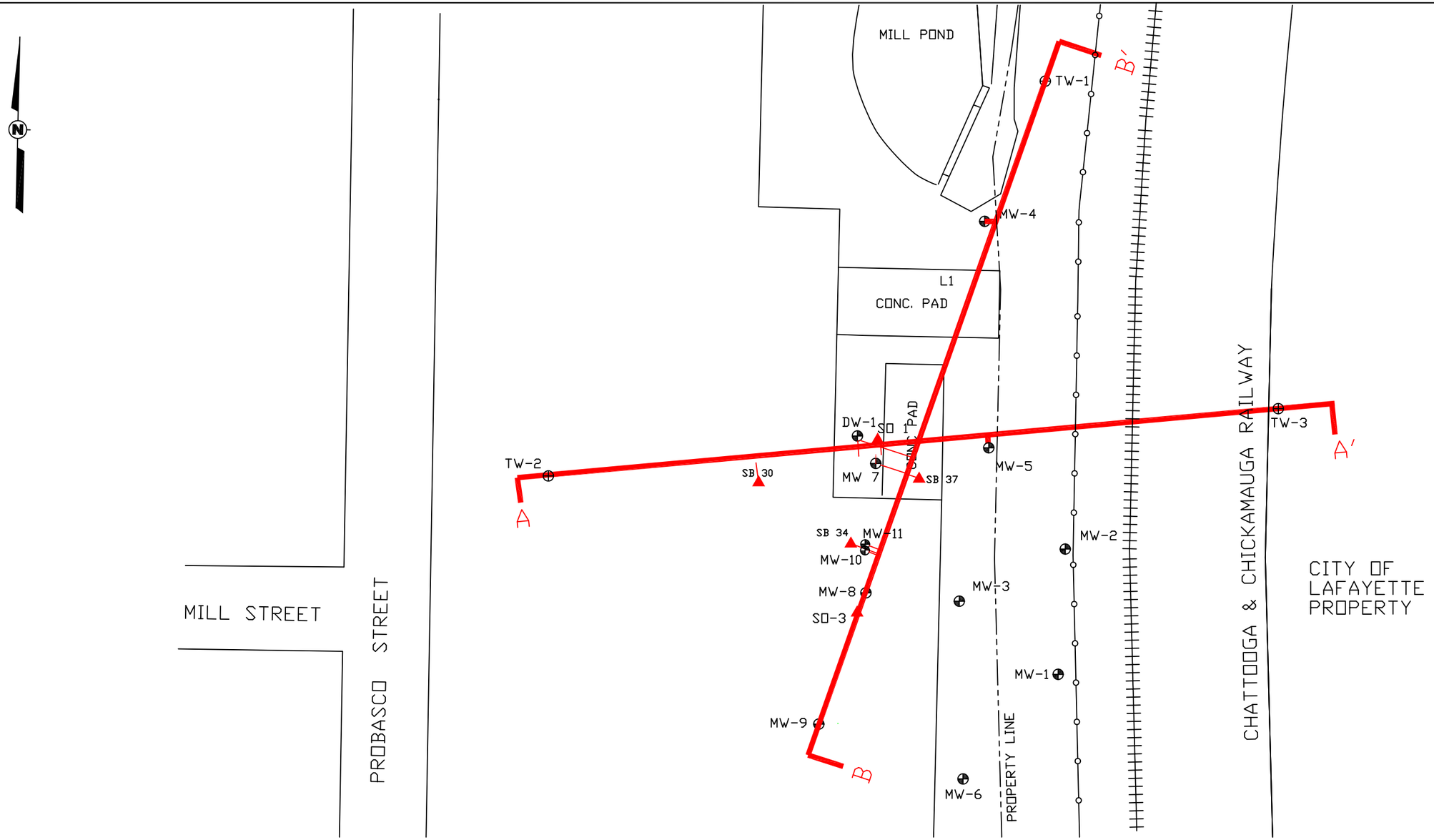
CAMBRIAN-preCAMBRIAN ROCKS

N

EPS

COLOR SPECTRUM
29 PROBASCO ST.
LAFAYETTE, GA 30728

FIGURE 4.
GEOLOGIC LOCATION MAP



LEGEND

- Soil Boring Location
- Groundwater Monitoring Well Location
- A A' Cross–Section Trace 'A'
- B B' Cross–Section Trace 'B'

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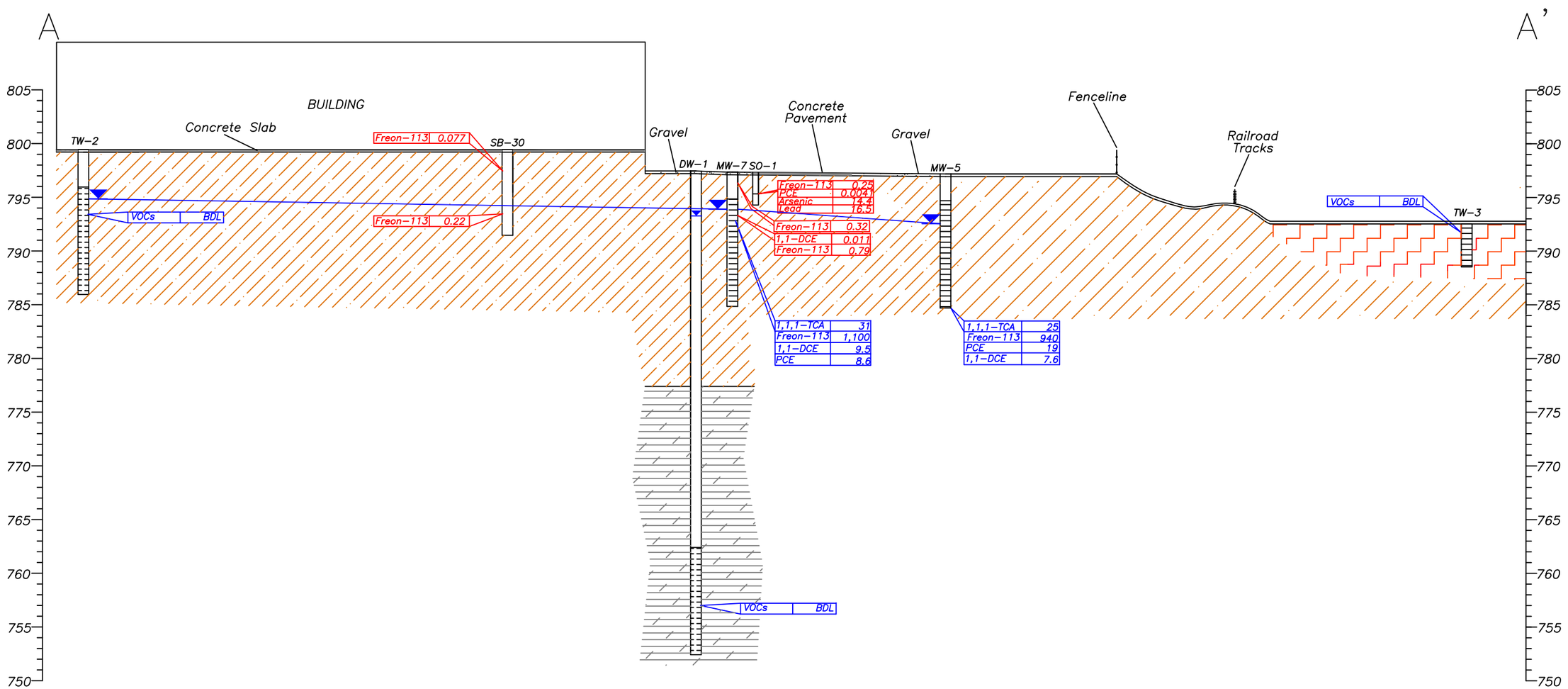
Geologic Cross-Section Location Map

FIGURE 5



LEGEND

Depth To Water (August 2011)

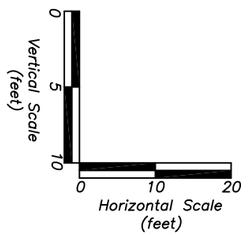
Soil Data		
1,1,1-TCA	0.012	1,1,1-Trichloroethane (mg/Kg)
1,1-DCA	0.0068	1,1-Dichloroethane (mg/Kg)
1,1-DCE	0.08	1,1-Dichloroethene (mg/Kg)
Freon-113	6.3	Freon-113 (mg/Kg)
PCE	0.3	Tetrachloroethene (mg/Kg)

Groundwater Data		
1,1,1-TCA	0.012	1,1,1-Trichloroethane (Ug/L)
1,1-DCA	0.0068	1,1-Dichloroethane (ug/L)
1,1-DCE	0.08	1,1-Dichloroethene (ug/L)
Freon-113	6.3	Freon-113 (ug/L)
PCE	0.3	Tetrachloroethene (ug/L)

Clay

Bedrock

Organic Material



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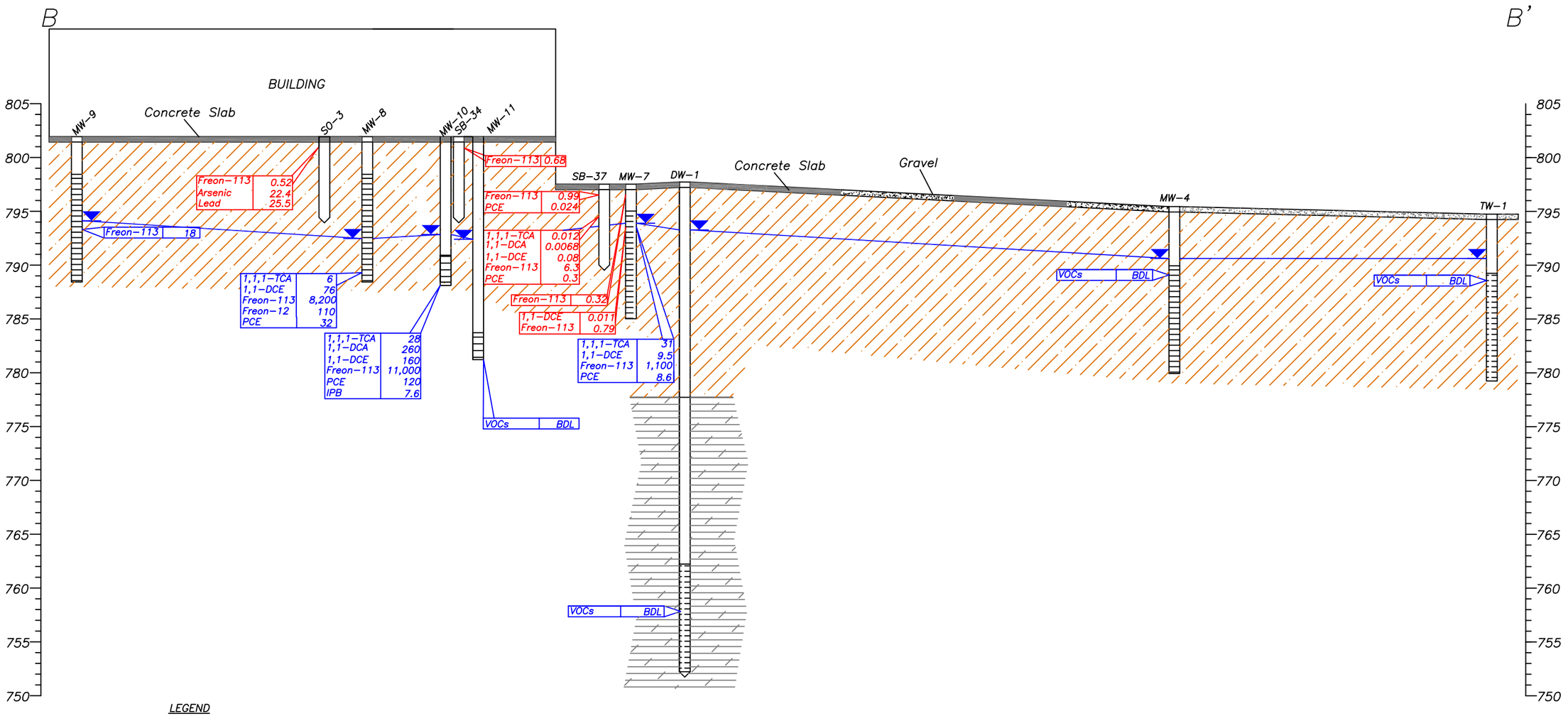
Cross-Section A-A'

FIGURE 6



LEGEND

Depth To Water (August 2011)

Soil Data

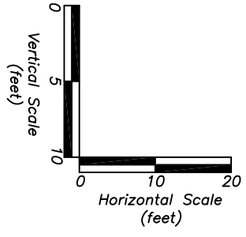
1,1,1-TCA	0.012	1,1,1-Trichloroethane (mg/Kg)
1,1-DCA	0.0068	1,1-Dichloroethane (mg/Kg)
1,1-DCE	0.08	1,1-Dichloroethene (mg/Kg)
Freon-113	6.3	Freon-113 (mg/Kg)
PCE	0.3	Tetrachloroethene (mg/Kg)

Groundwater Data

1,1,1-TCA	33	1,1,1-Trichloroethane (ug/L)
1,1-DCA	250	1,1-Dichloroethane (ug/L)
1,1-DCE	280	1,1-Dichloroethene (ug/L)
Freon-113	15,000	Freon-113 (ug/L)
Freon-12	680	Freon-12 (ug/L)
PCE	130	Tetrachloroethene (ug/L)
IPB	8.4	Isopropyl Benzene (ug/L)

Clay

Bedrock



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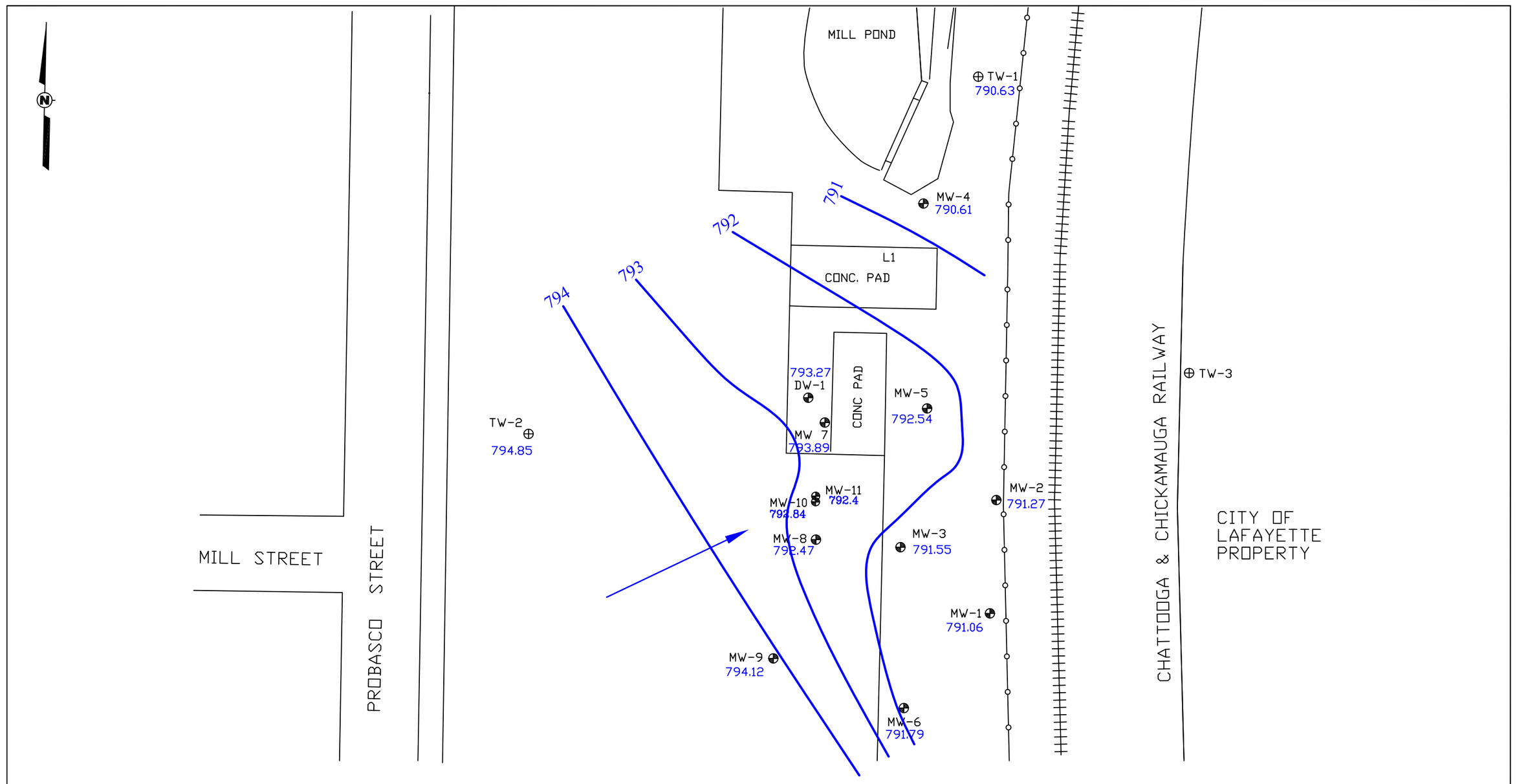
Cross-Section B-B'

FIGURE 7



LEGEND

- Groundwater Monitoring Well Location
- 794 — Groundwater Elevation Contour (Ft. Above NGVD)
- 794.08 — Groundwater Elevation at Well (Ft. Above NGVD)
- Groundwater Flow Direction
- Fenceline

0 20 40
Graphic Scale (feet)

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Color Spectrum
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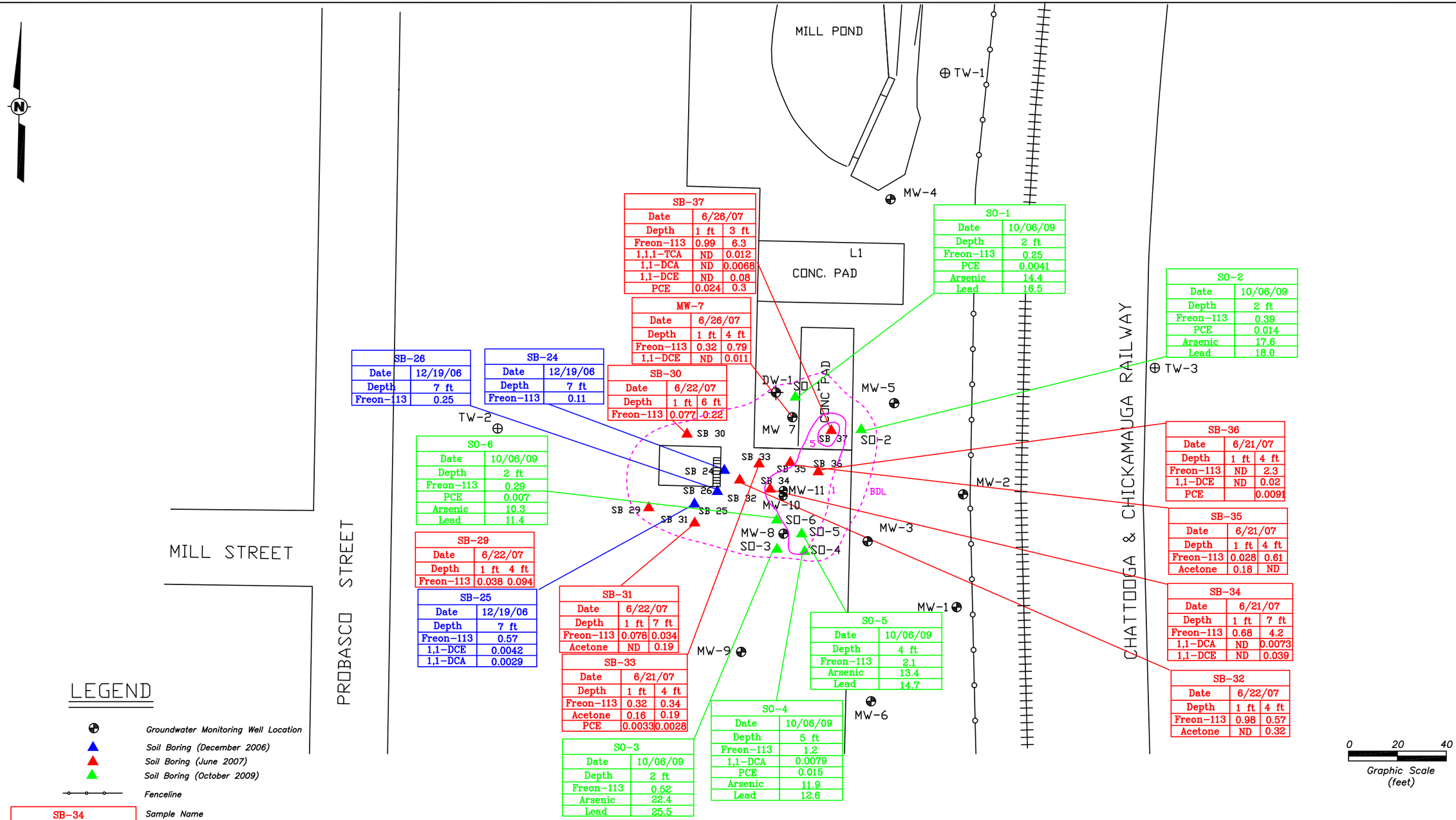
Potentiometric Surface Map (August 2011)

FIGURE 8



SB-37		
Date	6/26/07	
Depth	1 ft	3 ft
Freon-113	0.99	6.3
1,1,1-TCA	ND	0.012
1,1-DCA	ND	0.0068
1,1-DCE	ND	0.08
PCE	0.024	0.3

SO-1	
Date	10/06/09
Depth	2 ft
Freon-113	0.25
PCE	0.0041
Arsenic	14.4
Lead	16.5

SO-2	
Date	10/06/09
Depth	2 ft
Freon-113	0.39
PCE	0.014
Arsenic	17.6
Lead	18.0

MW-7		
Date	6/26/07	
Depth	1 ft	4 ft
Freon-113	0.32	0.79
1,1-DCE	ND	0.011

SB-26	
Date	12/19/06
Depth	7 ft
Freon-113	0.25

SB-24	
Date	12/19/06
Depth	7 ft
Freon-113	0.11

SB-30		
Date	6/22/07	
Depth	1 ft	6 ft
Freon-113	0.077	0.22

SB-36		
Date	6/21/07	
Depth	1 ft	4 ft
Freon-113	ND	2.3
1,1-DCE	ND	0.02
PCE		0.0091

SO-6	
Date	10/06/09
Depth	2 ft
Freon-113	0.29
PCE	0.007
Arsenic	10.3
Lead	11.4

SB-35		
Date	6/21/07	
Depth	1 ft	4 ft
Freon-113	0.028	0.61
Acetone	0.18	ND

SB-29		
Date	6/22/07	
Depth	1 ft	4 ft
Freon-113	0.038	0.094

SB-34		
Date	6/21/07	
Depth	1 ft	7 ft
Freon-113	0.68	4.2
1,1-DCA	ND	0.0073
1,1-DCE	ND	0.039

SB-25	
Date	12/19/06
Depth	7 ft
Freon-113	0.57
1,1-DCE	0.0042
1,1-DCA	0.0029

SB-31		
Date	6/22/07	
Depth	1 ft	7 ft
Freon-113	0.078	0.034
Acetone	ND	0.19

SB-32		
Date	6/22/07	
Depth	1 ft	4 ft
Freon-113	0.98	0.57
Acetone	ND	0.32

SB-33		
Date	6/21/07	
Depth	1 ft	4 ft
Freon-113	0.32	0.34
Acetone	0.16	0.19
PCE	0.0033	0.0028

SO-5	
Date	10/06/09
Depth	4 ft
Freon-113	2.1
Arsenic	13.4
Lead	14.7

SO-4	
Date	10/06/09
Depth	5 ft
Freon-113	1.2
1,1-DCA	0.0079
PCE	0.015
Arsenic	11.9
Lead	12.6

SO-3	
Date	10/06/09
Depth	2 ft
Freon-113	0.52
Arsenic	22.4
Lead	25.5

LEGEND

- Groundwater Monitoring Well Location
- Soil Boring (December 2006)
- Soil Boring (June 2007)
- Soil Boring (October 2009)
- Fenceline

SB-34		
Date	6/21/07	Sample Name / Sample Date
Depth	1 ft	7 ft Sample Depth
Freon-113	0.68	4.2 Freon-113 (mg/kg)
1,1-DCA	ND	0.0073 1,1-Dichloroethane (mg/kg)
1,1-DCE	ND	0.039 1,1-Dichloroethene (mg/kg)
1,1,1-TCA	ND	0.0073 1,1,1-Trichloroethane (mg/kg)
Acetone	ND	0.039 Acetone (mg/kg)

ND — Not Detected

/5 — Isoconcentration contours for VOCs in soil (mg/kg)

Estimated isoconcentration contour

BDL — Below Detection Limit

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Color Spectrum
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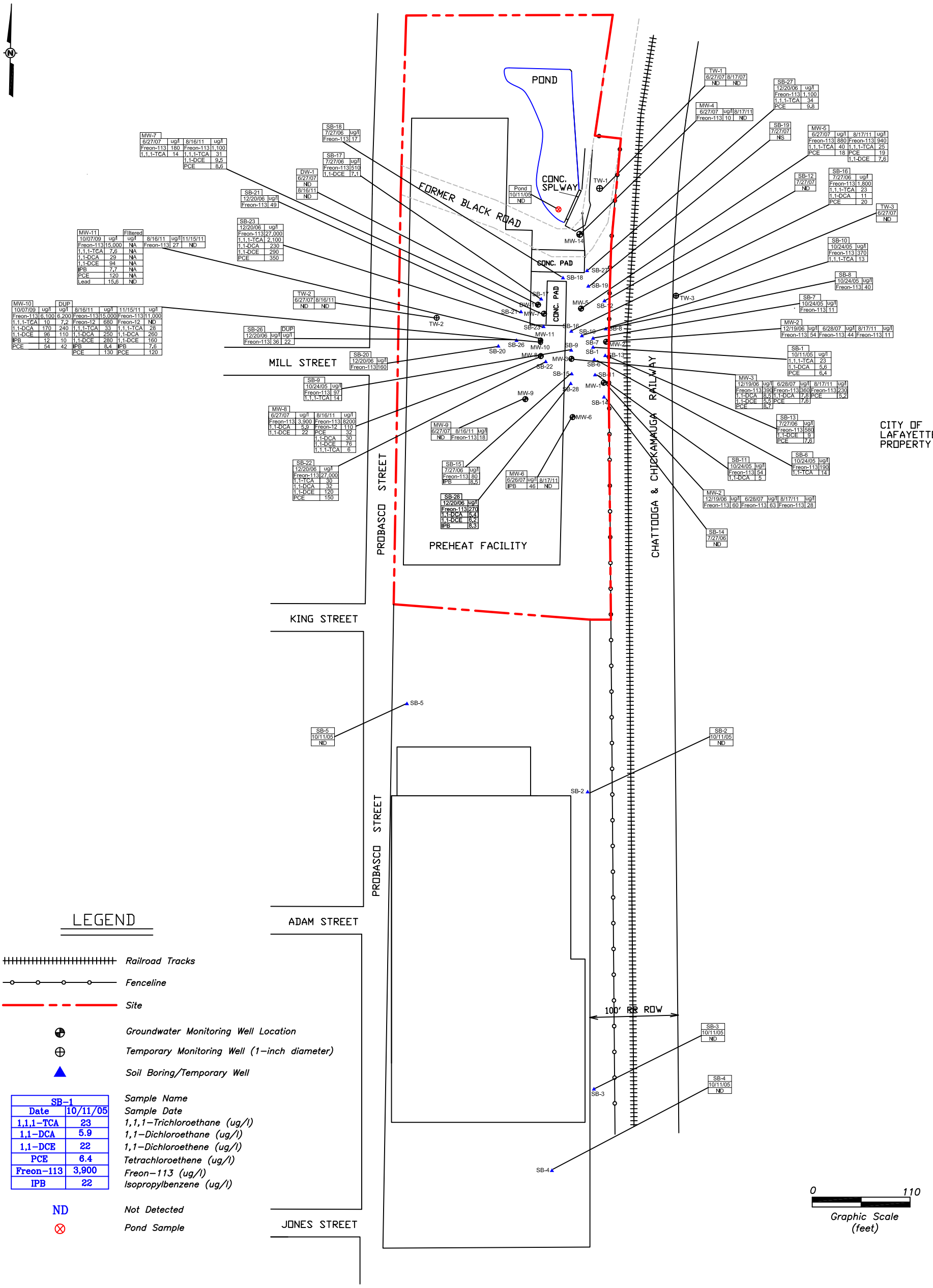
Soil Sampling Results

FIGURE 9



LEGEND

- Railroad Tracks
- Fenceline
- Site
- Groundwater Monitoring Well Location
- Temporary Monitoring Well (1-inch diameter)
- Soil Boring/Temporary Well

SB-1	
Date	10/11/05
1,1,1-TCA	23
1,1-DCA	5.9
1,1-DCE	22
PCE	6.4
Freon-113	3,900
IPB	22

Sample Name
Sample Date
1,1,1-Trichloroethane (ug/l)
1,1-Dichloroethane (ug/l)
1,1-Dichloroethene (ug/l)
Tetrachloroethene (ug/l)
Freon-113 (ug/l)
Isopropylbenzene (ug/l)

ND — Not Detected

Pond Sample

Note: Monitoring wells did not exist during the October 11, 2005 sampling event.

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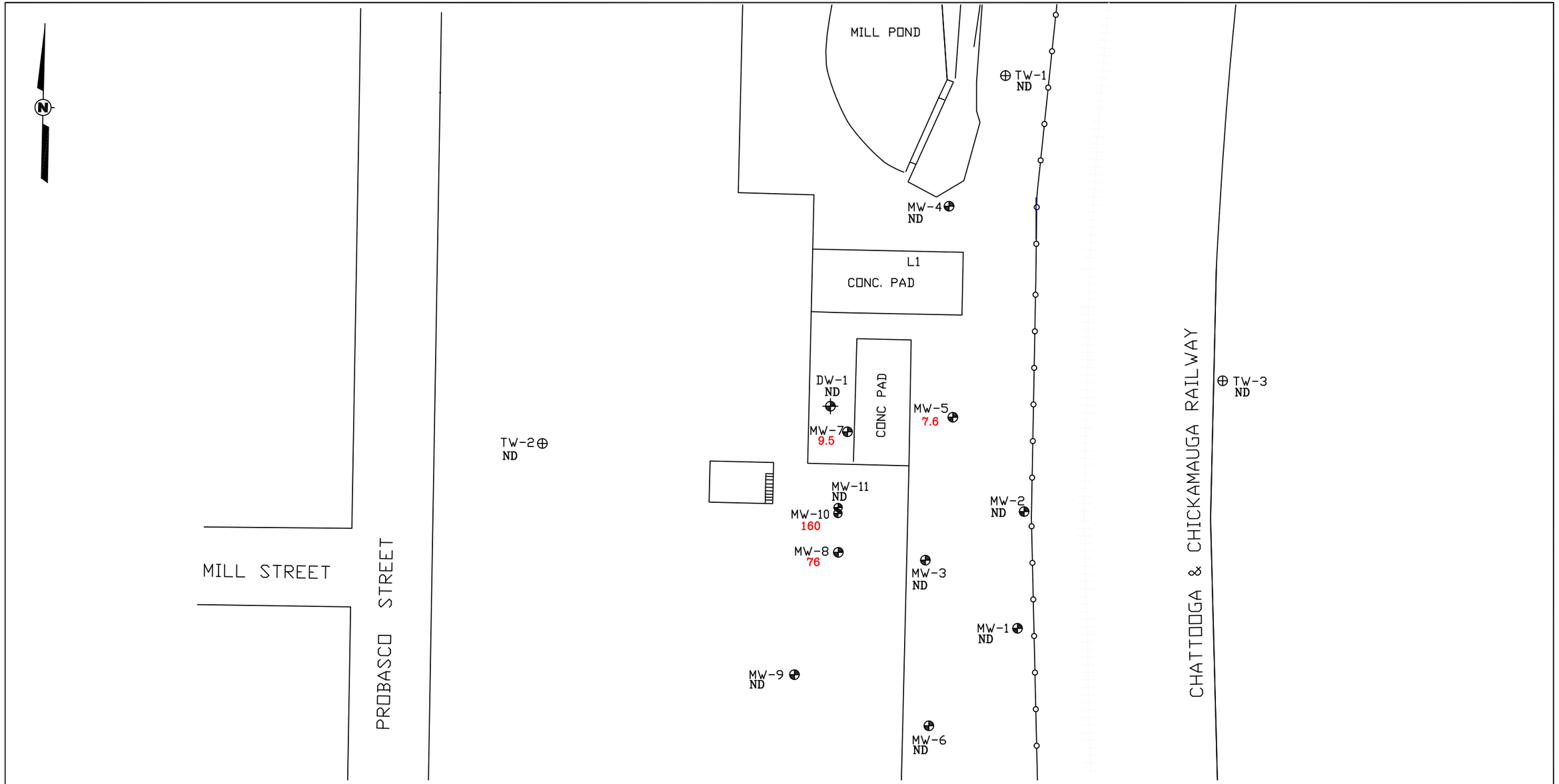
Groundwater Sampling Results

FIGURE 10



LEGEND

- Groundwater Monitoring Well Location
- Deep Monitoring Well Location
- Temporary Monitoring Well (inch)
- 160 DCE Concentration (ug/L)
- ND Not Detected
- Fenceline

0 20 40

Graphic Scale (feet)

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Color Spectrum
29 Probasco Street
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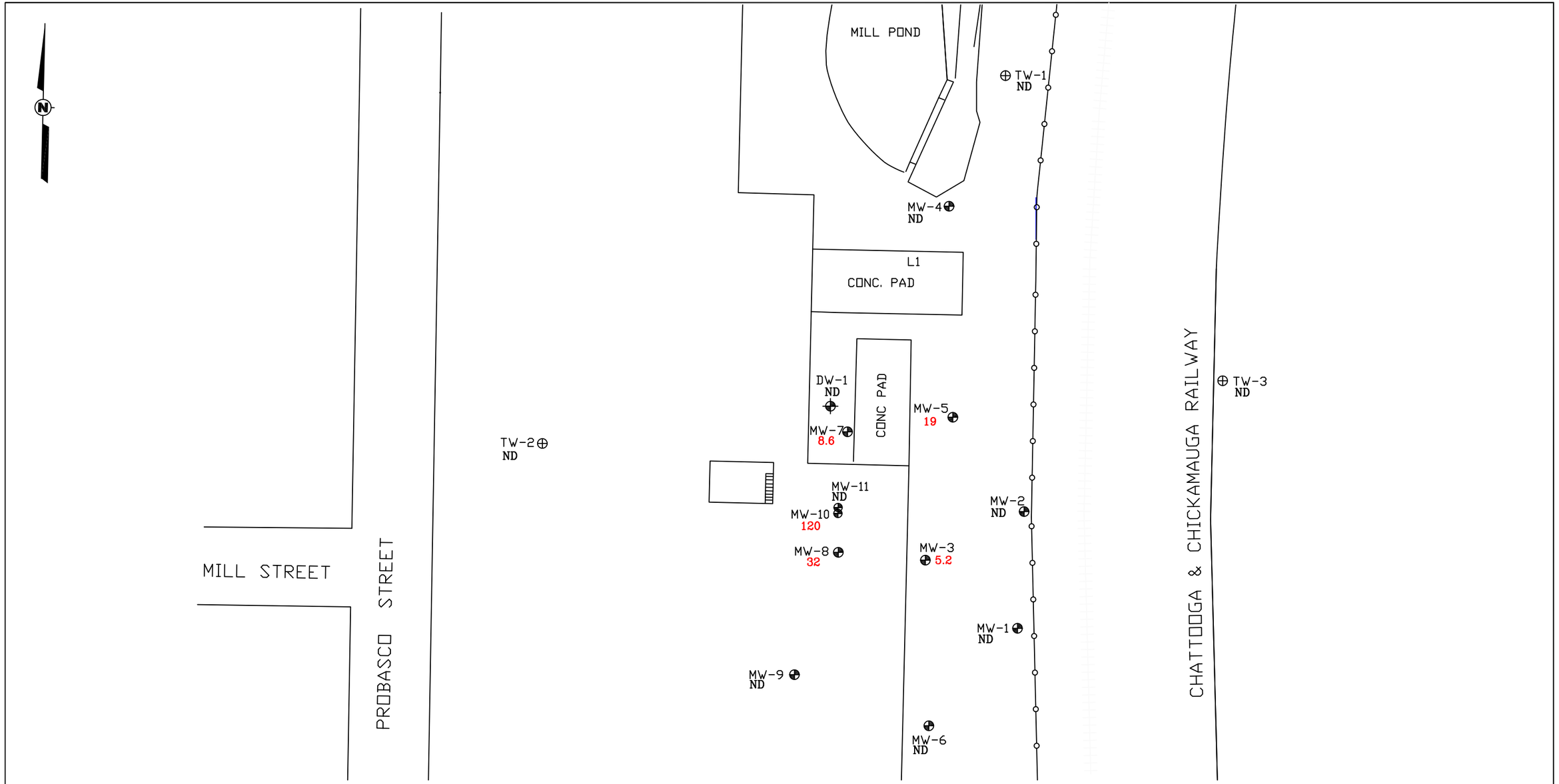
1,1-Dichloroethene Delineation
August 2011 Groundwater
Sampling Event

FIGURE
11



LEGEND

- Groundwater Monitoring Well Location
- Deep Monitoring Well Location
- Temporary Monitoring Well (inch)
- 194 — PCE Concentration (ug/L)
- ND — Not Detected
- Fenceline

0 20 40

Graphic Scale (feet)

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Color Spectrum
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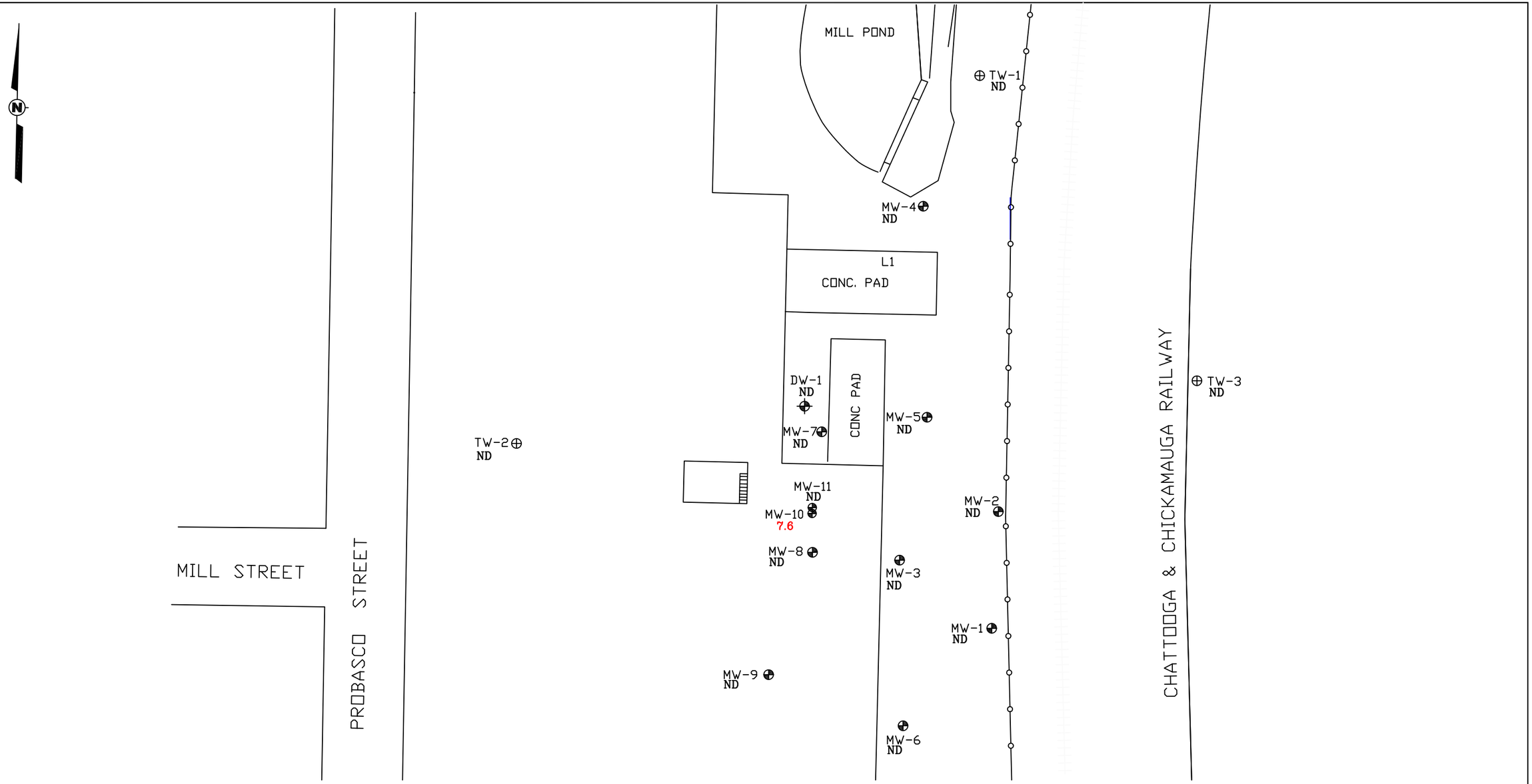
Tetrachloroethene Delineation
August 2011 Groundwater
Sampling Event

FIGURE
12



LEGEND

- Groundwater Monitoring Well Location
- Deep Monitoring Well Location
- Temporary Monitoring Well (inch)
- 7.6 IPB Concentration (ug/L)
- ND Not Detected
- Fenceline

0 20 40

Graphic Scale (feet)

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Color Spectrum
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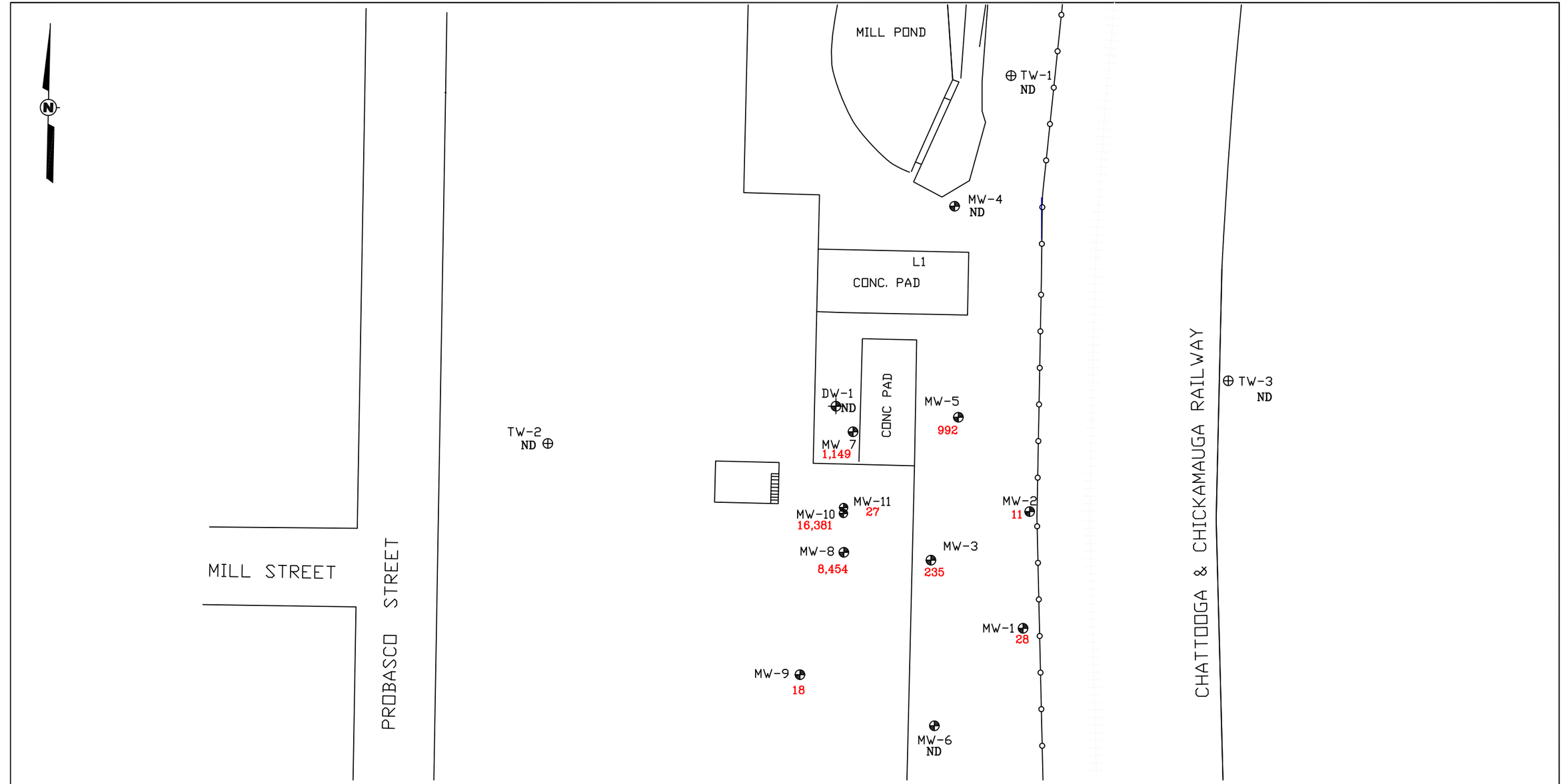
Isopropylbenzene Delineation
August 2011 Groundwater
Sampling Event

FIGURE
13



LEGEND

- Groundwater Monitoring Well Location
- Deep Monitoring Well Location
- Temporary Monitoring Well (inch)
- 194 VOC Concentration (ug/L)
- ND Not Detected
- Fenceline

0 20 40
Graphic Scale (feet)

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Color Spectrum
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Total VOC Isoconcentrations
August 2011 Groundwater
Sampling Event

FIGURE
14

APPENDIX D

TABLES

Table 1.
Groundwater Elevations
Color Spectrum
LaFayette, Georgia

Well Location	Date	Ground Surface Elevation (ft above NGVD)	TOC to Cover (ft)	TOC Elevation (ft above NGVD)	Screened Interval (ft below TOC)	Screened Interval Elevation (ft above NGVD)	Total Well Depth (ft below TOC)	Groundwater Depth (ft below TOC)	Depth to Product (ft below TOC)	Groundwater Elevation (ft above NGVD)
MW-1	6/28/2007	796.96		796.64	2-12	784.64-794.64	12.00	5.06	ND	791.58
	8/16/2011		0.32				10.08	5.58	ND	791.06
MW-2*	6/28/2007	796.43		796.06	2-12	784.06-794.06	12.00	5.48	NM	790.58
	8/16/2011		0.37				12.00	5.20	0.05	791.27
MW-3	6/28/2007	797.46		797.14	2-15	782.14-795.14	13.00	5.45	ND	791.69
	8/16/2011		0.32				13.36	5.59	ND	791.55
MW-4	6/28/2007	795.58		795.43	6-16	779.43-789.43	16.00	4.48	ND	790.95
	8/16/2011		0.15				13.35	4.82	ND	790.61
MW-5	6/28/2007	797.46		797.19	3-13	784.19-794.19	13.00	5.10	ND	792.09
	8/16/2011		0.27				13.35	4.65	ND	792.54
MW-6	6/28/2007	796.92		796.62	3-13	783.62-793.62	13.00	4.45	ND	792.17
	8/16/2011		0.30				13.82	4.83	ND	791.79
MW-7	6/28/2007	797.89		797.52	3.5-13.5	784.02-794.02	13.50	3.69	ND	793.83
	8/16/2011		0.37				13.23	3.63	ND	793.89
MW-8	6/28/2007	801.96		801.74	4-14	787.74-797.74	14.00	12.17	ND	789.57
	8/16/2011		0.22				14.09	9.27	ND	792.47
MW-9	6/28/2007	801.97		801.53	4-14	787.53-797.53	14.00	7.45	ND	794.08
	8/16/2011		0.44				14.31	7.41	ND	794.12
MW-10	10/6/2009	801.96		801.62	10-12.5	789.12-791.62	12.50	9.24	ND	792.38
	8/16/2011		0.34				12.37	8.78	ND	792.84
MW-11	10/6/2009	801.96		801.75	17.5-20	781.75-784.25	20.00	14.21	ND	787.54
	8/16/2011		0.21				19.85	9.35	ND	792.40
TW-1	6/28/2007	795.01		794.73	6-16	778.73-788.73	16.00	3.81	ND	790.92
	8/16/2011		0.28				13.10	4.10	ND	790.63
TW-2	6/28/2007	801.94		801.74	4-14	787.74-797.74	14.00	7.36	ND	794.38
	8/16/2011		0.20				13.57	6.89	ND	794.85
DW-1	6/28/2007	798.10		797.72	35.6-45.6	752.10-762.10	45.60	4.70	ND	793.02
	8/16/2011		0.38				42.89	4.45	ND	793.27

Notes

ft = feet

NGVD = National Geodetic Vertical Datum

* = corrected for free product

TOC = top of casing

A specific gravity correction factor of 0.85 was used to adjust groundwater elevations for MW-2.

NM= Not measured

Table 2.
Type 1 RRS for Soil
Color Spectrum
LaFayette, Georgia

Compounds of Interest	Table 2 Appendix III	Item 1			Item 2	Item 3	Delineation Criteria Type 1 RRS (Min of Items 1, 2, and 3) (mg/kg)	Maximum Dectection (mg/kg)	Type 1 RRS Exceedance?
		i. Appendix I (NC) (mg/kg)	ii. Type 1 GW x 100 factor (mg/kg)	Highest of (i) and (ii) (mg/kg)	RAGS (eq. 7) Non-Carcinogenic (mg/kg)	RAGS (eq. 6) Carcinogenic (mg/kg)			
1,1,1-Trichloroethane	---	5.44	20	20	179,269	NA	20	0.012	No
1,1-Dichloroethane	---	0.03	400	400	1389	446	400	0.0073	No
1,1-Dichloroethene	---	0.36	0.7	0.7	31,998	NA	0.7	0.08	No
Acetone	---	2.74	400	400	576,144	NA	400	0.32	No
Freon-113	---	6.92	100000	100000	19,109,411	NA	100,000	6.3	No
Tetrachloroethene	---	0.18	0.5	0.5	846	9.3	0.50	0.3	No
Arsenic	20	N/A	N/A	N/A	NA	NA	20	22.4	No[3]
Lead	75	N/A	N/A	N/A	NA	NA	75	25.5	No

Notes:

1) Dashes (--) indicate the information was not available for the referenced constituent.

2) NA - not applicable for the referenced constituents under Type 1 RRS.

Table 3.
Type 1 and 4 RRS for Groundwater
Color Spectrum
LaFayette, Georgia

Compounds of Interest	Maximum Detection (mg/L)	Delineation Criteria Type 1 Risk Reduction Standard (mg/L)	Type 1 RRS Exceedance?	Type 4 RRS (mg/L)	Type 4 RRS Exceedance?
1,1,1-Trichloroethane	2.1	0.2	Yes	13.6	No
1,1-Dichloroethane	0.23	4	No	NA	
1,1-Dichloroethene	0.29	0.007	Yes	0.52	No
Freon-113	27	1,000	No	NA	
Freon-12	0.68	1	No	NA	
Tetrachloroethene	0.35	0.005	Yes	0.005**	Yes
Isopropylbenzene	0.046	0.005*	Yes	1.05	No
Lead	0.0156***	0.015	No	NA	
Arsenic	<.05	0.01	No	NA	

Notes:

RRS = Risk Reduction Standard

* = A value does not exist on Table 1 of Appendix III for this compound. The Method Detection Limit was used for the Type 1 RRSs.

** = The calculated Type 4 value for PCE was 0.0038 mg/L which is less than the Type 1 RRS. Therefore, the Type 4 RRS defaults back to the Type 1 value.

*** = The well could not be fully developed due to slow recharge. The result represents a highly turbid sample and is not considered valid. Lead was not detected in a filtered sample collected from the same well.from the same well. Therefore the Type 4 RRS was not calculated.

mg/L = milligrams per liter

NA = Not applicable (no Type 1 exceedance)

Table 4.
Soil Analytical Results
Color Spectrum
LaFayette, Georgia

Sample Location	Depth (feet)	Sample Date	1,1,1-TCA (mg/Kg)	1,1-DCA (mg/Kg)	1,1-DCE (mg/Kg)	Acetone (mg/Kg)	Freon-113 (mg/Kg)	PCE (mg/Kg)	Arsenic (mg/Kg)	Lead (mg/Kg)
	Type 1 RRS		**20**	**400**	**0.7**	**400**	**100,000**	**0.5**	**20**	**75**
Minimum Detected Value			0.012	0.0029	0.0042	0.16	0.028	0.0028	10.3	10.8
Maximum Detected Value			0.012	0.0079	0.08	0.32	6.3	0.3	**22.4**	25.5
SB-24	7	12/19/06	<0.0035	<0.0035	<0.0035	NS	**0.11**	<0.0035	--	--
SB-25	7	12/19/06	<0.0024	**0.0029**	**0.0042**	NS	**0.57**	<0.0024	--	--
SB-26	7	12/19/06	<0.0033	<0.0033	<0.0033	NS	**0.25**	<0.0033	--	--
SB-29	1	06/22/07	<0.0046	<0.0046	<0.0046	<0.092	**0.038**	<0.0046	--	--
SB-29	4	06/22/07	<0.0038	<0.0038	<0.0038	<0.076	**0.094**	<0.0038	--	--
SB-30	1	06/22/07	<0.0030	<0.0030	<0.0030	<0.061	**0.077**	<0.0030	--	--
SB-30	6	06/22/07	<0.0035	<0.0035	<0.0035	<0.070	**0.22**	<0.0035	--	--
SB-31	1	06/22/07	<0.0044	<0.0044	<0.0044	<0.087	**0.078**	<0.0044	--	--
SB-31	7	06/22/07	<0.0036	<0.0036	<0.0036	**0.19**	**0.034**	<0.0036	--	--
SB-32	1	06/22/07	<0.0035	<0.0035	<0.0035	<0.069	**0.98**	<0.0035	--	--
SB-32	4	06/22/07	<0.0031	<0.0031	<0.0031	**0.32**	**0.57**	<0.0031	--	--
SB-33	1	06/21/07	<0.0028	<0.0028	<0.0028	**0.16**	**0.32**	**0.0033**	--	--
SB-33	4	06/21/07	<0.0027	<0.0027	<0.0027	**0.19**	**0.34**	**0.0028**	--	--
SB-34	1	06/21/07	<0.0033	<0.0033	<0.0033	<0.066	**0.68**	<0.0033	--	--
SB-34	7	06/21/07	<0.0027	**0.0073**	**0.039**	<0.054	**4.2**	<0.0027	--	--
SB-35	1	06/21/07	<0.0034	<0.0034	<0.0034	**0.18**	**0.028**	<0.0034	--	--
SB-35	4	06/21/07	<0.0041	<0.0041	<0.0041	<0.082	**0.61**	<0.0041	--	--
SB-36	1	06/21/07	<0.0046	<0.0046	<0.0046	<0.092	<0.0092	<0.0046	--	--
SB-36	4	06/21/07	<0.0038	<0.0038	**0.020**	<0.077	**2.3**	**0.0091**	--	--
SB-37	1	06/26/07	<0.0039	<0.0039	<0.0039	<0.077	**0.99**	**0.024**	--	--
SB-37	3	06/26/07	**0.012**	**0.0068**	**0.08**	<0.059	**6.3**	**0.30**	--	--
MW-7	1	06/26/07	<0.0032	<0.0032	<0.0032	<0.064	**0.32**	<0.0032	--	--
MW-7	4	06/26/07	<0.0031	<0.0031	**0.011**	<0.061	**0.79**	<0.0031	--	--
SO-1	2	10/06/09	<0.0031	<0.0031	<0.0031	<0.063	**0.25**	**0.0041**	**14.4**	**16.5**
SO-2	2	10/06/09	<0.0030	<0.0030	<0.0030	<0.061	**0.39**	**0.014**	**17.6**	**18**
SO-3	2	10/06/09	<0.0032	<0.0032	<0.0032	<0.064	**0.52**	<0.0032	**22.4**	**25.5**
SO-4	5	10/06/09	<0.0042	**0.0079**	<0.0042	<0.084	**1.2**	**0.015**	**11.9**	**12.6**
SO-5	4	10/06/09	<0.0044	<0.0044	<0.0044	<0.087	**2.1**	<0.0044	**13.4**	**14.7**
Duplicate	4	10/06/09	<0.0037	<0.0037	<0.0037	<0.074	**1.6**	<0.0037	**12.7**	**10.8**
SO-6	4	10/06/09	<0.0066	<0.0066	<0.0066	<0.13	**0.29**	**0.007**	**10.3**	**11.4**

Notes:

mg/Kg = milligrams per kilogram
<0.0035 = constituent was not detected above the detection limit.
NS = Not Sampled
1,1,1-TCA = 1,1,1-Trichloroethane
1,1-DCA = 1,1-Dichloroethane
1,1-DCE = 1,1-Dichloroethene
PCE = Tetrachloroethene
NC = Not Calculated
-- = Constituent Not Analyzed

Above Delineation Criteria (Type 1 RRS)

Table 5.
Groundwater Analytical Results
Color Spectrum
LaFayette, Georgia

Sample Location	Sample Date	1,1,1-TCA (ug/L)	1,1-DCA (ug/L)	1,1-DCE (ug/L)	Freon-113 (ug/L)	Freon-12 (ug/L)	PCE (ug/L)	IPB (ug/L)	Arsenic (ug/L)	Lead (ug/L)
Delineation: Type 1 RRS		**200**	**4,000**	**7**	**1,000,000**	**1,000**	**5**	**5***	**10**	**15**
Cleanup: Type 4 RRS		**13,600**	**NA**	**520**	**NA**	**NA**	**5****	**1,050**	**NA**	**NA*****
Minimum Detected Value		5.5	5.0	5.5	10	110	5	8	ND	15.6
Maximum Detected Value		2,100	260	290	27,000	680	350	46	ND	15.6
MW-1	12/19/06	<5.0	<5.0	<5.0	**60**	<10	<5.0	<5.0	--	--
	06/28/07	<5.0	<5.0	<5.0	**63**	<10	<5.0	<5.0	--	--
	08/17/11	<5.0	<5.0	<5.0	**28**	<10	<5.0	<5.0	--	--
MW-2	12/19/06	<5.0	<5.0	<5.0	**54**	<10	<5.0	<5.0	--	--
	06/28/07	<5.0	<5.0	<5.0	**44**	<10	<5.0	<5.0	--	--
	08/17/11	<5.0	<5.0	<5.0	**11**	<10	<5.0	<5.0	--	--
MW-3	12/19/06	<5.0	**8.5**	**5.5**	**390**	<10	**8.7**	<5.0	--	--
	06/28/07	<5.0	**7.8**	<5.0	**360**	<10	**7.6**	<5.0	--	--
	08/17/11	<5.0	<5.0	<5.0	**230**	<10	**5.2**	<5.0	--	--
MW-4	06/27/07	<5.0	<5.0	<5.0	**10**	<10	<5.0	<5.0	--	--
	08/17/11	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	--	--
MW-5	06/27/07	**40**	<5.0	<5.0	**880**	<10	**18**	<5.0	--	--
	08/17/11	**25**	<5.0	**7.6**	**940**	<10	**19**	<5.0	--	--
MW-6	06/27/07	<5.0	<5.0	<5.0	<10	<10	<5.0	**46**	**--**	**--**
	08/17/11	<5.0	<5.0	<5.0	<11	<10	<5.0	<5.0	**--**	**--**
Duplicate	08/17/11	<5.0	<5.0	<5.0	<12	<10	<5.0	<5.0	**--**	**--**
MW-7	06/27/07	**14**	<5.0	<5.0	**180**	<10	<5.0	<5.0	--	--
	08/16/11	**31**	<5.0	**9.5**	**1,100**	<10	**8.6**	<5.0	--	--
MW-8	06/27/07	<5.0	**5.9**	**22**	**3,900**	<10	<5.0	<5.0	--	--
	08/16/11	**6**	**30**	**76**	**8,200**	**110**	**32**	<5.0	--	--
MW-9	06/27/07	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
	08/16/11	<5.0	<5.0	<5.0	**18**	<10	<5.0	<5.0	--	--
MW-10	10/07/09	**10**	**170**	**96**	**6,100**	<10	**54**	**12**	<50	<10
Duplicate	10/07/09	**7.2**	**240**	**110**	**6,200**	<10	**42**	**10**	<50	<10
	08/16/11	**33**	**250**	**280**	**15,000**	**680**	**130**	**8.4**	--	--
	11/15/11	**28**	**260**	**160**	**11,000**	<10	**120**	**7.6**	--	--
MW-11	10/07/09	**7.6**	**29**	**94**	**15,000**	<10	**120**	**7.7**	<50	**15.6*****
MW-11F	10/07/09	--	--	--	--	<10	--	--	<50	<10
	08/16/11	<5.0	<5.0	<5.0	**27**	<10	<5.0	<5.0	--	--
	11/15/11	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
DW-1	06/27/07	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
	08/16/11	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
SB-1	10/11/05	**23**	**5.6**	<5.0	<10	<10	**6.4**	<5.0	--	--
SB-2	10/11/05	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
SB-3	10/11/05	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
SB-4	10/11/05	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
SB-5	10/11/05	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
SB-6	10/24/05	**14**	<5.0	<5.0	**190**	<10	<5.0	<5.0	--	--
SB-7	10/24/05	<5.0	<5.0	<5.0	**11**	<10	<5.0	<5.0	--	--
SB-8	10/24/05	<5.0	<5.0	<5.0	**40**	<10	<5.0	<5.0	--	--
SB-9	10/24/05	**14**	<5.0	<5.0	**97**	<10	<5.0	<5.0	--	--
SB-10	10/24/05	**13**	<5.0	<5.0	**370**	<10	<5.0	<5.0	--	--
SB-11	10/24/05	<5.0	**5.0**	<5.0	**54**	<10	<5.0	<5.0	--	--
SB-12	07/27/06	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
SB-13	07/27/06	<5.0	<5.0	**9.0**	**580**	<10	**7.6**	<5.0	--	--
SB-14	07/27/06	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
SB-15	07/27/06	<5.0	<5.0	<5.0	**80**	<10	<5.0	**8.5**	--	--
SB-16	07/27/06	**23**	**11**	<5.0	**1,800**	<10	**20**	<5.0	--	--
SB-17	07/27/06	<5.0	<5.0	**7.1**	**510**	<10	<5.0	<5.0	--	--
SB-18	07/27/06	<5.0	<5.0	<5.0	**17**	<10	<5.0	<5.0	--	--
SB-19	07/27/06	NS	NS	NS	NS	NS	NS	NS	--	--

Sample Location	Sample Date	1,1,1-TCA (ug/L)	1,1-DCA (ug/L)	1,1-DCE (ug/L)	Freon-113 (ug/L)	Freon-12 (ug/L)	PCE (ug/L)	IPB (ug/L)	Arsenic (ug/L)	Lead (ug/L)
Delineation: Type 1 RRS		**200**	**4,000**	**7**	**1,000,000**	**1,000**	**5**	**5***	**10**	**15**
Cleanup: Type 4 RRS		**13,600**	**NA**	**520**	**NA**	**NA**	**5****	**1,050**	**NA**	**NA*****
SB-20	12/20/06	<5.0	<5.0	<5.0	**160**	<10	<5.0	<5.0	--	--
SB-21	12/20/06	<5.0	<5.0	<5.0	**49**	<10	<5.0	<5.0	--	--
SB-22	12/20/06	**30**	**32**	**120**	**27,000**	<10	**150**	<5.0	--	--
SB-23	12/20/06	**2,100**	**230**	**290**	**27,000**	<10	**350**	<5.0	--	--
SB-26	12/20/06	<5.0	<5.0	<5.0	**36**	<10	<5.0	<5.0	--	--
Duplicate	12/20/06	<5.0	<5.0	<5.0	**22**	<10	<5.0	<5.0	--	--
SB-27	12/20/06	**34**	<5.0	<5.0	**1,100**	<10	**9.8**	<5.0	--	--
SB-28	12/20/06	<5.0	**5.4**	**6.2**	**270**	<10	<5.0	**8.3**	**--**	**--**
POND	10/11/05	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
TW-1	06/27/07	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
	08/17/11	<5.0	<5.0	<5.0	<11	<10	<5.0	<5.0	--	--
TW-2	06/27/07	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
	08/16/11	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
TW-3	06/27/07	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
Field Blank	12/20/06	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
Trip Blank	10/24/05	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
	12/20/06	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
	06/29/07	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
	10/07/09	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
	08/18/11	<5.0	<5.0	<5.0	<11	<10	<5.0	<5.0	--	--
Rinsate	10/07/09	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	--	--
	08/17/11	<5.0	<5.0	<5.0	<11	<10	<5.0	<5.0	--	--

Notes:

ug/L = micrograms per liter

<5.0 = constituent was not detected above the detection limit.

NS = not sampled

* = A value does not exist on Table 1 of Appendix III for this compound. The Method Detection Limit was used for the Type 1 RRS.

** The calculated Type 4 value was less than the Type 1 RRS. Therefore, the Type 4RRS defaults back to the Type 1 value.

*** The well could not be fully developed due to slow recharge. The result represents a highly turbid sample and is not considered valid. Lead was not detected in a filtered sample collected from the same well.

NA = Not Applicable, no Type 1 exceedance

1,1,1-TCA = 1,1,1-Trichloroethane

1,1-DCA = 1,1-Dichloroethane

1,1-DCE = 1,1-Dichloroethene

PCE = Tetrachloroethene

IPB = Isopropylbenzene

-- = Constituent Not Analyzed

NR = Not Regulated

F = Filtered

Above Delineation Criteria (Type 1 RRS)

Above Cleanup Criteria (Type 4 RRS)

Table 6.
Vapor Intrusion Model Results
Color Spectrum
LaFayette, Georgia

Compound	Matrix	Estimated Area Volume ft^3	Modeled Air Exchange (AE) Volume (1/h)	Sample Location	Concentration µg/L (GW) mg/kg (soil)	Risk*	Hazard** Quotient
Freon-113	GW	1,950,168	0.25	SB-23	27000	--	**2.4E-02**
	Soil	1,950,168	0.25	SB-34	4.2	--	**1.1E-03**
PCE	GW	1,950,168	0.25	SB-23	350	**1.2E-06**	**7.9E-04**
	Soil	1,950,168	0.25	SB-33	0.0033	**4.5E-08**	**3.0E-05**

Notes:

µg/L = micrograms per liter

PCE = Tetrachloroethene

1/hr = 1 building volume per hour

* = Estimated Risk is calculated based on measured groundwater and soil PCE concentrations

**= The hazard quotient is calculated based on measured groundwater and soil concentrations of PCE and/or Freon-113.

Table 7.
Projected Milestone Schedule
Color Spectrum
LaFayette, Georgia

ID	Task Name	Year 1				Year 2			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Project Mangement								
	Semiannual Progress Reports								
	CSR*								
2	Groundwater Sampling								
3	Groundwater Modeling/Compliance Evaluation								

APPENDIX E

FACILITY INVESTIGATIVE HISTORY

Facility Investigative History

The findings of the subsurface investigations conducted by EPS from October 2005 to November 2011 are discussed in detail in this section. The current property owner is not aware of any previous environmental investigations performed at the Site. Site sampling was conducted in accordance with the United States Environmental Protection Agency's Field Branches Quality System and Technical Procedures (FBQSTP). Details concerning the field methods are presented in the CSR. The soil results are presented on Table 4 and Figure 9. The groundwater results are presented on Table 5 and Figure 10.

October 11, 2005 Sampling Event

On October 11, 2005, five soil borings, referred to as SB-1 through SB-5, were advanced on the Site and an adjacent parcel to the groundwater table. The soil borings were advanced using a truck-mounted direct push drilling device. Soil borings SB-1 through SB-3 were located topographically downgradient (east) of the two primary buildings. Boring SB-4 was located near the southern property boundary and SB-5 was located near the western property boundary, upgradient of the buildings.

A groundwater sample was collected from each soil boring. A surface water sample was also collected from the pond. All samples were analyzed by an independent laboratory for VOCs using EPA Method 8260B.

The laboratory detected TCA, DCA, and PCE in the groundwater sample collected from SB-1 at concentrations of 23 µg/l, 5.6 µg/l, and 6.4 µg/l, respectively. VOCs were not detected in the groundwater samples collected from SB-2 through SB-5, or in the pond sample.

October 24, 2005 Sampling Event

On October 24, 2005, six soil borings (SB-6 through SB-11) were advanced near the fuel tanks by direct push technology to assess the extent of the VOC impacts in groundwater detected in the October 11th sampling event. During advancement of the soil borings, No. 2 fuel oil was observed in the groundwater samples collected from three of the borings. The release of the No. 2 fuel oil was attributed to the ASTs and is currently being addressed under the Water Resources Branch regulations and is not included as part of this CSR. Each of the six samples collected were analyzed for VOCs. Three of the samples were analyzed for polynuclear aromatic hydrocarbons (PAHs) using EPA Method 8270C. Laboratory results are as follows:

- TCA was detected in three samples, SB-6, SB-9, and SB-10 at concentrations of 14 µg/l, 14 µg/l, and 13 µg/l, respectively;
- DCA was detected in SB-11 at 5 µg/l;
- Freon-113 was detected in all six samples in concentrations ranging from 11 - 370 µg/l.
- PAHs were not detected in any samples.

HSRA Notification

On December 2, 2005, a HSRA Release Notification was submitted for the Site by the current owner of the facility, subsequent to its acquisition in November 2005. On February 10, 2006, the Site was added to the HSI.

July 2006 Sampling Event

On July 27, 2006, eight soil borings (SB-12 through SB-19) were advanced by direct push technology to further delineate VOCs in groundwater. Laboratory results are as follows:

- Freon-113 was detected in SB-13, and SB-15 through SB-18 at concentrations ranging from 17-1,800 µg/l.
- TCA was detected in SB-16 at 23 µg/l.
- DCA was detected in SB-16 at 11 µg/l.
- DCE was detected in SB-13 and SB-17 at concentrations of 9.0 µg/l and 7.1 µg/l, respectively.
- PCE was detected in SB-13 and SB-16 at 7.6 µg/l and 20 µg/l, respectively.

VOCs were not detected in SB-12 and SB-14. A groundwater sample could not be collected from SB-19. Based on the presence of regulated compounds in the groundwater above laboratory detection limits, additional groundwater delineation was required.

December 19-20, 2006 Sampling Event

On December 19-20, 2006 nine soil borings (SB-20 through SB-28) were advanced by direct push technology to the groundwater table. Borings (SB-20 through SB-26) were advanced indoors in the vicinity of a parts cleaner. Borings SB-27 and SB-28 were advanced outdoors to delineate the plume to the north and south. Temporary wells were constructed in borings SB-20 through SB-23, and SB-26 through SB-28 to determine groundwater flow direction. At each well and at three existing monitoring wells, MW-1 through MW-3 (installed to assess the AST fuel oil release), the top-of-casing elevation and groundwater depths were measured. The groundwater flow direction was determined to be to the east-southeast with a hydraulic gradient of 0.04 feet/foot.

After completing the groundwater depth measurements, groundwater samples were collected from each temporary well and MW-1 through MW-3 and analyzed for VOCs. Laboratory results are as follows:

- Freon-113 was detected in all ten samples ranging from 36 - 27,000 µg/l.
- TCA was detected in SB-22 at 30 µg/l, SB-23 at 2,100 µg/l, and SB-27 at 34 µg/l.
- DCA was detected in four samples: SB-22, SB-23, SB-28, and MW-3 at 32 µg/l, 230 µg/l, 5.4 µg/l, and 8.5 µg/l, respectively.
- DCE was detected in four samples: SB-22, SB-23, SB-28, and MW-3 at 120 µg/l, 290 µg/l, 6.2 µg/l, and 5.5 µg/l, respectively.
- PCE was detected in SB-22 at 150 µg/l, SB-23 at 350 µg/l, and SB-27 at 9.8 µg/l.

During the December 2006 sampling event, soil samples were collected from three boring locations (SB-24, SB-25, SB-26) located adjacent to the PCE parts cleaner, a suspected source area. Soil samples were collected continuously from these borings and field screened for VOCs using a PID. A soil sample was collected for laboratory analysis from each boring where the highest VOC concentration was measured. In borings where VOCs were not detected with a PID, a sample was collected immediately above the water table. Soil borings DMW-1, MW-4 through MW-9, TW-1, and TW-2 were not screened with a PID. VOCs were not detected in any of the samples above background and therefore, samples were collected from 7 ft-bls, immediately above the groundwater table. Laboratory results are as follows:

- Freon-113 was detected in all three samples, SB-24 through SB-26 at concentrations of 0.11-0.57 mg/kg.
- DCA was detected in SB-25 at 0.0029 mg/kg.
- DCE was detected in SB-25 at 0.0042 mg/kg.

After completion of the sampling, all temporary wells and soil borings were abandoned.

June 21-28, 2007 Sampling Event

In July 2007, six monitoring wells (MW-4 through MW-9), three temporary wells (TW-1 through TW-3), and one deep well (DW-1) were installed to complete horizontal and vertical delineation of the VOCs in groundwater. The wells were installed by direct push, hand auger, hollow stem auger, and air rotary drilling. 20 Soil samples were also collected by direct push technology from ten borings (SB-29 through SB-37 and MW-7) to complete horizontal soil delineation. Groundwater elevations were measured in monitoring wells MW-1 through MW-9, DW-1, TW-1, and TW-2 to determine groundwater flow direction. TW-3 was advanced off-site in the low-lying area to the east of the railroad right-of-way. Groundwater samples were then collected from each well for VOC analysis. Laboratory results are as follows:

- Freon-113 was detected in seven groundwater samples ranging from 10 µg/l in MW-4 to 3,900 µg/l in MW-8.
- TCA was detected in two samples: MW-5 at 40 µg/l and MW-7 at 14 µg/l.
- DCA was detected in two samples: MW-3 at 7.8 g/l and MW-8 at 5.9 µg/l.
- DCE was detected in MW-8 at 22 µg/l.
- PCE was detected in MW-3 at 7.6µg/l and MW-5 at 18µg/l.
- IPB was detected in the sample collected from MW-6 at 46 µg/l.
- VOCs were not detected in samples collected from TW-1 through TW-3, MW-9, and DW-1.

20 soil samples were collected by direct push technology from ten borings (SB-29 through SB-37 and MW-7) to further delineate VOCs in soil. SB-29 through SB-36 were advanced indoors for soil sampling. SB-37 and MW-7 were advanced outside of the preheat building: SB-37 was located on the concrete dumpster pad and MW-7 was located adjacent to the pad. During boring installation, soil samples were continuously collected and field screened with a PID for VOCs. In each boring soil samples were collected from 1 ft-bls and at an intermediate depth between the ground surface and the water table. Laboratory results are as follows:

- Freon-113 was detected in 19 of the 20 soil samples analyzed. Concentrations ranged from 0.028 mg/kg in the sample SB-35 collected at 1 ft-bls to 6.3 mg/kg in sample SB-37 collected at 3 ft-bls. Freon-113 was not detected in boring SB-36 at a depth of 1 ft-bls.
- TCA was detected in SB-37 at 3 ft-bls at 0.012 mg/kg.
- DCA was detected in SB-34 at 7 ft-bls and SB-37 at 3 ft-bls at 0.0073 mg/kg and 0.0068 mg/kg, respectively.
- DCE was detected in four of the twenty soil samples analyzed. Concentrations detected were 0.039 mg/kg in SB-34 at 7 ft-bls, 0.02 mg/kg in SB-36 at 4ft-bls, 0.08 mg/kg in SB-37 at 3 ft-bls, and 0.011 mg/kg in MW-7 at 4 ft-bls.
- Acetone was detected in five soil samples. Concentrations ranged from 0.16 - 0.32 mg/kg.
- PCE was detected in four of the twenty soil samples analyzed. PCE concentrations were 0.0033 mg/kg in SB-33 at 1 ft-bls and 0.0028 at 4ft-bls; 0.024 mg/kg in SB-37 at 1 ft-bls and 0.3 mg/kg at 3 ft-bls.

Monitoring well top-of-casing elevations were measured on July 9, 2007 by Wardlaw Land Surveying of LaFayette, Georgia. Horizontal locations were surveyed relative to the state plain coordinates and the elevations were referenced to the National Geodetic Vertical Datum. The groundwater flow direction was determined to be to the east-northeast.

October 6-7, 2009 Sampling Event

In October 2009, a nested monitoring well pair (MW-10 and MW-11) was installed in the apparent source area to investigate the potential for Freon-113 DNAPL in this area. The wells were installed using hollow stem auger methods. Well MW-10 was screened at the water table (10 – 12.5 feet below the ground surface) and MW-11 was screened on top of bedrock (17.5 – 20 feet below the ground surface). Freon-113 was detected in the shallow well at 6,100 µg/l and in the deeper well at 15,000 µg/l. However, the concentrations are below the Type 4 RRS and no Freon-113 was detected in nearby deep well DW-1.

The groundwater samples were analyzed for VOCs, arsenic and lead. Other constituents detected in the groundwater samples included the following.

- TCA was detected in MW-10 at 10 µg/l and MW-11 at 7.6 µg/l.
- DCA was detected in MW-10 at 170 µg/l and MW-11 at 29 µg/l.
- DCE was detected in MW-10 at 96 µg/l and in MW-11 at 94µg/l.
- PCE was detected in MW-10 at 54µg/l and MW-11 at 120µg/l.
- IPB was detected in MW-10 at 12 µg/l and in MW-11 at 7.7 µg/l.
- Arsenic was not detected in either groundwater sample.
- Lead was detected in MW-11 at 15.6 µg/l; however, due to slow recharge, the well could not be properly developed and the turbidity level was 800 NTUs. The sample is, therefore, not considered to be valid. A filtered sampled was also collected from this well and no lead was detected.

Six soil samples were collected by direct push technology from six borings (SO-1 through SO-6) to further delineate VOCs in soil. SO-1 and SO-2 were advanced in the area of the concrete dumpster pad. SO-3 through SO06 were advanced for indoor soil sampling. During boring installation, soil samples were continuously collected and field screened with a PID for VOCs. In each boring, soil samples were collected at depths above the smear zone where PID readings indicated the highest potential VOC concentrations. Laboratory results are as follows:

- Freon-113 was detected in all samples, ranging from 0.29 mg/kg in SO-6 to 2.1 mg/kg in SO-5.
- TCA was not detected in any samples.
- DCA was detected in SO-4 at 5 ft-bls at 0.0079 mg/kg.
- DCE was not detected in any samples.
- Acetone was not detected in any samples.
- PCE was detected in four of the six soil samples analyzed. PCE was measured at 0.015 mg/kg at 5 ft-bls in SO-4 and 0.0041 mg/kg at 4 ft-bls for SO-6.
- Arsenic was detected in all soil samples, ranging from 10.3 mg/kg in SO-6 (4 ft-bls) to 22.4 mg/kg in SO-3 (2 ft-bls).
- Lead was detected in all soil samples, ranging from 11.4 mg/kg in SO-6 (4 ft-bls) to 25.5 mg/kg in SO-3 (2 ft-bls).

August and November 2011 Sampling Event

In August 2011, the groundwater monitoring wells (MW-1 through MW-11), DW-1, TW-1 and TW-2 were sampled in accordance with FBQSTP and analyzed for VOCs. No VOCs were detected in DW-1, MW-4, MW-6, TW-1 and TW-2.

- TCA was detected in MW-5, MW-7, MW-8, and MW-10 at concentrations ranging from 6 to 28 µg/l, which are all below the Type 1 RRS (200 µg/l).
- DCA was detected in MW-8 (30 µg/l) and MW-10 (260 µg/l), which are below the Type 1 RRS (4,000 µg/l).
- DCE was detected in MW-5, MW-7, MW-8, and MW-10 at concentrations ranging from 7.6 to 280 µg/l, all of which are above the Type 1 RRS (7 µg/l), but below the Type 4 RRS (520 µg/l).
- Freon-113 was detected in MW-1, MW-2, MW-3, MW-5, MW-7, MW-8, MW-9, MW-10, and MW-11 at concentrations ranging from 11 to 15,000 µg/l, all of which are below the Type 1 RRS (1,000,000 µg/l).
- Freon-12 was detected in MW-8 (110 µg/l) and MW-10 (680 µg/l), both of which are below the Type 1 RRS (1,000 µg/l).
- PCE was detected in MW-3, MW-5, MW-7, MW-8, and MW-10 at concentrations ranging from 5.2 to 130 µg/l, all of which are above the Type 1 and 4 RRS of 5 µg/l.
- IPB was detected in MW-10 at a concentration of 8.4 µg/l, which is above the Type 1 RRS (5 µg/l), but below the Type 4 RRS (1,050 µg/l).

There was a significant decrease in the Freon-113 concentration in MW-11 from the October 2009 event to the August 2011 event. Thus, on November 15, 2011, MW-10 and MW-11 were sampled to confirm the presence or absence of Freon-113 in MW-11. No VOCs were detected in MW-11 indicating the absence of a DNAPL. TCA, TCA, DCE, Freon-113, PCE and IPB were detected in MW-10.

APPENDIX F

SOIL BORING LOGS AND WELL CONSTRUCTION DIAGRAMS

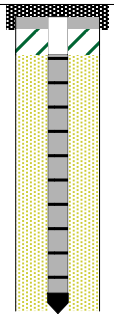
PROJECT:

Color Spectrum

Log of Boring No. MW-1

SITE LOCATION:	La Fayette, GA	TOP OF CASING ELEVATION (ft):	N/A
DRILLING CONTRACTOR:	Atlas Geo-Sampling	DATE STARTED: 6/20/06	DATE FINISHED: 6/20/06
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.): 12	SCREEN INTERVAL (ft.): 2-12
DRILLING EQUIPMENT:	AMS Power Probe	DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.): 0-2
SAMPLING METHOD:	Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.): 7.25	WELL DIAMETER (In.): 2
LOGGED BY:	K. Moore		

DEPTH (feet)	SAMPLES Sample No. Location	SAMPLES Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): N/A	
0				Tan orange sandy clay crumbles easily (fill)	Flush mounted vault set in concrete Bentonite 1-2 ft-bls
			0.2		
5				Tan orange sandy clay (fill) some petroleum odor at 7 ft at transition	
			6.2		Filter Sand 2-12 ft-bls
10				Gray brown clayey course grain sand - saprolite	
			2		Terminated at 12 ft-bls.
15					
20					
25					
30					
35					
40					
45					
50					



EPS

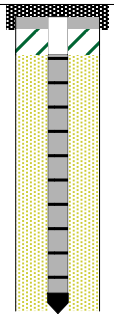
PROJECT: **Color Spectrum**

Log of Boring No. MW-2

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/20/06	DATE FINISHED: 6/20/06
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 12	SCREEN INTERVAL (ft.): 2-12
DRILLING EQUIPMENT: AMS Power Probe		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.): 0-2
SAMPLING METHOD: Macrocore w/ Acetate Liner		BOREHOLE DIAMETER (In.): 7.25	WELL DIAMETER (In.): 2

LOGGED BY: K. Moore

DEPTH (feet)	SAMPLES Sample No. Location	SAMPLES Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): N/A	
0			0	Tan orange sandy clay (fill)	Flush mounted vault set in concrete Bentonite 1-2 ft-bls
5			0.5	Tan orange sandy clay (fill) transition to native at 7 ft.	Filter Sand 2-12 ft-bls
10			5.5	Tan gray clayey course grain sand with some foliation - saprolite	Terminated at 12 ft-bls.
15					
20					
25					
30					
35					
40					
45					
50					



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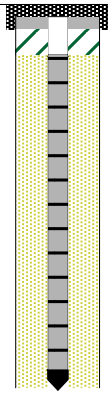
PROJECT: **Color Spectrum**

Log of Boring No. MW-3

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/20/06	DATE FINISHED: 6/20/06
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 15	SCREEN INTERVAL (ft.): 2-15
DRILLING EQUIPMENT: AMS Power Probe		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.): 0-2
SAMPLING METHOD: Macrocore w/ Acetate Liner		BOREHOLE DIAMETER (In.): 7.25	WELL DIAMETER (In.): 2
LOGGED BY: K. Moore			

DEPTH (feet)	SAMPLES Sample No. Location	SAMPLES Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): N/A	
0				Gray brown clayey medium grain sand	Flush mounted vault set in concrete Bentonite 1-2 ft-bls
			0.5		
5				Gray brown clayey medium grain sand (moist)	
			0.2		
10				Tan gray clayey course grain quartz sands - saprolite	Filter Sand 2-15 ft-bls
			0.1		
				Gray brown clayey course grain sand - saprolite	
15			0		Terminated at 15 ft-bls.
20					
25					
30					
35					
40					
45					
50					



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PROJECT:

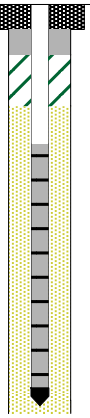
Color Spectrum

Log of Boring No. MW-4

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A 795.43	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/21/07	DATE FINISHED: 6/21/07
DRILLING METHOD: Direct Push and H.S.A.		TOTAL DEPTH (ft.): 16	SCREEN INTERVAL (ft.): 6-16
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.): 4.48	CASING (ft.): 0-6
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.): 7.25	WELL DIAMETER (In.): 2

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): 795.43	
0				Dark brown clayey sand with gravel	Flush mounted vault set in concrete
				Black weathered rock	Grout 1-2 ft-bls
5				Tan clay with some gravel (wet)	Bentonite 2-4 ft-bls.
10				Tan weathered rock with come clay (wet)	Filter Sand 4-16 ft-bls
15				Tan clay with rock	Terminated at 16 ft-bls.
20					
25					
30					
35					
40					
45					
50					



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PROJECT:

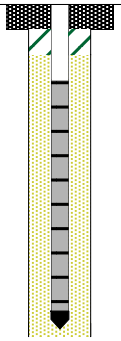
Color Spectrum

Log of Boring No. MW-5

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A 797.19	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/21/07	DATE FINISHED: 6/21/07
DRILLING METHOD: Hollow Stem Auger		TOTAL DEPTH (ft.): 13	SCREEN INTERVAL (ft.): 3-13
DRILLING EQUIPMENT: Deitrich		DEPTH TO WATER AT TIME OF BORING (ft.): 5.1	CASING (ft.): 0-3
SAMPLING METHOD: Split Spoon		BOREHOLE DIAMETER (In.): 7.25	WELL DIAMETER (In.): 2

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): 797.19	
0				Gravel	Flush mounted vault set in concrete
				Red clay with gravel	Bentonite 1-2 ft-bls.
				Dark brown clay with come rock gravel and black deposits	
5				Black clay with some weathered rock	
				Red clay with interbedded grey clay and some gravel	Filter Sand 2-13 ft-bls.
				Dark red clay with some black clay deposits	
10				Orange-red clay with rock gravel and sands	Terminated at 13 ft-bls.
15					
20					
25					
30					
35					
40					
45					
50					



EPS

PROJECT:

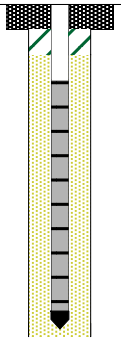
Color Spectrum

Log of Boring No. MW-6

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A 796.62	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/21/07	DATE FINISHED: 6/21/07
DRILLING METHOD: Hollow Stem Auger		TOTAL DEPTH (ft.): 13	SCREEN INTERVAL (ft.): 3-13
DRILLING EQUIPMENT: Deitrich		DEPTH TO WATER AT TIME OF BORING (ft.): 4.45	CASING (ft.): 0-3
SAMPLING METHOD: Split Spoon		BOREHOLE DIAMETER (In.): 7.25	WELL DIAMETER (In.): 2

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Top of Casing Elevation (ft): 796.62)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0				Gravel	Flush mounted vault set in concrete
				Red-orange clay with some rock and silts	
				Brown-black clay with some rock and silts	Bentonite 1-2 ft-bls.
				Black clay and silt with some rock gravel	
5				Brown-tan clay with some grey clay and gravel	
				Tan clay with some black sands and gravel	Filter Sand 2-13 ft-bls.
10				Tan-gray clay with some gravel and black striations	
				Orange clay with some gray clay deposits and gravel	
15				Green-gray clay	Terminated at 13 ft-bls.
20					
25					
30					
35					
40					
45					
50					



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PROJECT:

Color Spectrum

Log of Boring No. MW-7

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A 797.52	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/26/07	DATE FINISHED: 6/26/07
DRILLING METHOD: Direct Push and H.S.A.		TOTAL DEPTH (ft.): 13.5	SCREEN INTERVAL (ft.): 3.5-13.5
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.): 3.69	CASING (ft.): 0-3.5
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.): 7.25	WELL DIAMETER (In.): 2

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): 797.52	
0				Rock gravel	Flush mounted vault set in concrete
				Red clay with gravel	Bentonite 1-2 ft-bls.
5					
				Red clay with rock layers (wet)	Filter Sand 2-13.5 ft-bls.
10					
15					Terminated at 13.5 ft-bls.
20					
25					
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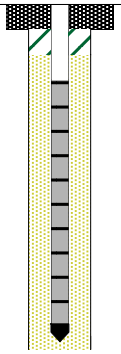
35					
40					
45					
50					



EPS

PROJECT:

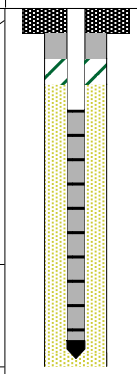
Color Spectrum

Log of Boring No. MW-8

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A 801.96	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/22/07	DATE FINISHED: 6/22/07
DRILLING METHOD: Direct Push and H.S.A.		TOTAL DEPTH (ft.): 14	SCREEN INTERVAL (ft.): 4-14
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.): 12.17	CASING (ft.): 0-4
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.): 7.25	WELL DIAMETER (In.): 2

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES Sample No. Location	SAMPLES Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): 801.96	
0				Concrete	Flush mounted vault set in concrete Grout 1-2 ft-bls Bentonite 2-3 ft-bls.
5				Red clay with gravel	
10				Grey-brown clay with some rock	Filter Sand 3-14 ft-bls.
15					Terminated at 14 ft-bls.
20					
25					
30					
35					
40					
45					
50					



EPS

PROJECT:

Color Spectrum

Log of Boring No. MW-9

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A 801.93	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/22/07	DATE FINISHED: 6/22/07
DRILLING METHOD: Direct Push and H.S.A.		TOTAL DEPTH (ft.): 14	SCREEN INTERVAL (ft.): 4-14
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.): 7.45	CASING (ft.): 0-4
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.): 7.25	WELL DIAMETER (In.): 2

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): 801.93	
0				Concrete	Flush mounted vault set in concrete
5				Red clay with gravel	Grout 1-2 ft-bls
10				Red-brown clay with gravel	Bentonite 2-3 ft-bls.
15				Rock layer	Filter Sand 3-14 ft-bls.
20				Gray-brown clay with some rock	Terminated at 14 ft-bls.
25					
30					
35					
40					
45					
50					

PROJECT:

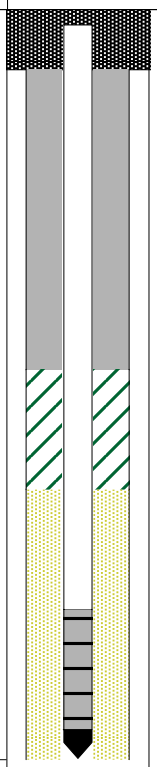
Color Spectrum

Log of Boring No. MW-10

SITE LOCATION:	LaFayette, GA	TOP OF CASING ELEVATION (ft):	N/A
DRILLING CONTRACTOR:	Atlas Geo-Sampling	DATE STARTED: 10/6/09	DATE FINISHED: 10/6/09
DRILLING METHOD:	Hollow Stem Auger	TOTAL DEPTH (ft.): 12.5	SCREEN INTERVAL (ft.): 10-12.5
DRILLING EQUIPMENT:	AMS Power Probe	DEPTH TO WATER AT TIME OF BORING (ft.): 9.24	CASING (ft.): 10
SAMPLING METHOD:	None	BOREHOLE DIAMETER (In.): 7.25	WELL DIAMETER (In.): 2
LOGGED BY:	R. Jones		

Ground Surface Elevation (ft): N/A

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Flush mounted vault set in concrete
					Grout 1-6 ft-bls
5				No soils collected	
					Bentonite 6-8 ft-bls.
					Filter Sand 8-12.5 ft-bls.
10					Boring terminated at 12.5 ft-bls. Installed well using 2-inch screen. Gauged and collected groundwater sample on 10/7/09.
15					
20					



EPS

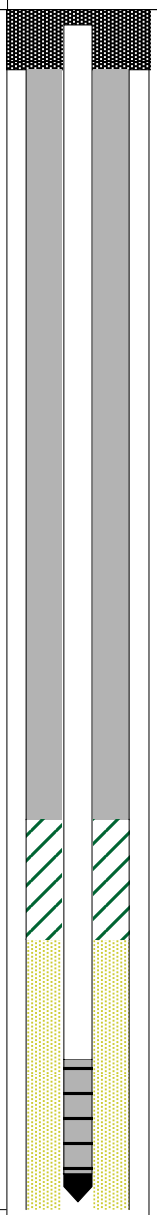
PROJECT:

Color Spectrum

Log of Boring No. MW-11

SITE LOCATION:	LaFayette, GA	TOP OF CASING ELEVATION (ft):	N/A
DRILLING CONTRACTOR:	Atlas Geo-Sampling	DATE STARTED: 10/6/09	DATE FINISHED: 10/6/09
DRILLING METHOD:	Hollow Stem Auger	TOTAL DEPTH (ft.): 20	SCREEN INTERVAL (ft.): 17.5-20
DRILLING EQUIPMENT:	AMS Power Probe	DEPTH TO WATER AT TIME OF BORING (ft.): 14.21	CASING (ft.): 17.5
SAMPLING METHOD:	None	BOREHOLE DIAMETER (In.): 7.25	WELL DIAMETER (In.): 2
LOGGED BY:	R. Jones		

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Ground Surface Elevation (ft): N/A	
0					Flush mounted vault set in concrete
5					Grout 1-13.5
10				No soils collected	
15					Bentonite 13.5-15.5 ft-bls Filter Sand 15.5-20 ft-bls.
20					Boring terminated at 20 ft-bls. Installed well using 2-inch screen. Gauged and collected groundwater sample on 10/7/09.



EPS

PROJECT:

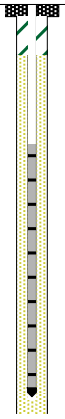
Color Spectrum

Log of Boring No. TW-1

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A 794.73	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/21/07	DATE FINISHED: 6/21/07
DRILLING METHOD: Direct Push and H.S.A.		TOTAL DEPTH (ft.): 16	SCREEN INTERVAL (ft.): 6-16
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.): 3.81	CASING (ft.): 0-6
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.): 3	WELL DIAMETER (In.): 1

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): 794.73	
0				Dark brown clayey sand	Flush mounted vault set in concrete Bentonite 1-2 ft-bls.
4				Weathered rock	
5				Dark brown clayey sand (very wet)	
10				Green to tan clay with rock	Filter Sand 2-16 ft-bls
15					Terminated at 16 ft-bls.
20					
25					
30					
35					
40					
45					
50					



EPS

PROJECT:

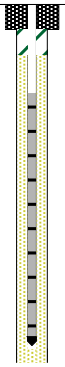
Color Spectrum

Log of Boring No. TW-2

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A 801.74	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/22/07	DATE FINISHED: 6/22/07
DRILLING METHOD: Direct Push and H.S.A.		TOTAL DEPTH (ft.): 14	SCREEN INTERVAL (ft.): 4-14
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.): 5.48	CASING (ft.): 0-4
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.): 3	WELL DIAMETER (In.): 1

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): 801.74	
0				Concrete	Flush mounted vault set in concrete
				Red clay with gravel	Bentonite 1-2 ft-bls.
5					
				Red-brown clay with some rock	Filter Sand 2-14 ft-bls.
10					
15					Refusal encountered at 14 ft-bls.
20					
25					
30					
35					
40					
45					
50					



EPS

PROJECT: **Color Spectrum**		**Log of Boring No. TW-3**	
SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A	
DRILLING CONTRACTOR: N/A		DATE STARTED: 6/27/09	DATE FINISHED: 6/27/09
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 4	SCREEN INTERVAL (ft.): 0-4
DRILLING EQUIPMENT: Hand Auger		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.): N/A
SAMPLING METHOD: N/A		BOREHOLE DIAMETER (In.): 4	WELL DIAMETER (In.): 1
LOGGED BY: G. Henry			

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Top of Casing Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0				Organic material	Terminated at 4 ft-bls. Well abandoned immediately after sampling.
5					
10					
15					
20					
25					
30					
35					
40					
45					
50					

EPS

PROJECT:

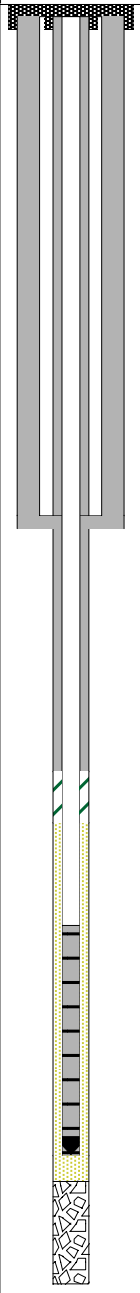
Color Spectrum

Log of Boring No. DW-1

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A 797.72	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/21/07	DATE FINISHED: 6/22/07
DRILLING METHOD: Hollow Stem Auger		TOTAL DEPTH (ft.): 46	SCREEN INTERVAL (ft.): 36-46
DRILLING EQUIPMENT: Deitrich		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.): 0-36
SAMPLING METHOD: N/A		BOREHOLE DIAMETER (In.):	WELL DIAMETER (In.):

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): 797.72	
0				Gravel	Flush mounted vault set in concrete
5				Red clay and gravel	Grout 0-30 ft-bls
10				Brown to dark grey clay with silt	
15				Brown-tan clay with silt	Borehole diameter 10.25 inches Well diameter 4 inches
20				Brown clay	
25				Bedrock with some fractures and unconsolidated materials	Borehole diameter 4 inches Well diameter 2 inches
30					Bentonite 30-32 ft-bls.
35					
40					Filter Sand 32-46 ft-bls
45					Refusal encountered at 46 ft-bls.
50					



EPS

PROJECT:

Color Spectrum

Log of Boring No. SB-29

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A	N/A
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/22/07	DATE FINISHED: 6/22/07
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 8	SCREEN INTERVAL (ft.):
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.):
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.):	WELL DIAMETER (In.):

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Top of Casing Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	SB-29 (1)		17.5	Concrete	
5	SB-29 (4)		13.9	Red clay with gravel	
			12.6		Terminated at 8 ft-bls.
10					
15					
20					
25					
30					
35					
40					
45					
50					

EPS

PROJECT:

Color Spectrum

Log of Boring No. SB-30

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A	N/A
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/22/07	DATE FINISHED: 6/22/07
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 8	SCREEN INTERVAL (ft.):
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.):
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.):	WELL DIAMETER (In.):
LOGGED BY: N/A G. Henry			

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Top of Casing Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	SB-30 (1)		1.1	Concrete	
5	SB-30 (4)		1.6	Red clay with gravel	
			1.5		Terminated at 8 ft-bls.
10					
15					
20					
25					
30					
35					
40					
45					
50					

EPS

PROJECT:

Color Spectrum

Log of Boring No. SB-31

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A	N/A
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/22/07	DATE FINISHED: 6/22/07
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 8	SCREEN INTERVAL (ft.):
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.):
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.):	WELL DIAMETER (In.):

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Top of Casing Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	SB-31 (1)		2.3	Concrete	
5			1.8	Red clay with gravel	
	SB-31 (7)		2.8		Terminated at 8 ft-bls.
10					
15					
20					
25					
30					
35					
40					
45					
50					

EPS

PROJECT:

Color Spectrum

Log of Boring No. SB-32

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A	N/A
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/22/07	DATE FINISHED: 6/22/07
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 8	SCREEN INTERVAL (ft.):
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.):
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.):	WELL DIAMETER (In.):

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): N/A	
0	SB-32 (1)		8.8	Concrete	
5	SB-32 (4)		3	Red clay with gravel	Terminated at 8 ft-bls.
10					
15					
20					
25					
30					
35					
40					
45					
50					

EPS

PROJECT:

Color Spectrum

Log of Boring No. SB-33

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A	N/A
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/21/07	DATE FINISHED: 6/21/07
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 12	SCREEN INTERVAL (ft.):
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.):
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.):	WELL DIAMETER (In.):

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): N/A	
0	SB-33 (1)		0.8	Concrete	
5	SB-33 (4)		0.4		
			0.3	Red clay with gravel	
10					Terminated at 12 ft-bls.
15					
20					
25					
30					
35					
40					
45					
50					

EPS

PROJECT:

Color Spectrum

Log of Boring No. SB-34

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A	N/A
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/21/07	DATE FINISHED: 6/21/07
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 8	SCREEN INTERVAL (ft.):
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.):
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.):	WELL DIAMETER (In.):

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES Sample No. Location	SAMPLES Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Top of Casing Elevation (ft): N/A	
0	SB-34 (1)		2	Concrete	
5			3	Red clay with gravel	
	SB-34 (7)		3.4		Terminated at 8 ft-bls.
10					
15					
20					
25					
30					
35					
40					
45					
50					

EPS

PROJECT:

Color Spectrum

Log of Boring No. SB-35

SITE LOCATION: La Fayette, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Atlas Geo-Sampling	DATE STARTED: 6/21/07 / DATE FINISHED: 6/21/07
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 12 / SCREEN INTERVAL (ft.):
DRILLING EQUIPMENT: GeoProbe	DEPTH TO WATER AT TIME OF BORING (ft.): / CASING (ft.):
SAMPLING METHOD: Macrocore Acetate Liner	BOREHOLE DIAMETER (In.): / WELL DIAMETER (In.):
LOGGED BY: N/A G. Henry	

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Top of Casing Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	SB-35 (4) SB-35 (1)		0	Concrete	
			0.2	Red clay with gravel	
5			0	Red clay with gravel (wet)	
10					Terminated at 12 ft-bls.
15					
20					
25					
30					
35					
40					
45					
50					

EPS

PROJECT:

Color Spectrum

Log of Boring No. SB-36

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A	N/A
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/21/07	DATE FINISHED: 6/21/07
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 12	SCREEN INTERVAL (ft.):
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.):
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.):	WELL DIAMETER (In.):

LOGGED BY: N/A G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Top of Casing Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	SB-36 (1)		0.6	Concrete	
5	SB-36 (4)		0.6	Red clay with gravel	
10			0		Terminated at 12 ft-bls.
15					
20					
25					
30					
35					
40					
45					
50					

EPS

PROJECT:

Color Spectrum

Log of Boring No. SB-37

SITE LOCATION: La Fayette, GA		TOP OF CASING ELEVATION (ft): N/A	N/A
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 6/26/07	DATE FINISHED: 6/26/07
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 8	SCREEN INTERVAL (ft.):
DRILLING EQUIPMENT: GeoProbe		DEPTH TO WATER AT TIME OF BORING (ft.):	CASING (ft.):
SAMPLING METHOD: Macrocore Acetate Liner		BOREHOLE DIAMETER (In.):	WELL DIAMETER (In.):
LOGGED BY: N/A	G. Henry		

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Top of Casing Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	SB-37 (1)		2.3	Concrete and rock	
5				Red-orange clay with some rock	
10				Red-brown clay with some rock (wet)	Terminated at 8 ft-bls.
15					
20					
25					
30					
35					
40					
45					
50					

EPS

PROJECT: **Color Spectrum**

Log of Boring No. SO-1

SITE LOCATION: LaFayette, GA		TOP OF CASING ELEVATION (ft): N/A	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 10/6/09	DATE FINISHED: 10/6/09
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 3	SCREEN INTERVAL (ft.): N/A
DRILLING EQUIPMENT: AMS Power Probe		DEPTH TO WATER AT TIME OF BORING (ft.): N/A	CASING (ft.): N/A
SAMPLING METHOD: Macrocore w/ Acetate Liner		BOREHOLE DIAMETER (In.): 3	WELL DIAMETER (In.): N/A
LOGGED BY: R. Jones			

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	09279-SO-1-2		0	Gravel, gray sand	
			0	Red clay with rock (quartz)	
			0	Red clay with sand and weathered rock	Boring terminated at 3 ft-bls..
5					
10					
15					
20					

EPS

PROJECT:

Color Spectrum

Log of Boring No. SO-2

SITE LOCATION: LaFayette, GA		TOP OF CASING ELEVATION (ft): N/A	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 10/6/09	DATE FINISHED: 10/6/09
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 3	SCREEN INTERVAL (ft.): N/A
DRILLING EQUIPMENT: AMS Power Probe		DEPTH TO WATER AT TIME OF BORING (ft.): N/A	CASING (ft.): N/A
SAMPLING METHOD: Macrocore w/ Acetate Liner		BOREHOLE DIAMETER (In.): 3	WELL DIAMETER (In.): N/A
LOGGED BY: R. Jones			

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	09279-SO-2-2		0	Gravel, gray sand	
			0	Red clay with rock (quartz)	
			0	Red clay with sand and weathered rock	Boring terminated at 3 ft bls.
5					
10					
15					
20					

EPS

PROJECT:

Color Spectrum

Log of Boring No. SO-2

SITE LOCATION: LaFayette, GA		TOP OF CASING ELEVATION (ft): N/A	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 10/6/09	DATE FINISHED: 10/6/09
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 3	SCREEN INTERVAL (ft.): N/A
DRILLING EQUIPMENT: AMS Power Probe		DEPTH TO WATER AT TIME OF BORING (ft.): N/A	CASING (ft.): N/A
SAMPLING METHOD: Macrocore w/ Acetate Liner		BOREHOLE DIAMETER (In.): 3	WELL DIAMETER (In.): N/A
LOGGED BY: R. Jones			

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	09279-SO-2-2		0	Gravel, gray sand	
			0	Red clay with rock (quartz)	
			0	Red clay with sand and weathered rock	Boring terminated at 3 ft bls.
5					
10					
15					
20					

EPS

PROJECT: **Color Spectrum**

Log of Boring No. SO-3

SITE LOCATION: LaFayette, GA		TOP OF CASING ELEVATION (ft): N/A	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 10/6/09	DATE FINISHED: 10/6/09
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 8	SCREEN INTERVAL (ft.): N/A
DRILLING EQUIPMENT: AMS Power Probe		DEPTH TO WATER AT TIME OF BORING (ft.): 7	CASING (ft.): N/A
SAMPLING METHOD: Macrocore w/ Acetate Liner		BOREHOLE DIAMETER (In.): 3	WELL DIAMETER (In.): N/A
LOGGED BY: R. Jones			

DEPTH (feet)	SAMPLES: Sample No. / Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0				Concrete, gravel and gray sand	
	09279-SO-3-2		6.2		
			6.1	Sand with clay and weathered rock	
			4.3		
			4.5	Red clay with sand and weathered rock	
5			4.4		
			5.2	Red clay with weathered rock	
			7.3		Boring terminated at 8 ft-bls.
10					
15					
20					

EPS

PROJECT: **Color Spectrum**

Log of Boring No. SO-4

SITE LOCATION: LaFayette, GA		TOP OF CASING ELEVATION (ft): N/A	
DRILLING CONTRACTOR: Atlas Geo-Sampling		DATE STARTED: 10/6/09	DATE FINISHED: 10/6/09
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 8	SCREEN INTERVAL (ft.): N/A
DRILLING EQUIPMENT: AMS Power Probe		DEPTH TO WATER AT TIME OF BORING (ft.): 7	CASING (ft.): N/A
SAMPLING METHOD: Macrocore w/ Acetate Liner		BOREHOLE DIAMETER (In.): 3	WELL DIAMETER (In.): N/A
LOGGED BY: R. Jones			

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0				Concrete, gravel and gray sand	
			2.9		
			3	Sand with clay and weathered rock	
			2.7		
	09279-SO-4-5		2.7	Red clay with sand and weathered rock	
5			6.4		
			6.7	Red clay with weathered rock	
			1.7		
					Boring terminated at 8 ft bls
10					
15					
20					

EPS

PROJECT: **Color Spectrum**	**Log of Boring No. SO-5**
SITE LOCATION: LaFayette, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Atlas Geo-Sampling	DATE STARTED: 10/6/09 / DATE FINISHED: 10/6/09
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 8 / SCREEN INTERVAL (ft.): N/A
DRILLING EQUIPMENT: AMS Power Probe	DEPTH TO WATER AT TIME OF BORING (ft.): 7 / CASING (ft.): N/A
SAMPLING METHOD: Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.): 3 / WELL DIAMETER (In.): N/A
LOGGED BY: R. Jones	

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0				Concrete, gravel and gray sand	
			4.7	Sand with clay and weathered rock	
			4.7		
	09279-SO-5-4		4.4		
			4.8	Red clay with sand and weathered rock	
5			4.2		
			6.3	Red clay with weathered rock	
			6.3		Boring terminated at 8 ft-bls.
10					
15					
20					

EPS

PROJECT: **Color Spectrum**	**Log of Boring No. SO-6**
SITE LOCATION: LaFayette, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Atlas Geo-Sampling	DATE STARTED: 10/6/09 / DATE FINISHED: 10/6/09
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 8 / SCREEN INTERVAL (ft.): N/A
DRILLING EQUIPMENT: AMS Power Probe	DEPTH TO WATER AT TIME OF BORING (ft.): 7 / CASING (ft.): N/A
SAMPLING METHOD: Macrocore w/ Acetate Liner	BOREHOLE DIAMETER (In.): 3 / WELL DIAMETER (In.): N/A
LOGGED BY: R. Jones	

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0				Concrete, gravel and gray sand	
			4.1	Sand with clay and weathered rock	
			4.2		
	09279-SO-6-4		5.1	Red clay with sand and weathered rock	
5			5.2		
			4.1	Red clay with weathered rock	
			4.5		Boring terminated at 8 ft-bls.
10					
15					
20					

EPS

APPENDIX G

LABORATORY REPORTS FOR 2011

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

August 24, 2011

Justin Vickery
Environmental Planning Specialists, Inc.
900 Ashwood Parkway
Atlanta GA 30338

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

RE: Color Spectrum

Dear Justin Vickery: Order No: 1108F19

Analytical Environmental Services, Inc. received 17 samples on 8/18/2011 10:40:00 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 07/01/11-06/30/12.
-AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

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

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

James Forrest
Project Manager

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: 1108F19

Date: 8-18-11 Page 1 of 2

COMPANY: EPS

ADDRESS: Two Ashwood Pkwy Ste 350 Atlanta GA 30338

PHONE: 404-315-9113

FAX:

SAMPLED BY: Ryan Jones

SIGNATURE: [signature]

ANALYSIS REQUESTED: VOC (8260)

PRESERVATION (See codes): H+I

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

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	VOC (8260) / H+I	REMARKS	No # of Containers
1	11228-TW-2	8-16-11	1538	X		GW	X		2
2	11228-MW-7	8-16-11	1730	X		GW	X		2
3	11228-DW-1	8-16-11	1805	X		GW	X		2
4	11228-MW-9	8-16-11	1432	X		GW	X		2
5	11228-MW-11	8-16-11	1745	X		GW	X		2
6	11228-MW-10	8-16-11	1212	X		GW	X		2
7	11228-MW-8	8-16-11	1455	X		GW	X		2
8	11229-MW-3	8-17-11	1315	X		GW	X		2
9	11229-TW-1	8-17-11	0958	X		GW	X		2
10	11229-MW-5	8-17-11	1140	X		GW	X		2
11	11229-Rinsate	8-17-11	1430	X		GW	X		2
12	11229-MW-1	8-17-11	1355	X		GW	X		2
13	11229-MW-6	8-17-11	1210	X		GW	X		2
14	11229-DUP-1	8-17-11	—	X		GW			2

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: [signature]	8-18-11 1040	1: Latonya	8-18-11 10:40
2:		2:	
3:		3:	

PROJECT INFORMATION

PROJECT NAME: Color Spectrum

PROJECT #:

SITE ADDRESS: Lafayette, GA

SEND REPORT TO: jvickery@envplanning.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers: 28

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

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT (circled) 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

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: 1108F19

Date: 8-18-11 Page 2 of 2

COMPANY: EPS

ADDRESS: 900 Ashwood Pkwy Ste 350 Atlanta GA 30338

PHONE: 404-715-9113

FAX:

SAMPLED BY: Ryan Davis

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	ANALYSIS REQUESTED: VOC (8260)	PRESERVATION (See codes)	REMARKS	No # of Containers
1	11229-MW-4	8-17-11	1000	X		GW	X			2
2	11229-MW-2	8-17-11	1445	X		GW	X			2
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

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:	8-18-11 1045	1: Latonya	8-18-11 10:45
2:		2:	
3:		3:	

PROJECT INFORMATION

PROJECT NAME: Solar Spectrum

PROJECT #:

SITE ADDRESS: LaFayette, GA

SEND REPORT TO: jvickery@envplanning.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers: 4

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

Analytical Environmental Services, Inc

Date: 24-Aug-11

Client: Environmental Planning Specialists, Inc.
Project: Color Spectrum
Lab ID: 1108F19

Case Narrative

Sample Receiving Nonconformance:

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

Analytical Environmental Services, Inc

Date: 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-TW-2
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 3:38:00 PM
Lab ID:	1108F19-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 13:24	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 13:24	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 13:24	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 13:24	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 13:24	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 13:24	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 13:24	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 13:24	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Freon-113	BRL	10		ug/L	150697	1	08/22/2011 13:24	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-TW-2
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 3:38:00 PM
Lab ID:	1108F19-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 13:24	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 13:24	SB
Surr: 4-Bromofluorobenzene	88.8	64.7-130		%REC	150697	1	08/22/2011 13:24	SB
Surr: Dibromofluoromethane	111	80.7-129		%REC	150697	1	08/22/2011 13:24	SB
Surr: Toluene-d8	90	71.1-120		%REC	150697	1	08/22/2011 13:24	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-MW-7
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 5:30:00 PM
Lab ID:	1108F19-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	31	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,1-Dichloroethene	9.5	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 13:54	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 13:54	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 13:54	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 13:54	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 13:54	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 13:54	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 13:54	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 13:54	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Freon-113	1100	100		ug/L	150697	10	08/22/2011 16:53	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-MW-7
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 5:30:00 PM
Lab ID:	1108F19-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	8.6	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 13:54	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 13:54	SB
Surr: 4-Bromofluorobenzene	81.4	64.7-130		%REC	150697	1	08/22/2011 13:54	SB
Surr: 4-Bromofluorobenzene	83.4	64.7-130		%REC	150697	10	08/22/2011 16:53	SB
Surr: Dibromofluoromethane	101	80.7-129		%REC	150697	10	08/22/2011 16:53	SB
Surr: Dibromofluoromethane	117	80.7-129		%REC	150697	1	08/22/2011 13:54	SB
Surr: Toluene-d8	88.8	71.1-120		%REC	150697	10	08/22/2011 16:53	SB
Surr: Toluene-d8	93.3	71.1-120		%REC	150697	1	08/22/2011 13:54	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-DW-1
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 6:05:00 PM
Lab ID:	1108F19-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 14:24	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 14:24	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 14:24	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 14:24	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 14:24	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 14:24	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 14:24	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 14:24	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Freon-113	BRL	10		ug/L	150697	1	08/22/2011 14:24	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-DW-1
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 6:05:00 PM
Lab ID:	1108F19-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 14:24	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 14:24	SB
Surr: 4-Bromofluorobenzene	81.1	64.7-130		%REC	150697	1	08/22/2011 14:24	SB
Surr: Dibromofluoromethane	111	80.7-129		%REC	150697	1	08/22/2011 14:24	SB
Surr: Toluene-d8	91.7	71.1-120		%REC	150697	1	08/22/2011 14:24	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-MW-9
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 2:32:00 PM
Lab ID:	1108F19-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 14:57	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 14:57	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 14:57	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 14:57	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 14:57	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 14:57	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 14:57	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 14:57	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Freon-113	18	10		ug/L	150697	1	08/22/2011 14:57	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-MW-9
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 2:32:00 PM
Lab ID:	1108F19-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 14:57	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 14:57	SB
Surr: 4-Bromofluorobenzene	84.4	64.7-130		%REC	150697	1	08/22/2011 14:57	SB
Surr: Dibromofluoromethane	114	80.7-129		%REC	150697	1	08/22/2011 14:57	SB
Surr: Toluene-d8	89.7	71.1-120		%REC	150697	1	08/22/2011 14:57	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-MW-11
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 5:45:00 PM
Lab ID:	1108F19-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 15:27	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 15:27	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 15:27	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 15:27	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 15:27	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 15:27	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 15:27	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 15:27	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Freon-113	27	10		ug/L	150697	1	08/22/2011 15:27	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-MW-11
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 5:45:00 PM
Lab ID:	1108F19-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 15:27	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 15:27	SB
Surr: 4-Bromofluorobenzene	85.1	64.7-130		%REC	150697	1	08/22/2011 15:27	SB
Surr: Dibromofluoromethane	110	80.7-129		%REC	150697	1	08/22/2011 15:27	SB
Surr: Toluene-d8	89.7	71.1-120		%REC	150697	1	08/22/2011 15:27	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-MW-10
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 12:12:00 PM
Lab ID:	1108F19-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	33	5.0		ug/L	150697	1	08/22/2011 17:22	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
1,1-Dichloroethane	250	200		ug/L	150697	100	08/22/2011 18:20	SB
1,1-Dichloroethene	280	200		ug/L	150697	100	08/22/2011 18:20	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 17:22	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 17:22	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 17:22	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 17:22	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 17:22	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 17:22	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 17:22	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Dichlorodifluoromethane	680	500		ug/L	150697	100	08/22/2011 18:20	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Freon-113	15000	1000		ug/L	150697	100	08/22/2011 18:20	SB
Isopropylbenzene	8.4	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-MW-10
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 12:12:00 PM
Lab ID:	1108F19-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	130	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 17:22	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 17:22	SB
Surr: 4-Bromofluorobenzene	88.7	64.7-130		%REC	150697	100	08/22/2011 18:20	SB
Surr: 4-Bromofluorobenzene	93.8	64.7-130		%REC	150697	1	08/22/2011 17:22	SB
Surr: Dibromofluoromethane	115	80.7-129		%REC	150697	1	08/22/2011 17:22	SB
Surr: Dibromofluoromethane	118	80.7-129		%REC	150697	100	08/22/2011 18:20	SB
Surr: Toluene-d8	94.7	71.1-120		%REC	150697	1	08/22/2011 17:22	SB
Surr: Toluene-d8	96.5	71.1-120		%REC	150697	100	08/22/2011 18:20	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-MW-8
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 2:55:00 PM
Lab ID:	1108F19-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	5.5	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,1-Dichloroethane	30	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,1-Dichloroethene	76	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 18:48	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 18:48	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 18:48	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 18:48	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 18:48	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 18:48	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 18:48	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Dichlorodifluoromethane	110	10		ug/L	150697	1	08/22/2011 18:48	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Freon-113	8200	1000		ug/L	150697	100	08/23/2011 13:20	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11228-MW-8
Project Name:	Color Spectrum	**Collection Date:**	8/16/2011 2:55:00 PM
Lab ID:	1108F19-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	32	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 18:48	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 18:48	SB
Surr: 4-Bromofluorobenzene	85.8	64.7-130		%REC	150697	100	08/23/2011 13:20	SB
Surr: 4-Bromofluorobenzene	86.6	64.7-130		%REC	150697	1	08/22/2011 18:48	SB
Surr: Dibromofluoromethane	98.2	80.7-129		%REC	150697	100	08/23/2011 13:20	SB
Surr: Dibromofluoromethane	112	80.7-129		%REC	150697	1	08/22/2011 18:48	SB
Surr: Toluene-d8	89.2	71.1-120		%REC	150697	100	08/23/2011 13:20	SB
Surr: Toluene-d8	91	71.1-120		%REC	150697	1	08/22/2011 18:48	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-3
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 1:15:00 PM
Lab ID:	1108F19-008	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 19:17	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 19:17	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 19:17	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 19:17	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 19:17	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 19:17	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 19:17	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 19:17	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Freon-113	230	100		ug/L	150697	10	08/23/2011 13:48	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-3
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 1:15:00 PM
Lab ID:	1108F19-008	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	5.2	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 19:17	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 19:17	SB
Surr: 4-Bromofluorobenzene	81.4	64.7-130		%REC	150697	10	08/23/2011 13:48	SB
Surr: 4-Bromofluorobenzene	88.3	64.7-130		%REC	150697	1	08/22/2011 19:17	SB
Surr: Dibromofluoromethane	104	80.7-129		%REC	150697	10	08/23/2011 13:48	SB
Surr: Dibromofluoromethane	113	80.7-129		%REC	150697	1	08/22/2011 19:17	SB
Surr: Toluene-d8	94	71.1-120		%REC	150697	10	08/23/2011 13:48	SB
Surr: Toluene-d8	96.2	71.1-120		%REC	150697	1	08/22/2011 19:17	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-TW-1
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 9:58:00 AM
Lab ID:	1108F19-009	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 19:46	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 19:46	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 19:46	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 19:46	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 19:46	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 19:46	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 19:46	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 19:46	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Freon-113	BRL	10		ug/L	150697	1	08/22/2011 19:46	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-TW-1
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 9:58:00 AM
Lab ID:	1108F19-009	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 19:46	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 19:46	SB
Surr: 4-Bromofluorobenzene	84.3	64.7-130		%REC	150697	1	08/22/2011 19:46	SB
Surr: Dibromofluoromethane	110	80.7-129		%REC	150697	1	08/22/2011 19:46	SB
Surr: Toluene-d8	88.3	71.1-120		%REC	150697	1	08/22/2011 19:46	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-5
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 11:49:00 AM
Lab ID:	1108F19-010	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	25	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,1-Dichloroethene	7.6	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 20:15	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 20:15	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 20:15	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 20:15	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 20:15	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 20:15	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 20:15	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 20:15	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Freon-113	940	100		ug/L	150697	10	08/23/2011 14:17	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-5
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 11:49:00 AM
Lab ID:	1108F19-010	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	19	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 20:15	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 20:15	SB
Surr: 4-Bromofluorobenzene	79.8	64.7-130		%REC	150697	10	08/23/2011 14:17	SB
Surr: 4-Bromofluorobenzene	82.2	64.7-130		%REC	150697	1	08/22/2011 20:15	SB
Surr: Dibromofluoromethane	104	80.7-129		%REC	150697	10	08/23/2011 14:17	SB
Surr: Dibromofluoromethane	117	80.7-129		%REC	150697	1	08/22/2011 20:15	SB
Surr: Toluene-d8	89	71.1-120		%REC	150697	10	08/23/2011 14:17	SB
Surr: Toluene-d8	93.3	71.1-120		%REC	150697	1	08/22/2011 20:15	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-RINSATE
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 2:30:00 PM
Lab ID:	1108F19-011	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 20:43	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 20:43	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 20:43	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 20:43	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 20:43	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 20:43	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 20:43	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 20:43	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Freon-113	BRL	10		ug/L	150697	1	08/22/2011 20:43	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-RINSATE
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 2:30:00 PM
Lab ID:	1108F19-011	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 20:43	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 20:43	SB
Surr: 4-Bromofluorobenzene	80.4	64.7-130		%REC	150697	1	08/22/2011 20:43	SB
Surr: Dibromofluoromethane	110	80.7-129		%REC	150697	1	08/22/2011 20:43	SB
Surr: Toluene-d8	95.2	71.1-120		%REC	150697	1	08/22/2011 20:43	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-1
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 1:55:00 PM
Lab ID:	1108F19-012	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 21:12	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 21:12	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 21:12	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 21:12	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 21:12	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 21:12	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 21:12	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 21:12	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Freon-113	28	10		ug/L	150697	1	08/22/2011 21:12	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-1
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 1:55:00 PM
Lab ID:	1108F19-012	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 21:12	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 21:12	SB
Surr: 4-Bromofluorobenzene	84.1	64.7-130		%REC	150697	1	08/22/2011 21:12	SB
Surr: Dibromofluoromethane	114	80.7-129		%REC	150697	1	08/22/2011 21:12	SB
Surr: Toluene-d8	92.5	71.1-120		%REC	150697	1	08/22/2011 21:12	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-6
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 12:10:00 PM
Lab ID:	1108F19-013	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 21:41	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 21:41	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 21:41	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 21:41	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 21:41	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 21:41	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 21:41	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 21:41	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Freon-113	BRL	10		ug/L	150697	1	08/22/2011 21:41	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-6
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 12:10:00 PM
Lab ID:	1108F19-013	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 21:41	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 21:41	SB
Surr: 4-Bromofluorobenzene	86.2	64.7-130		%REC	150697	1	08/22/2011 21:41	SB
Surr: Dibromofluoromethane	111	80.7-129		%REC	150697	1	08/22/2011 21:41	SB
Surr: Toluene-d8	93.1	71.1-120		%REC	150697	1	08/22/2011 21:41	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-DUP-1
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011
Lab ID:	1108F19-014	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 22:09	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 22:09	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 22:09	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 22:09	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 22:09	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 22:09	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 22:09	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 22:09	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Freon-113	BRL	10		ug/L	150697	1	08/22/2011 22:09	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-DUP-1
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011
Lab ID:	1108F19-014	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 22:09	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 22:09	SB
Surr: 4-Bromofluorobenzene	80.4	64.7-130		%REC	150697	1	08/22/2011 22:09	SB
Surr: Dibromofluoromethane	112	80.7-129		%REC	150697	1	08/22/2011 22:09	SB
Surr: Toluene-d8	94	71.1-120		%REC	150697	1	08/22/2011 22:09	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-4
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 10:00:00 AM
Lab ID:	1108F19-015	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/23/2011 12:51	SB
2-Butanone	BRL	50		ug/L	150697	1	08/23/2011 12:51	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/23/2011 12:51	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/23/2011 12:51	SB
Acetone	BRL	50		ug/L	150697	1	08/23/2011 12:51	SB
Benzene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Chloroethane	BRL	10		ug/L	150697	1	08/23/2011 12:51	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Chloromethane	BRL	10		ug/L	150697	1	08/23/2011 12:51	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/23/2011 12:51	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Freon-113	BRL	10		ug/L	150697	1	08/23/2011 12:51	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Styrene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-4
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 10:00:00 AM
Lab ID:	1108F19-015	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Toluene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/23/2011 12:51	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/23/2011 12:51	SB
Surr: 4-Bromofluorobenzene	81.6	64.7-130		%REC	150697	1	08/23/2011 12:51	SB
Surr: Dibromofluoromethane	94.4	80.7-129		%REC	150697	1	08/23/2011 12:51	SB
Surr: Toluene-d8	89.9	71.1-120		%REC	150697	1	08/23/2011 12:51	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-2
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 2:45:00 PM
Lab ID:	1108F19-016	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/23/2011 20:33	SB
2-Butanone	BRL	50		ug/L	150697	1	08/23/2011 20:33	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/23/2011 20:33	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/23/2011 20:33	SB
Acetone	BRL	50		ug/L	150697	1	08/23/2011 20:33	SB
Benzene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Chloroethane	BRL	10		ug/L	150697	1	08/23/2011 20:33	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Chloromethane	BRL	10		ug/L	150697	1	08/23/2011 20:33	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/23/2011 20:33	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Freon-113	11	10		ug/L	150697	1	08/23/2011 20:33	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Styrene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11229-MW-2
Project Name:	Color Spectrum	**Collection Date:**	8/17/2011 2:45:00 PM
Lab ID:	1108F19-016	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Toluene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/23/2011 20:33	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/23/2011 20:33	SB
Surr: 4-Bromofluorobenzene	96.7	64.7-130		%REC	150697	1	08/23/2011 20:33	SB
Surr: Dibromofluoromethane	97	80.7-129		%REC	150697	1	08/23/2011 20:33	SB
Surr: Toluene-d8	93.4	71.1-120		%REC	150697	1	08/23/2011 20:33	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Color Spectrum	**Collection Date:**	8/18/2011
Lab ID:	1108F19-017	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,1,2-Trichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,1-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,1-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,2-Dibromoethane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,2-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,2-Dichloroethane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,2-Dichloropropane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,3-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,4-Dichlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
1,4-Dioxane	BRL	150		ug/L	150697	1	08/22/2011 12:56	SB
2-Butanone	BRL	50		ug/L	150697	1	08/22/2011 12:56	SB
2-Hexanone	BRL	10		ug/L	150697	1	08/22/2011 12:56	SB
4-Methyl-2-pentanone	BRL	10		ug/L	150697	1	08/22/2011 12:56	SB
Acetone	BRL	50		ug/L	150697	1	08/22/2011 12:56	SB
Benzene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Bromodichloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Bromoform	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Bromomethane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Carbon disulfide	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Carbon tetrachloride	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Chlorobenzene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Chloroethane	BRL	10		ug/L	150697	1	08/22/2011 12:56	SB
Chloroform	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Chloromethane	BRL	10		ug/L	150697	1	08/22/2011 12:56	SB
cis-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
cis-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Cyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Dibromochloromethane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Dichlorodifluoromethane	BRL	10		ug/L	150697	1	08/22/2011 12:56	SB
Ethylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Freon-113	BRL	10		ug/L	150697	1	08/22/2011 12:56	SB
Isopropylbenzene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Methyl acetate	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Methyl tert-butyl ether	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Methylcyclohexane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Methylene chloride	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Styrene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Aug-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Color Spectrum	**Collection Date:**	8/18/2011
Lab ID:	1108F19-017	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Tetrachloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Toluene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
trans-1,2-Dichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
trans-1,3-Dichloropropene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Trichloroethene	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Trichlorofluoromethane	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Vinyl chloride	BRL	2.0		ug/L	150697	1	08/22/2011 12:56	SB
Xylenes, Total	BRL	5.0		ug/L	150697	1	08/22/2011 12:56	SB
Surr: 4-Bromofluorobenzene	83.2	64.7-130		%REC	150697	1	08/22/2011 12:56	SB
Surr: Dibromofluoromethane	108	80.7-129		%REC	150697	1	08/22/2011 12:56	SB
Surr: Toluene-d8	89.9	71.1-120		%REC	150697	1	08/22/2011 12:56	SB

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client EPS Work Order Number 1108F19

Checklist completed by Signature 8/11/14 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 3.9 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 X EH 8/19/14 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 _____

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: Color Spectrum
Workorder: 1108F19

ANALYTICAL QC SUMMARY REPORT

BatchID: 150697

Sample ID: **MB-150697** Client ID: Units: **ug/L** Prep Date: **08/22/2011** Run No: **203667**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **150697** Analysis Date: **08/22/2011** Seq No: **4256447**

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	
1,4-Dioxane	BRL	150	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	

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: Color Spectrum
Workorder: 1108F19

ANALYTICAL QC SUMMARY REPORT

BatchID: 150697

Sample ID: **MB-150697** Client ID: Units: **ug/L** Prep Date: **08/22/2011** Run No: **203667**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **150697** Analysis Date: **08/22/2011** Seq No: **4256447**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
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	
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	
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	
Xylenes, Total	BRL	5.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	42.01	0	50	0	84	64.7	130	0	0	0	
Surr: Dibromofluoromethane	50.35	0	50	0	101	80.7	129	0	0	0	
Surr: Toluene-d8	45.30	0	50	0	90.6	71.1	120	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: Color Spectrum
Workorder: 1108F19

ANALYTICAL QC SUMMARY REPORT

BatchID: 150697

Sample ID: **LCS-150697** Client ID: Units: **ug/L** Prep Date: **08/22/2011** Run No: **203667**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **150697** Analysis Date: **08/22/2011** Seq No: **4256333**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	39.59	5.0	50	0	79.2	60	140	0	0	0	
Benzene	46.27	5.0	50	0	92.5	70	130	0	0	0	
Chlorobenzene	48.22	5.0	50	0	96.4	70	130	0	0	0	
Toluene	49.46	5.0	50	0	98.9	70	130	0	0	0	
Trichloroethene	48.70	5.0	50	0	97.4	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	50.74	0	50	0	101	64.7	130	0	0	0	
Surr: Dibromofluoromethane	55.76	0	50	0	112	80.7	129	0	0	0	
Surr: Toluene-d8	54.51	0	50	0	109	71.1	120	0	0	0	

Sample ID: **1108F19-003AMS** Client ID: **11228-DW-1** Units: **ug/L** Prep Date: **08/22/2011** Run No: **203667**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **150697** Analysis Date: **08/22/2011** Seq No: **4257254**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	48.75	5.0	50	0	97.5	46.2	183	0	0	0	
Benzene	54.55	5.0	50	0	109	62.2	143	0	0	0	
Chlorobenzene	53.18	5.0	50	0	106	72.2	137	0	0	0	
Toluene	57.89	5.0	50	0	116	57.8	149	0	0	0	
Trichloroethene	59.55	5.0	50	0	119	70.5	149	0	0	0	
Surr: 4-Bromofluorobenzene	55.06	0	50	0	110	64.7	130	0	0	0	
Surr: Dibromofluoromethane	56.47	0	50	0	113	80.7	129	0	0	0	
Surr: Toluene-d8	56.15	0	50	0	112	71.1	120	0	0	0	

Sample ID: **1108F19-003AMSD** Client ID: **11228-DW-1** Units: **ug/L** Prep Date: **08/22/2011** Run No: **203667**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **150697** Analysis Date: **08/22/2011** Seq No: **4257289**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	51.23	5.0	50	0	102	46.2	183	48.75	4.96	20	
Benzene	52.05	5.0	50	0	104	62.2	143	54.55	4.69	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: Color Spectrum
Workorder: 1108F19

ANALYTICAL QC SUMMARY REPORT

BatchID: 150697

Sample ID: **1108F19-003AMSD** Client ID: **11228-DW-1** Units: **ug/L** Prep Date: **08/22/2011** Run No: **203667**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **150697** Analysis Date: **08/22/2011** Seq No: **4257289**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	51.55	5.0	50	0	103	72.2	137	53.18	3.11	20	
Toluene	55.42	5.0	50	0	111	57.8	149	57.89	4.36	20	
Trichloroethene	55.94	5.0	50	0	112	70.5	149	59.55	6.25	20	
Surr: 4-Bromofluorobenzene	54.32	0	50	0	109	64.7	130	55.06	0	0	
Surr: Dibromofluoromethane	55.22	0	50	0	110	80.7	129	56.47	0	0	
Surr: Toluene-d8	54.67	0	50	0	109	71.1	120	56.15	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		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 22, 2011

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

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

RE: Color Spectrum

Dear Gregg Henry: Order No: 1111E23

Analytical Environmental Services, Inc. received 2 samples on 11/17/2011 10:05:00 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 07/01/11-06/30/12.
-AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

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

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

James Forrest
Project Manager

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: 1111E23

Date: _____ Page _____ of _____

COMPANY: EPS

ADDRESS: 1050 Crown Point Pkwy St. 550 Atl, GA 30338

PHONE: 404-315-9113

FAX:

SAMPLED BY: G Henry

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	No # of Containers
1	11319-MW-10	11.15.11	1225	X		GW	3
2	11319-MW-11	11.15.11	1355	X		GW	3
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

ANALYSIS REQUESTED

PRESERVATION (See codes)

REMARKS

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:	11.17.11 1605	1:	11/17/11 10:05
2:		2:	
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT FedEx UPS MAIL COURIER

GREYHOUND OTHER_____

PROJECT INFORMATION

PROJECT NAME: Color Spectrum

PROJECT #:

SITE ADDRESS: Lafayette, GA

SEND REPORT TO: gHenry@enviplanning.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: _____ PO#: _____

RECEIPT

Total # of Containers: 4

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 ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

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

Date: 22-Nov-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11319-MW-10
Lab Order	1111E23	**Tag Number:**	
Project:	Color Spectrum	**Collection Date:**	11/15/2011 12:25:00 PM
Lab ID:	1111E23-001A	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	28	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,1,2-Trichloroethane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,1-Dichloroethane	260	100		ug/L	154333	20	11/21/2011 15:51	JT
1,1-Dichloroethene	160	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,2-Dibromoethane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,2-Dichlorobenzene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,2-Dichloroethane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,2-Dichloropropane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,3-Dichlorobenzene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,4-Dichlorobenzene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
1,4-Dioxane	BRL	150		ug/L	154333	1	11/19/2011 15:25	JT
2-Butanone	BRL	50		ug/L	154333	1	11/19/2011 15:25	JT
2-Hexanone	BRL	10		ug/L	154333	1	11/19/2011 15:25	JT
4-Methyl-2-pentanone	BRL	10		ug/L	154333	1	11/19/2011 15:25	JT
Acetone	BRL	50		ug/L	154333	1	11/19/2011 15:25	JT
Benzene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Bromodichloromethane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Bromoform	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Bromomethane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Carbon disulfide	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Carbon tetrachloride	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Chlorobenzene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Chloroethane	BRL	10		ug/L	154333	1	11/19/2011 15:25	JT
Chloroform	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Chloromethane	BRL	10		ug/L	154333	1	11/19/2011 15:25	JT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Cyclohexane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Dibromochloromethane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Dichlorodifluoromethane	BRL	10		ug/L	154333	1	11/19/2011 15:25	JT
Ethylbenzene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Freon-113	11000	1000		ug/L	154333	100	11/21/2011 14:26	JT
Isopropylbenzene	7.6	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Methyl acetate	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Methyl tert-butyl ether	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Methylcyclohexane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Methylene chloride	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	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
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 22-Nov-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11319-MW-10
Lab Order	1111E23	**Tag Number:**	
Project:	Color Spectrum	**Collection Date:**	11/15/2011 12:25:00 PM
Lab ID:	1111E23-001A	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)								
Styrene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Tetrachloroethene	120	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Toluene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Trichloroethene	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Trichlorofluoromethane	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Vinyl chloride	BRL	2.0		ug/L	154333	1	11/19/2011 15:25	JT
Xylenes, Total	BRL	5.0		ug/L	154333	1	11/19/2011 15:25	JT
Surr: 4-Bromofluorobenzene	85.6	67.4-123		%REC	154333	100	11/21/2011 14:26	JT
Surr: 4-Bromofluorobenzene	92.5	67.4-123		%REC	154333	1	11/19/2011 15:25	JT
Surr: 4-Bromofluorobenzene	86.7	67.4-123		%REC	154333	20	11/21/2011 15:51	JT
Surr: Dibromofluoromethane	104	75.5-128		%REC	154333	100	11/21/2011 14:26	JT
Surr: Dibromofluoromethane	107	75.5-128		%REC	154333	1	11/19/2011 15:25	JT
Surr: Dibromofluoromethane	99	75.5-128		%REC	154333	20	11/21/2011 15:51	JT
Surr: Toluene-d8	92.2	70-120		%REC	154333	1	11/19/2011 15:25	JT
Surr: Toluene-d8	93.9	70-120		%REC	154333	100	11/21/2011 14:26	JT
Surr: Toluene-d8	93.9	70-120		%REC	154333	20	11/21/2011 15:51	JT

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 22-Nov-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11319-MW-11
Lab Order	1111E23	**Tag Number:**	
Project:	Color Spectrum	**Collection Date:**	11/15/2011 1:55:00 PM
Lab ID:	1111E23-002A	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,1,2-Trichloroethane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,1-Dichloroethane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,1-Dichloroethene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,2-Dibromoethane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,2-Dichlorobenzene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,2-Dichloroethane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,2-Dichloropropane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,3-Dichlorobenzene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,4-Dichlorobenzene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
1,4-Dioxane	BRL	150		ug/L	154333	1	11/21/2011 13:01	JT
2-Butanone	BRL	50		ug/L	154333	1	11/21/2011 13:01	JT
2-Hexanone	BRL	10		ug/L	154333	1	11/21/2011 13:01	JT
4-Methyl-2-pentanone	BRL	10		ug/L	154333	1	11/21/2011 13:01	JT
Acetone	BRL	50		ug/L	154333	1	11/21/2011 13:01	JT
Benzene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Bromodichloromethane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Bromoform	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Bromomethane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Carbon disulfide	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Carbon tetrachloride	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Chlorobenzene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Chloroethane	BRL	10		ug/L	154333	1	11/21/2011 13:01	JT
Chloroform	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Chloromethane	BRL	10		ug/L	154333	1	11/21/2011 13:01	JT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Cyclohexane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Dibromochloromethane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Dichlorodifluoromethane	BRL	10		ug/L	154333	1	11/21/2011 13:01	JT
Ethylbenzene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Freon-113	BRL	10		ug/L	154333	1	11/21/2011 13:01	JT
Isopropylbenzene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Methyl acetate	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Methyl tert-butyl ether	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Methylcyclohexane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Methylene chloride	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
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- Narr See case narrative
- NC Not confirmed
- < Less than Result value
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Analytical Environmental Services, Inc **Date:** 22-Nov-11

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	11319-MW-11
Lab Order	1111E23	**Tag Number:**	
Project:	Color Spectrum	**Collection Date:**	11/15/2011 1:55:00 PM
Lab ID:	1111E23-002A	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Tetrachloroethene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Toluene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Trichloroethene	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Trichlorofluoromethane	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Vinyl chloride	BRL	2.0		ug/L	154333	1	11/21/2011 13:01	JT
Xylenes, Total	BRL	5.0		ug/L	154333	1	11/21/2011 13:01	JT
Surr: 4-Bromofluorobenzene	83	67.4-123		%REC	154333	1	11/21/2011 13:01	JT
Surr: Dibromofluoromethane	103	75.5-128		%REC	154333	1	11/21/2011 13:01	JT
Surr: Toluene-d8	96.2	70-120		%REC	154333	1	11/21/2011 13:01	JT

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	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client EPS Work Order Number 1111E23

Checklist completed by [signature] 11/17/11
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 2.9 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 _____

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: Color Spectrum
Workorder: 1111E23

ANALYTICAL QC SUMMARY REPORT

BatchID: 154333

Sample ID: **MB-154333** Client ID: Units: **ug/L** Prep Date: **11/17/2011** Run No: **209610**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **154333** Analysis Date: **11/17/2011** Seq No: **4382861**

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	
1,4-Dioxane	BRL	150	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	

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: Color Spectrum
Workorder: 1111E23

ANALYTICAL QC SUMMARY REPORT

BatchID: 154333

Sample ID: **MB-154333** Client ID: Units: **ug/L** Prep Date: **11/17/2011** Run No: **209610**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **154333** Analysis Date: **11/17/2011** Seq No: **4382861**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
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	
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	
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	
Xylenes, Total	BRL	5.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	45.39	0	50	0	90.8	67.4	123	0	0	0	
Surr: Dibromofluoromethane	47.82	0	50	0	95.6	75.5	128	0	0	0	
Surr: Toluene-d8	44.71	0	50	0	89.4	70	120	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: Color Spectrum
Workorder: 1111E23

ANALYTICAL QC SUMMARY REPORT

BatchID: 154333

Sample ID: **LCS-154333** Client ID: Units: **ug/L** Prep Date: **11/17/2011** Run No: **209610**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **154333** Analysis Date: **11/17/2011** Seq No: **4382862**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	49.57	5.0	50	0	99.1	60	140	0	0	0	
Benzene	52.50	5.0	50	0	105	70	130	0	0	0	
Chlorobenzene	51.64	5.0	50	0	103	70	130	0	0	0	
Toluene	49.65	5.0	50	0	99.3	70	130	0	0	0	
Trichloroethene	53.57	5.0	50	0	107	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	46.50	0	50	0	93	67.4	123	0	0	0	
Surr: Dibromofluoromethane	47.31	0	50	0	94.6	75.5	128	0	0	0	
Surr: Toluene-d8	43.32	0	50	0	86.6	70	120	0	0	0	

Sample ID: **1111A63-001AMS** Client ID: Units: **ug/L** Prep Date: **11/17/2011** Run No: **209610**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **154333** Analysis Date: **11/17/2011** Seq No: **4382878**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	55.66	5.0	50	0	111	50.1	179	0	0	0	
Benzene	58.37	5.0	50	0	117	61.2	150	0	0	0	
Chlorobenzene	55.34	5.0	50	0	111	72.1	140	0	0	0	
Toluene	56.02	5.0	50	0	112	58.7	154	0	0	0	
Trichloroethene	59.23	5.0	50	0	118	68.3	149	0	0	0	
Surr: 4-Bromofluorobenzene	46.93	0	50	0	93.9	67.4	123	0	0	0	
Surr: Dibromofluoromethane	47.06	0	50	0	94.1	75.5	128	0	0	0	
Surr: Toluene-d8	43.55	0	50	0	87.1	70	120	0	0	0	

Sample ID: **1111A63-001AMSD** Client ID: Units: **ug/L** Prep Date: **11/17/2011** Run No: **209610**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **154333** Analysis Date: **11/17/2011** Seq No: **4382879**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	62.83	5.0	50	0	126	50.1	179	55.66	12.1	23.3	
Benzene	65.75	5.0	50	0	132	61.2	150	58.37	11.9	19	

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: Color Spectrum
Workorder: 1111E23

ANALYTICAL QC SUMMARY REPORT

BatchID: 154333

Sample ID: **1111A63-001AMSD** Client ID:
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B**
Units: **ug/L** Prep Date: **11/17/2011** Run No: **209610**
BatchID: **154333** Analysis Date: **11/17/2011** Seq No: **4382879**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	60.21	5.0	50	0	120	72.1	140	55.34	8.43	21.5	
Toluene	61.06	5.0	50	0	122	58.7	154	56.02	8.61	20	
Trichloroethene	65.31	5.0	50	0	131	68.3	149	59.23	9.76	17.7	
Surr: 4-Bromofluorobenzene	44.70	0	50	0	89.4	67.4	123	46.93	0	0	
Surr: Dibromofluoromethane	49.85	0	50	0	99.7	75.5	128	47.06	0	0	
Surr: Toluene-d8	45.50	0	50	0	91	70	120	43.55	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		

APPENDIX H

VAPOR INTRUSION MODELING

Vapor Intrusion Model:
Freon-113

Groundwater

DATA ENTRY SHEET

GW-ADV Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES X

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
76131	2.70E+04	1,1,2-Trichloro-1,2,2-trifluoroethane

MORE ↓

ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum directly above water table, (Enter A, B, or C)	ENTER SCS soil type directly above water table	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
			Totals must add up to value of L_{WT} (cell G28)							
20	20	244	244	0	0	A	SC	SC		

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
Lookup Soil Parameters				Lookup Soil Parameters				Lookup Soil Parameters			
SC	1.63	0.385	0.197	SC	1.63	0.385	0.197	SC	1.63	0.385	0.197

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm-s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
20	40	15179	5425.5	670.56	0.1	0.25	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	30	25	250	1.0E-05	1
				Used to calculate risk-based groundwater concentration.	

END

CHEMICAL PROPERTIES SHEET

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
7.80E-02	8.20E-06	4.80E-01	25	6,463	320.70	487.30	1.11E+04	1.70E+02	0.0E+00	3.0E+01

END

INTERMEDIATE CALCULATIONS SHEET

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
7.88E+08	224	0.188	0.188	0.188	0.299	1.77E-09	0.837	1.48E-09	30.00	0.385	0.030	0.355	41,209

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)
3.83E+06	8.24E+07	5.00E-05	20	6,840	3.94E-01	1.64E+01	1.78E-04	2.01E-03	0.00E+00	0.00E+00	4.65E-06	3.42E-05	224

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe^f) (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF ($\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
20	4.42E+08	0.10	8.33E+01	2.01E-03	4.12E+03	1.59E+87	2.85E-06	1.26E+03	NA	3.0E+01

END

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	1.70E+05	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	2.4E-02

MESSAGE AND ERROR SUMMARY BELOW: (DO NOT USE RESULTS IF ERRORS ARE PRESENT)

SCROLL DOWN TO "END"

END

Vapor Intrusion Model:
Freon-113

Soil

DATA ENTRY SHEET

SL-ADV Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES: X

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C_R (µg/kg)	Chemical
76131	6.34E+03	1,1,2-Trichloro-1,2,2-trifluoroethane

MORE ↓

ENTER Average soil temperature, T_S (°C)	ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to top of contamination, L_t (cm)	ENTER Depth below grade to bottom of contamination, (enter value of 0 if value is unknown) L_b (cm)	ENTER Totals must add up to value of L_t (cell G28) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
20	20	30	244	30	0	0	SC		

MORE ↓

ENTER Stratum A SCS soil type (Lookup Soil Parameters)	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum A soil organic carbon fraction, f_{oc}^A (unitless)	ENTER Stratum B SCS soil type (Lookup Soil Parameters)	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum B soil organic carbon fraction, f_{oc}^B (unitless)	ENTER Stratum C SCS soil type (Lookup Soil Parameters)	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)	ENTER Stratum C soil organic carbon fraction, f_{oc}^C (unitless)
SC	1.63	0.385	0.197	0.002	SC	1.63	0.385	0.197	0.002	SC	1.63	0.385	0.197	0.002

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
20	40	15179	5425.5	670.56	0.1	0.25	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	30	25	250	1.0E-05	1

Used to calculate risk-based soil concentration.

END

CHEMICAL PROPERTIES SHEET

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)	Physical state at soil temperature, (S,L,G)
7.80E-02	8.20E-06	4.80E-01	25	6,463	320.70	487.30	1.11E+04	1.70E+02	0.0E+00	3.0E+01	L

END

INTERMEDIATE CALCULATIONS SHEET

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Initial soil concentration used, C_R (µg/kg)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
7.88E+08	10	0.188	0.188	0.188	0.299	1.77E-09	0.837	1.48E-09	41,209	6.34E+03	3.83E+06

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)	Convection path length, L_p (cm)
8.24E+07	5.00E-05	20	6,840	3.94E-01	1.64E+01	1.78E-04	2.01E-03	0.00E+00	0.00E+00	2.01E-03	10	20

Soil-water partition coefficient, K_d (cm^3/g)	Source vapor conc., C_{source} (µg/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $\exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ (µg/m^3)	Finite source β term (unitless)	Finite source ψ term $(sec)^{-1}$	Time for source depletion, τ_D (sec)	Exposure duration > time for source depletion (YES/NO)
2.23E+01	4.27E+06	0.10	8.33E+01	2.01E-03	4.12E+03	1.59E+87	NA	NA	2.00E+02	8.33E-06	5.41E+08	YES

Finite source indoor attenuation coefficient, $<\alpha>$ (unitless)	Mass limit bldg. conc., $C_{building}$ (µg/m^3)	Finite source bldg. conc., $C_{building}$ (µg/m^3)	Final finite source bldg. conc., $C_{building}$ (µg/m^3)	Unit risk factor, URF $(µg/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
NA	6.03E+01	NA	6.03E+01	NA	3.0E+01

END

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C_{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	NA	NA	4.13E+06	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.1E-03

MESSAGE AND ERROR SUMMARY BELOW: (DO NOT USE RESULTS IF ERRORS ARE PRESENT)

SCROLL DOWN TO "END"

END

Vapor Intrusion Model: Tetrachloroethylene

Groundwater

GW-ADV
Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES X

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
127184	3.50E+02	Tetrachloroethylene

MORE ↓

ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum directly above water table, (Enter A, B, or C)	ENTER SCS soil type directly above water table	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
			Totals must add up to value of L_{WT} (cell G28)							
20	20	244	244	0	0	A	SC	SC		

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
Lookup Soil Parameters				Lookup Soil Parameters				Lookup Soil Parameters			
SC	1.63	0.385	0.197	SC	1.63	0.385	0.197	SC	1.63	0.385	0.197

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
20	40	15179	5425.5	670.56	0.1	0.25	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	30	25	250	1.0E-05	1
				Used to calculate risk-based groundwater concentration.	

END

CHEMICAL PROPERTIES SHEET

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
7.20E-02	8.20E-06	1.84E-02	25	8,288	394.40	620.20	1.55E+02	2.00E+02	5.9E-06	6.0E-01

END

INTERMEDIATE CALCULATIONS SHEET

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
7.88E+08	224	0.188	0.188	0.188	0.299	1.77E-09	0.837	1.48E-09	30.00	0.385	0.030	0.355	41,209

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)
3.83E+06	8.24E+07	5.00E-05	20	9,451	1.40E-02	5.81E-01	1.78E-04	1.86E-03	0.00E+00	0.00E+00	7.21E-06	5.26E-05	224

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
20	2.03E+05	0.10	8.33E+01	1.86E-03	4.12E+03	2.79E+94	4.09E-06	8.32E-01	5.9E-06	6.0E-01

END

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	2.00E+05	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.2E-06	7.9E-04

MESSAGE AND ERROR SUMMARY BELOW: (DO NOT USE RESULTS IF ERRORS ARE PRESENT)

SCROLL DOWN TO "END"

END

Vapor Intrusion Model:
Tetrachloroethylene

Soil

DATA ENTRY SHEET

SL-ADV Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES: X

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C_R (µg/kg)	Chemical
127184	3.30E+00	Tetrachloroethylene

MORE

ENTER Average soil temperature, T_S (°C)	ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to top of contamination, L_t (cm)	ENTER Depth below grade to bottom of contamination, (enter value of 0 if value is unknown) L_b (cm)	ENTER Totals must add up to value of L_t (cell G28) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
20	20	30	244	30	0	0	SC		

MORE

ENTER Stratum A SCS soil type (Lookup Soil Parameters)	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum A soil organic carbon fraction, f_{oc}^A (unitless)	ENTER Stratum B SCS soil type (Lookup Soil Parameters)	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum B soil organic carbon fraction, f_{oc}^B (unitless)	ENTER Stratum C SCS soil type (Lookup Soil Parameters)	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)	ENTER Stratum C soil organic carbon fraction, f_{oc}^C (unitless)
SC	1.63	0.385	0.197	0.002	SC	1.63	0.385	0.197	0.002	SC	1.63	0.385	0.197	0.002

MORE

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
20	40	15179	5425.5	670.56	0.1	0.25	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	30	25	250	1.0E-05	1

Used to calculate risk-based soil concentration.

END

CHEMICAL PROPERTIES SHEET

Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H (atm-m^3/mol)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF ($\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)	Physical state at soil temperature, (S,L,G)
7.20E-02	8.20E-06	1.84E-02	25	8,288	394.40	620.20	1.55E+02	2.00E+02	5.9E-06	6.0E-01	L

END

INTERMEDIATE CALCULATIONS SHEET

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Floor-wall seam perimeter, X_{crack} (cm)	Initial soil concentration used, C_R (µg/kg)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)
7.88E+08	10	0.188	0.188	0.188	0.299	1.77E-09	0.837	1.48E-09	41,209	3.30E+00	3.83E+06

Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)	Convection path length, L_p (cm)
8.24E+07	5.00E-05	20	9,451	1.40E-02	5.81E-01	1.78E-04	1.86E-03	0.00E+00	0.00E+00	1.86E-03	10	20

Soil-water partition coefficient, K_d (cm^3/g)	Source vapor conc., C_{source} (µg/m^3)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $\exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ (µg/m^3)	Finite source β term (unitless)	Finite source ψ term $(sec)^{-1}$	Time for source depletion, τ_D (sec)	Exposure duration > time for source depletion (YES/NO)
3.10E-01	3.85E+03	0.10	8.33E+01	1.86E-03	4.12E+03	2.79E+94	NA	NA	1.85E+02	1.33E-05	3.14E+08	YES

Finite source indoor attenuation coefficient, $<\alpha>$ (unitless)	Mass limit bldg. conc., $C_{building}$ (µg/m^3)	Finite source bldg. conc., $C_{building}$ (µg/m^3)	Final finite source bldg. conc., $C_{building}$ (µg/m^3)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
NA	3.14E-02	NA	3.14E-02	5.9E-06	6.0E-01

END

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C_{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	NA	NA	9.96E+04	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
4.5E-08	3.0E-05

MESSAGE AND ERROR SUMMARY BELOW: (DO NOT USE RESULTS IF ERRORS ARE PRESENT)

SCROLL DOWN TO "END"

END

APPENDIX I

WILDLIFE RESOURCE DIVISION LETTER

Noel Holcomb, Commissioner
Dan Forster, Director

Georgia Department of Natural Resources
Wildlife Resources Division
Nongame Conservation Section
2065 U.S. Highway 278, S.E., Social Circle, Georgia 30025-4743
(770) 918 6411

December 6, 2007

Justin Vickery, Senior Geologist
EPS
900 Ashwood Parkway
Atlanta, GA 30338

Subject: **Known Occurrences of Conservation Areas and Special Concern Animals and Plants On or Near EPD Hazardour Site Compliance Status Report, T&E Species Review, Walker County, Georgia**

Dear Mr. Vickery:

This is in response to your request of November 27, 2007. According to our records, within a three-mile radius of the project site there are the following Natural Heritage Database occurrences:

Aesculus glabra (Ohio Buckeye) approx. 2.5 mi. W of site
GA *Aneides aeneus* (Green Salamander) approx. 3.0 mi. W of site
Carya laciniosa (Shellbark Hickory) approx. 3.0 mi. W of site
GA *Crataegus triflora* (Three-flowered Hawthorn) approx. 3.0 mi. W of site
Etheostoma coosae (Coosa Darter) approx. 1.0 mi. SE of site in Town Creek
Etheostoma coosae (Coosa Darter) approx. 2.5 mi. N of site in Dry Creek
Etheostoma coosae (Coosa Darter) approx. 2.5 mi. W of site in Duck Creek
Fraxinus quadrangulata (Blue Ash) approx. 3.0 mi. W of site
GA *Jeffersonia diphylla* (Twinleaf) approx. 3.0 mi. W of site
GA *Neviusia alabamensis* (Alabama Snow-wreath) approx. 3.0 mi. W of site
Phacelia purshii (Miami-mist) approx. 2.5 mi. W of site
Ponthieva racemosa (Shadow-witch Orchid) approx. 3.0 mi. W of site
Potamogeton amplifolius (Bigleaf Pondweed) approx. 1.0 mi. N of site
Blue Hole [Cave] approx. 3.0 mi. W of site
Chattooga River [High Priority Stream] approx. 1.0 mi. SE of site
Crockford-Pigeon Mountain WMA [GA DNR] approx. 2.5 mi. W of site
Duck Creek [High Priority Stream] approx. 2.0 mi. SW of site
Wayne's Dudhole [Cave] approx. 3.0 mi. W of site

* Entries above proceeded by "US" indicates species with federal status in Georgia (Protected or Candidate). Species that are federally protected in Georgia are also state protected; "GA" indicates Georgia protected species.

Recommendations:

We have no records of species of concern within the project area. Please encourage strict measures to protect the important aquatic resources near this site. This site occurs near Duck

Creek and the Chattooga River, both high priority streams. As part of an effort to develop a comprehensive wildlife conservation strategy for the state of Georgia, the Wildlife Resources division has developed and mapped a list of streams that are important to the protection or restoration of rare aquatic species and aquatic communities. High priority waters and their surrounding watersheds are a high priority for a broad array of conservation activities, but do not receive any additional legal protections. We now have GIS ESRI shapefiles of GA high priority waters available on our website (http://www.georgiawildlife.com/content/displaycontent.asp?txtDocument=89&txtPage=13). Please contact the Georgia Natural Heritage Program if you would like additional information on high priority waters.

New Data Available on the Nongame Conservation Section Website

We have recently updated the Nongame Conservation Section Website!!! You can view the updated rare species and natural community information by Quarter Quad, County and HUC8 Watershed. To access this information, please visit our GA Rare Species and Natural Community Information page at:
http://georgiawildlife.dnr.state.ga.us/content/displaycontent.asp?txtDocument=89
An updated ESRI shape file of our rare species and natural community data by quarter quad and county is also available. It can be downloaded from:
http://georgiawildlife.dnr.state.ga.us/assets/documents/gnhp/gnhpds.zip

Disclaimer:

Please keep in mind the limitations of our database. The data collected by the Nongame Conservation Section comes from a variety of sources, including museum and herbarium records, literature, and reports from individuals and organizations, as well as field surveys by our staff biologists. In most cases the information is not the result of a recent on-site survey by our staff. Many areas of Georgia have never been surveyed thoroughly. Therefore, the Nongame Conservation Section can only occasionally provide definitive information on the presence or absence of rare species on a given site. Our files are updated constantly as new information is received. **Thus, information provided by our program represents the existing data in our files at the time of the request and should not be considered a final statement on the species or area under consideration.**

If you know of populations of special concern species that are not in our database, please fill out the appropriate data collection form and send it to our office. Forms can be obtained through our web site (http://www.georgiawildlife.com) or by contacting our office. If I can be of further assistance, please let me know.

Sincerely,

Katrina Morris
Environmental Review Coordinator