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January 5, 2017

Ms. Susan Kibler, P.G.
Response and Remediation Program
Georgia Department of Natural Resources
Environmental Protection Division
2 Martin Luther King, Jr. Drive, SE, Suite 1054 East
Atlanta, Georgia 30334

Subject: **Submittal of VIRP Application
SECHEM, INC. – HSI Site No. 10515
4580 South Berkeley Lake Road
Norcross, Georgia**

Dear Ms. Kibler:

On behalf of our client SECHEM, INC. (SECHEM), EarthCon Consultants, Inc. (EarthCon), is pleased to submit to the Georgia Environmental Protection Division (EPD) the Voluntary Investigation and Remediation (VIRP) Application for the SECHEM Site (HSI No. 10515) located in Norcross, Gwinnett County, Georgia, which is enclosed with this letter.

If you have any questions or comments regarding the VIRP Application, please feel free to contact the undersigned at (770) 973-2100.

Sincerely,

A handwritten signature in blue ink that reads "Rachel Andrews".

Rachel L. Andrews
Staff Geologist

A handwritten signature in blue ink that reads "Carol Northern".

Carol D. Northern, P.G.
Principal Geologist

Attachment: VIRP Application

Cc: Ms. Rachel L. Odzer, SECHEM
Mr. Stephen P. Holt, P.E., SECHEM



VOLUNTARY INVESTIGATION AND REMEDIATION PLAN

SECHEM, INC.
4580 SOUTH BERKELY LAKE ROAD
NORCROSS, GWINNETT COUNTY, GEORGIA 30092
HSI SITE NUMBER 10515

PREPARED FOR:

SECHEM, INC.
CORPORATE ENVIRONMENTAL DEPARTMENT
654 JUDGE STREET
HARLEYVILLE, SOUTH CAROLINA 29448

PREPARED BY:

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EarthCon Project No. 02.20160244.00

January 2017



VOLUNTARY INVESTIGATION AND REMEDIATION PLAN

SECHEM, INC.
4580 South Berkeley Lake Road
Norcross, Gwinnett County, Georgia 30092
HSI Site Number 10515

Prepared For:

SECHEM, INC.
Corporate Environmental Department
654 Judge Street
Harleyville, South Carolina 29448

January 2017

Carol Northern

Carol D. Northern, P.G.
Principal Geologist
Registration No. 000793
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Date: 1/5/17



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1.0 INTRODUCTION

The former SECHEM, INC. facility (referred to herein as “the Property”) is located at 4580 South Berkeley Lake Road in Norcross, Gwinnett County, Georgia. The Property is listed on the Hazardous Site Inventory (HSI) as “SECHEM, INC., HSI Site #10515”. The adjacent Youngblood Farm Investments, L.P. (YFI) property is sub-listed under HSI Site #10515 (“the Site”). The Property is owned by SECHEM, INC. (SECHEM), a fourth tier subsidiary of the Giant Cement Holding Company, Inc. (GCHI).

This Voluntary Investigation and Remediation Plan (VIRP) has been prepared to meet requirements outlined in the Georgia Voluntary Remediation Program Act (VRPA). The VRPA went into effect on June 1, 2009 and Georgia EPD began accepting applications to the Voluntary Remediation Program (VRP) on January 6, 2010. The VIRP Application Form and Checklist is provided in Appendix A. The Warranty Deed for the Property is provided in Appendix B and a copy of the tax map showing the Property, surrounding properties, tax parcel identification number, and Property owner information is provided in Appendix C.

2.0 SITE SUMMARY

The Property consists of approximately 1.0 acre and is located approximately three miles northwest of Norcross in Gwinnett County, Georgia. The Property location and Site layout are shown on Figures 1 and 2, respectively.

SECHEM began operations at the Property in 1971. SECHEM received commercial and industrial waste and blended the waste into fuel for cement and lightweight aggregate kilns. SECHEM’s operations included the storage, blending, packaging, and distribution of industrial solvents. In the mid-1970s, a diesel underground storage tank (UST) was installed and an earthen embankment and discharge pipe were constructed on the Property. In 1976, 15 vertical aboveground storage tanks (ASTs) were installed on the southwestern portion of the Property. In 1984, the drum shed and dock were expanded. By 1990, a total of 34 vertical ASTs were operational. Between 1992 and 1994, the ASTs were emptied and dismantled and the product was disposed of off-site. By 1994, chemical blending operations at the Property had ceased and the Property had become a 10-day transfer facility operating solely as a product distributor. GCHI purchased SECHEM in 1999.

In 1995, a Phase II Environmental Site Assessment (ESA) was conducted in conjunction with a real estate transaction on the adjacent 19-acre parcel located to the southwest of the Property, which was owned by YFI. Concentrations of regulated substances were detected in soil and groundwater samples collected during the Phase II ESA. The Property was identified as a potential source of the release. YFI submitted a Hazardous Site Response Act (HSRA) release notification to the Georgia Environmental Protection Division (EPD) on August 11, 1995.

After reviewing YFI's HSRA notification, EPD issued a HSRA release notification request to SECHEM. In response, SECHEM conducted soil and groundwater investigations on the Property and the adjacent property to the southwest. SECHEM submitted an investigation and sampling report to EPD on August 12, 1998. EPD subsequently listed the Property and sub-listed 4.21 acres of the adjacent YFI property as HSI Site No. 10515 on October 23, 1998 for a confirmed release of benzene in groundwater exceeding a reportable quantity and a suspected release of vinyl chloride in soil exceeding a reportable quantity. The HSI listing also identified 1,1,1-trichloroethane (111-TCA), tetrachloroethene (PCE), and trichloroethene (TCE), and their associated daughter products, as well as naphthalene, toluene, and xylenes in soil and groundwater. Regulated substances in the groundwater have also been documented in the intermittent tributary to Mill Creek located on the adjacent YFI property. YFI subsequently sold the remaining, un-impacted 15 acres of their property.

Numerous environmental investigations have been conducted at the Site. The results of these activities were submitted to Georgia EPD in the following documents:

- Compliance Status Report (CSR), dated September 2000;
- CSR Addendum, dated April 2002;
- Pilot Test and Extended Pilot Test Report, dated August 2004;
- Corrective Action Plan (CAP), dated February 2005;
- CAP Addendum, dated August 2005;
- Phase I: CAP Addendum Report, dated June 2012;
- Phase II: CAP Addendum Report, dated June 2013;
- Corrective Action Program 2014 Annual Report, dated March 2015; and
- Corrective Action Program 2015 Annual Report, dated April 2016.

Pilot testing and extended pilot testing was conducted on the Site in November 2002 and from June 2003 to June 2004. The pilot tests assessed the use of soil vapor extraction (SVE) and groundwater extraction (GWE) on the Property and air sparging (AS) coupled with SVE on the adjacent YFI property. Based on the results of the pilot tests, the 2005 CAP recommended that remedial efforts be focused solely on the Property, and the remediation system would consist of SVE coupled with AS. The CAP was conditionally approved on June 9, 2005 pending revisions to the CAP report, which were submitted in a CAP Addendum dated August 2, 2005. The AS/SVE system was installed on the Property in 2006; system pilot testing was conducted in 2007; and full operation of the system began on January 22, 2008.

The Phase I CAP Addendum Report was approved by EPD on November 19, 2012. In accordance with the approved Phase I CAP Addendum, groundwater monitoring of 24 monitoring wells on the Site occurs on an annual basis. Four surface water monitoring stations located in the intermittent tributary to Mill Creek on the adjacent YFI Property are sampled on a quarterly basis.

The Phase II CAP Addendum Report, submitted to EPD in June 2013, was prepared to address the existing groundwater plume on the Site and the discharge of impacted groundwater to the intermittent tributary to Mill Creek. The report included an evaluation of the current system's effectiveness, a source investigation, and an evaluation of remediation alternatives to supplement or replace the existing AS/SVE system. During the preparation of the Phase II CAP Addendum Report, samples of surface soils, subsurface soils, soil vapor, and groundwater were collected on the Property. Based on the analytical results, the Phase II CAP Addendum Report stated that the on-site SVE system effectively treated the majority of the unsaturated source area soils, but limited areas of residual source material remained in the surface and subsurface soils on the Property. The report also stated that while the AS system lowered concentrations of contaminants in groundwater on-site and down-gradient of the Property, continued significant reductions of contaminants in groundwater and surface water down-gradient of the Property cannot be expected using the current system. EPD has not responded to the June 2013 Phase II: CAP Addendum Report.

The AS/SVE system is currently in operation¹. The most recent annual groundwater monitoring event occurred in May 2016. The most recent stream sampling event occurred on August 18, 2016. The results of the May 2016 groundwater sampling event and the August 2016 surface water sampling event are summarized in Tables 1 and 2, respectively.

3.0 CONSTITUENTS/AREAS OF CONCERN

Based on the information provided in the 2000 CSR, 2002 CSR Addendum, and 2013 Phase II CAP Addendum, additional horizontal and vertical delineation of soil and groundwater contamination at the Site may be needed. Summaries of regulated substances historically detected in soil and sediment, surface water, and groundwater at the Site are provided in Appendices D, E, and F, respectively. The extent of contamination on the Site is further discussed in Sections 4.6 and 4.7. The two probable source areas are the former AST farm and the drum shed (Figure 2).

Historical analytical data and data collected in 2016 were compared to applicable HSRA Risk Reduction Standards (RRS) and Georgia Instream Water Quality Standards (WQS). Constituents whose concentrations exceeded the delineation criteria were identified as constituents of concern (COCs). COCs were identified in soil and groundwater on the Property and in soil, groundwater, and surface water on the adjacent YFI property. Soil contamination was primarily located to the west of the drum shed on the Property and follows the course of the drainage ditch down-gradient to the adjacent YFI property. The groundwater contaminant plume is located on the Property and extends onto the adjacent YFI property. The groundwater contaminant plume has impacted the spring and surface water body (tributary to Mill Creek) located on the YFI property.

¹. On December 9, 2016, on behalf of SECHEM, EarthCon Consultants, Inc. submitted a request to EPD (R. Andrews to S. Kibler) to cease operation of the AS/SVE System. On December 20, 2016, this request was approved by the EPD.

The following table summarizes the COCs identified in their respective media on the Site.

Soil	Groundwater	Surface Water	Sediment
<ul style="list-style-type: none"> • 1,2-Dichlorobenzene (1,2-DCB) • 1,3-Dichlorobenzene (1,3-DCB) • 1,4-Dichlorobenzene (1,4-DCB) • Ethylbenzene • Methylene chloride • Naphthalene • Tetrachloroethene (PCE) • Toluene • Trichloroethene (TCE) 	<ul style="list-style-type: none"> • Benzene • cis-1,2-Dichloroethene (cis-1,2-DCE) • trans-1,2-Dichloroethene (trans-1,2-DCE) • 1,2-DCB • 1,4-DCB • 1,2-Dichloroethane (1,2-DCA) • 1,1-Dichloroethene (1,2-DCE) • 1,4-Dioxane • 4-Methyl-2-pentanone • PCE • 1,1,2-Trichloroethane (112-TCA) • TCE • Vinyl chloride (VC) 	<ul style="list-style-type: none"> • PCE • TCE • VC 	<ul style="list-style-type: none"> • PCE • TCE

4.0 PRELIMINARY CONCEPTUAL SITE MODEL

4.1 Facility Geology and Hydrogeology

Geology

As described in the 2000 CSR, the Property is located in the Southern Piedmont geologic province east of the Brevard Fault Zone. The Property area is located near the contact of undifferentiated granitic gneiss and metagraywacke/mica schist. The Property area is underlain by the Wolf Creek Formation, of Proterozoic to Late Paleozoic Age and consists of thinly laminated fine-grained amphibolite interlayered with lustrous, silvery, gray biotite-muscovite schist. No fault zones or shear zones were identified in the vicinity of the Property.

Based on data from previous investigations, soils on the Site consist of silt to clay saprolite to varying depths ranging from 15 to 35 feet below ground surface (bgs). The soils are underlain by a layer of partially weathered rock followed by fractured bedrock. Bedrock was reportedly encountered at depths between 20 to 40 feet bgs. Site stratigraphy is shown on cross sections A-A' and B-B'. The cross section locations are shown on Figure 3 while the cross sections are presented as Figures 4 and 5.

Hydrogeology

Based on information provided in the 2000 CSR, the Site hydrogeologic system consists of a saprolite-bedrock aquifer. The aquifer is recharged by infiltrated rainfall. Groundwater is stored and transmitted through pore spaces in the saprolite, which consists of clays and silts. Storage capacity in the saprolite is greater than the bedrock; however, transmissivity is lower. Groundwater in the underlying bedrock is stored and transferred through fractures, joints, and faults. The aquifer discharges to streams in valley bottoms and other surface water bodies.

More specifically, groundwater at the Site discharges to the spring connected to the tributary to Mill Creek on the YFI property.

4.2 Groundwater Flow

The water level measurements collected on May 9, 2016, provided in Table 3, were used to develop a potentiometric surface map. As shown on Figure 6, groundwater mimics surface topography and flows toward the spring and intermittent tributary to Mill Creek located on the adjacent YFI property.

4.3 Hydraulic Conductivity

According to the Corrective Action Program 2015 Annual Report, a geometric mean hydraulic conductivity of 0.367 feet per day has been calculated for the shallow wells on the Property.

4.4 Source Areas

The two probable sources of soil and groundwater contamination are the former AST farm and the drum shed (Figure 2).

4.5 Extent of Impacts

Soil

According to the 2000 CSR and 2002 CSR Addendum, a considerable amount of soil analytical data was collected between 1995 and 2000. Sample depths and locations were generally chosen based on the results of field screening using a photoionization detector (PID), and the samples were analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). The soil samples were collected from varying depths, including near the ground surface, at or above the water table, and above bedrock. Based on the variations in soil sampling locations and depths, the extent of impacts to soil at Site had not been fully delineated.

According to the Phase II CAP Addendum, additional surface and subsurface soil samples were collected in April 2013 to assess the extent of contamination in the vicinity of the AS/SVE system. These samples were collected after the AS/SVE system had been in operation for approximately 5 years. The assessment showed significant reductions in surface and subsurface soil concentrations on the Property; however, residual source material was identified. Additional sampling may be needed to fully delineate the horizontal and vertical extent of soil contamination on the Site. Historical surface and subsurface soil sample results are summarized in Appendix D.

Groundwater

Based on analytical results from the most recent groundwater sampling event conducted in May 2016, 23 regulated substances were detected in groundwater at the Site at concentrations above laboratory detection limits. Thirteen of those regulated substances were detected above their respective delineation criteria [i.e. Type 1 RRS]. The groundwater concentrations are shown on the cross-sections provided as Figures 4 and 5. May 2016 groundwater plume isoconcentration maps for six of the primary COCs (PCE, TCE, 1,1-DCE, 1,2-DCE, VC, and 1,2-DCA) are provided as Figures 7 through 12, respectively. Additional sampling may be needed to fully delineate the horizontal and vertical extent of groundwater contamination on Site. The most recent groundwater sampling data is summarized in Table 1. A summary of historical groundwater data collected since 2006 is provided in Appendix E.

Plume stability analysis using procedures described in *A Practical Method to Evaluate Ground Water Contaminant Plume Stability*² was conducted to help provide an understanding of the overall behavior of the dissolved chlorinated ethane and chlorinated ethene groundwater plumes at the Site. A variety of diagnostic tools were used to help assess groundwater plume dynamics including:

- Ricker Method® Plume Stability Analysis;
- Center of Mass Movement over Time Analysis;
- Plume Spread Trends over Time Analysis; and
- Overall Plume Spatial Difference Analysis

The graphical summary of the Ricker Method® Plume Stability Analysis is presented as trend graphs for plume area, plume average concentration, and plume mass indicator. The graphical summary of the center of mass (COM) movement over time analysis is presented in graphs to show relative plume COM movement. Plume spread analyses (i.e. longitudinal/length and transverse/width) are also presented as trend graphs to demonstrate relative changes in longitudinal and transverse plume movements. The graphical summary of the plume spatial difference analysis is presented in plume difference maps. The spatial difference figures depict relative concentration, magnitude and spatial/areal indications where the dissolved contaminant plume differed between two dates. The plume differences are denoted by areas of red shading (areas of concentration increase) and blue shading (areas of concentration decrease). The relative magnitude of plume concentration change is indicated by gradational shading, with darker shading indicating greater change in magnitude in accordance with the provided scale.

The Ricker Method® analysis resulted in statistically significant decreasing trends in area, average concentration, and mass indicator for both the total chloroethene and total chloroethane plumes. The total chloroethene plume exhibited overall reductions in area, average concentration, and mass indicator of 19%, 63%, and 70%, respectively over the period of 2006 through 2016.

² Ricker, J.A. 2008. A Practical Method to Evaluate Ground Water Contaminant Plume Stability. *Groundwater Monitoring & Remediation* 28, no. 4: 85–94.

Likewise, the total chloroethane plume exhibited overall reductions of 47%, 69%, and 83%, respectively. Although the COM for both plumes exhibited downgradient trends, it is not due to plume expansion. Rather, the observed downgradient trending COMs are primarily due to the more significant reductions of the plume in the former source areas. Overall, both the chloroethene and chloroethane plumes are observed to be significantly decreasing during the evaluation period of 2006 through 2016. The plume difference maps for the chloroethene and chloroethane plumes are included in Appendix F.

Surface Water

Surface water samples were collected from the tributary to Mill Creek located to the west of the Property at four surface water sampling locations, SW-1 to SW-4. Sampling location SW-1 is located on the YFI property near the spring water that discharges to the tributary to Mill Creek. Sampling locations SW-2 through SW-4 are located on the property owned by Gwinnett County to the northwest of the Property. The tributary to Mill Creek is an intermittent stream and surface water levels fluctuate significantly according to precipitation levels. Based on analytical results from the most recent surface water sampling event conducted on August 18, 2016, PCE, TCE, and VC were detected above their respective applicable Georgia WQS, in the sample collected from SW-1. Concentrations of VOCs detected in the sample collected from SW-2 did not exceed Georgia WQS. VOCs were not detected in the samples collected from SW-3 and SW-4. The concentrations and locations of the detected constituents are consistent with historical sampling data. The concentrations exceeding the Georgia WQS appear to be limited to the segment of the stream near the intermittent spring, which discharges groundwater from the SECHEM facility and up-gradient portions of the adjacent YFI property. It is anticipated that the contaminants detected in the surface water will comply with Georgia WQS during the course of corrective action. The most recent surface water analytical data is summarized in Table 2. Historical surface water data is summarized in Appendix G.

Sediment

According to the 2000 CSR, four stream sediment samples were collected from the surface water sampling locations at the tributary to Mill Creek in July 2000. Stream sediment impacts were reportedly limited to the vicinity of the spring at sampling location SW-1 on the adjacent YFI property. The historical sediment sampling results are summarized in Appendix D.

4.6 Identification of Potential Receptors

4.6.1 Human Receptors

Soil

The Property is an unoccupied, limited access site and is zoned as industrial. The adjacent YFI property is additionally unoccupied and consists of wooded undeveloped land. According to the 2000 CSR, impacts to soils from COCs were limited to subsurface soils and surface soil impacts

were not identified. Based on this information, human exposure to impacted soil at the Site is not anticipated.

Under future site conditions, it is possible that construction work involving subsurface excavation may need to be performed within areas on the Property exhibiting soil impacts from COCs. Exposure under this scenario would be of short duration, very infrequent, and would be addressed by SECHEM under an activity-specific health and safety plan.

Groundwater

Impacts from COCs were identified in groundwater at the Property and adjacent YFI property. Drinking water is supplied to the Property and the surrounding area by Gwinnett County. No water supply wells are present on the Property or adjacent YFI property, and both properties are currently unoccupied. Institutional controls, such as zoning ordinances and deed restrictions, will prevent the installation and use of water supply wells at the Property. Based on this information, human exposure to impacted groundwater at the Property and adjacent YFI is not anticipated.

A drinking water well was reportedly identified approximately 0.75 miles southeast of the Property. According to the 2000 CSR, there is little potential for regulated substances released to groundwater or soil at the Property to migrate to the extent that the drinking water well would be impacted. The drinking water well was reportedly located in a different surface water drainage basin than the Property.

Surface Water & Sediment

Impacts from COCs were identified at the spring discharge zone (surface water sampling location SW-1) of the intermittent tributary to Mill Creek located on the adjacent YFI property. Concentrations of regulated substances reduced to non-detectable levels down-stream of the spring, as the intermittent tributary flows along the Gwinnett County property to the north. Unauthorized visitors may attempt to access the spring and intermittent tributary, which could result in direct human contact with impacted surface water and sediment.

4.6.2 Environmental Receptors

According to the 2000 CSR, no surface water bodies exist on the Property, and impacts from COCs to surface soils were not observed; therefore, no environmental receptors are anticipated to be exposed to COCs on the Property.

COCs were detected in surface water samples collected from the spring and the intermittent tributary to Mill Creek located on the adjacent YFI property. Potential environmental receptors were identified as local flora and fauna that may access the spring and intermittent stream. According to the 2000 CSR, the nature of the intermittent tributary (i.e. small and sandy with inconsistent water levels) made it inherently incapable of supporting aquatic life; therefore,

exposure to environmental receptors is not anticipated.

5.0 REMEDIATION PLAN

Based on sampling data collected during previous investigations, concentrations of regulated substances in soil and groundwater at the Site exceed delineation criteria. Additionally, concentrations of regulated substances were detected in surface water on the adjacent YFI property at concentrations that exceeded the Georgia Instream WQS. An AS/SVE system has been operating at the Property since 2008 (for approximately 9 years) in an effort to remediate contaminated soil and groundwater. The following sections provide the recommendation for the current corrective action system as well as additional proposed activities planned to bring the Site into compliance with applicable RRS.

5.1 Air Sparge/Soil Vapor Extraction (AS/SVE) System

The AS/SVE system was installed in 2007 and began operation in January 2008 to assist with reducing soil and dissolved-phase VOC concentrations on the Property. The AS/SVE system consists of an air compressor, two vacuum blowers, an electric catalytic oxidizer, nineteen AS wells and nineteen SVE wells. One 10-horsepower (hp) dual type oil-less rotary vane compressor is used to inject compressed air into the groundwater and two 2.5-hp regenerative blowers are used to induce a vacuum on the subsurface to extract vapor-phase VOCs. Extracted vapors are routed through header pipes and directed to the catalytic oxidizer for treatment prior to discharge to the atmosphere. A figure illustrating the AS and SVE wells and associated lines is presented in Appendix H.

System operation, maintenance, and monitoring (OMM) has been performed during the eight years of operation. The OMM activities included the collection of instrument readings (temperature, air flowrate, pressure, vacuum, etc.), performance of periodic maintenance, and the collection of vapor samples. Influent and effluent vapor samples were collected and screened with a photoionization detector (PID) to monitor the treatment efficiency of the catalytic oxidizer. Also, influent vapor samples have been submitted to a certified laboratory for VOC analysis since 2008.

According to historical data presented in the Corrective Action Program 2015 Annual Report, total VOC concentrations from influent vapor samples ranged between 1,325 milligrams per cubic meter (mg/m^3) and 7,944 mg/m^3 between the time of system startup (January 2008) and April 2009. In 2009, influent vapor-phase VOC concentrations began to decline and reached asymptotic levels in 2013. The average total vapor-phase VOC concentration between November 2013 and March 2016 was calculated to be approximately 167 mg/m^3 . As a result of the decline, vapor mass removal rates decreased from 22.20 pounds per day (lbs/day) in 2008 to 4.68 lbs/day in 2015. A total of approximately 16,170 pounds of VOC have been removed and treated by the system since activation. A summary table of historical influent vapor-phase VOC concentrations and mass removal rates is provided in Appendix I.

Similar to the decreasing trend of vapor-phase VOC concentrations and mass removal rates, dissolved-phase VOC concentrations from monitoring wells (SMW-2 and SMW-3) located within the AS/SVE zone of influence show a decreasing trend. Maximum dissolved-phase VOC concentrations of 317,120 micrograms per liter ($\mu\text{g}/\text{L}$) and 78,040 $\mu\text{g}/\text{L}$ observed from SMW-2 and SMW-3, respectively, were reduced by one to three orders of magnitude. Based on 2014 and 2015 groundwater data, the average dissolved-phase VOC concentration was calculated to be 906 $\mu\text{g}/\text{L}$ in SMW-2 and 9,126 $\mu\text{g}/\text{L}$ in SMW-3.

The AS/SVE system appears to have been an effective technology for reducing VOC impacts on the Property. Based on decreasing trends of influent vapor-phase and dissolved-phase concentrations, it is recommended that the AS/SVE be deactivated to monitor dissolved-phase rebound and natural attenuation of the on-site plume. The SVE system is planned for deactivation in December 2016.

5.2 Groundwater and Surface Water Monitoring

Following the shutdown of the AS/SVE system, groundwater and surface water monitoring will continue on a semi-annual basis at the Site to monitor for changes in concentrations of COCs. The semi-annual sampling events are proposed to be conducted in March and September when precipitation levels are more likely to produce surface water volumes sufficient for sampling the intermittent tributary to Mill Creek.

5.3 Soil and Groundwater Delineation

Current and historical data will be evaluated to determine if additional soil and groundwater samples are needed to complete delineation.

5.4 Restrictive Covenant

Institutional controls will be used to eliminate possible groundwater exposure pathways on the Property. SECHEM will execute a covenant that restricts the use of surficial groundwater in impacted areas on the Property to non-potable uses only. The covenant will be executed in conformance with Georgia's Uniform Environmental Covenants Act (O.C.G.A. § 44-16-1).

5.5 Groundwater Model

Groundwater modeling will be conducted to verify the extent and stability of the groundwater contaminant plume and to select the appropriate downgradient point of exposure for comparison to applicable cleanup standards, if necessary. Groundwater modeling will be conducted using the existing site data. Results of the groundwater modeling will be submitted in a CSR Update.

5.6 Summary of Planned Corrective Action Activities

Corrective action measures at the site will be proposed subsequent to the shutdown of the AS/SVE system. Corrective action measures will be selected based on information, including

surface and groundwater data, collected after the AS/SVE system shutdown. Upon completion of corrective action, a CSR Update will be prepared confirming consistency of the corrective action with the provisions, purposes, standards, and policies of the VRPA and certifying compliance of groundwater at the Site with the applicable cleanup standards.

6.0 REPORTING

Progress reports will be submitted semi-annually to EPD until corrective action is complete. A CSR Update will then be prepared for submittal to EPD. The CSR Update will document the completion of the corrective action specified in this VIRP and will certify that groundwater concentrations are in compliance with applicable cleanup standards.

7.0 SCHEDULE

A project schedule for activities described in this VIRP is provided in Table 4. SECHEM expects to conduct the following activities during the first 6-month reporting period following the Property's enrollment into the VRP:

- Shut down the AS/SVE system,
- Site-wide groundwater and surface water sampling event; and
- Soil sampling for delineation purposes, if necessary.

8.0 REFERENCES

Draper Aden Associates, *Compliance Status Report, SECHEM, INC. - HSI Site No. 10515, Norcross, Georgia*, September 29, 2000.

Draper Aden Associates, *Compliance Status Report Addendum, SECHEM, INC. - HSI Site No. 10515, Norcross, Georgia*, April 2002.

Draper Aden Associates, *Corrective Action Plan, SECHEM, INC. – HSI Site No. 10515, Norcross, Georgia*, January 2005.

Draper Aden Associates, *Corrective Action Plan Addendum, SECHEM, INC. – HSI Site No. 10515, Norcross, Georgia*, August 2005.

Draper Aden Associates, *Pilot Test and Extended Pilot Test Report, SECHEM, INC. - HSI Site No. 10515, Norcross, Georgia*, June 2013.

Georgia Environmental Protection Division, *Conditional Approval of Corrective Action Plan, SECHEM, INC. – HSI Site No. 10515, Norcross, Georgia*, June 2005.

Georgia Environmental Protection Division, *Notice of Deficiency, SECHEM, INC. – HSI Site No. 10515, Norcross, Georgia*, March 2005.

Golder Associates, *Phase II: Corrective Action Plan Addendum Report, SECHEM, INC. Facility, Norcross, Georgia, HSI Site No. 10515*, June 2013.

Golder Associates, *Corrective Action Program 2014 Annual Report, SECHEM, INC. Facility, Norcross, Georgia, HSI Site No. 10515*, March 2015.

Golder Associates, *Corrective Action Program 2015 Annual Report, SECHEM, INC. Facility, Norcross, Georgia, HSI Site No. 10515, April 2016.*

TABLES

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS, MAY 2016

SECHEM, INC.
Norcross, Gwinnett County, Georgia
HSI Site Number 10515

Well	Date	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	2-Butanone	4-Methyl-2-pentanone	Acetone	Benzene	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes (total)
Delineation Criteria (mg/L)		0.2	0.005	4	0.007	0.6	0.005	0.007	0.6	0.075	DL	2	2	4	0.005	0.1	0.08	0.07	0.7	0.005	1	0.1	0.005	0.002	10
SMW-1	5/10/2016	< 0.001	< 0.001	0.0015	0.0014	< 0.001	0.0019	0.0073	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	0.0073	< 0.001	0.0054	< 0.001	< 0.001	0.011	< 0.001	< 0.001
SMW-2	5/10/2016	< 0.001	< 0.001	0.0019	0.0013	0.0015	0.0098	0.019	< 0.001	0.0016	0.21	< 0.01	< 0.01	< 0.01	< 0.001	0.01	< 0.001	0.018	< 0.001	0.014	< 0.001	< 0.001	0.011	< 0.001	< 0.001
SMW-3	5/10/2016	0.022	0.017	0.084	0.023	0.9	0.35	0.33	0.27	0.18	< 1	0.26	2.2	0.94	0.012	< 0.01	< 0.01	0.33	0.05	0.043	0.038	< 0.01	0.028	0.21	1.1
SMW-4	5/10/2016	< 0.001	< 0.001	0.0012	0.01	< 0.001	< 0.001	0.0025	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	0.0092	0.0025	< 0.001	0.22	< 0.001	< 0.001	0.062	< 0.001	< 0.001
SRW-1	5/10/2016	< 0.002	< 0.002	0.025	0.064	< 0.002	0.11	0.17	< 0.002	< 0.002	< 0.2	< 0.02	< 0.02	< 0.02	< 0.002	< 0.002	0.0026	0.17	< 0.002	0.28	< 0.002	< 0.002	0.23	< 0.002	< 0.002
WMW-1	5/11/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0018	< 0.002	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	0.0014	< 0.001	< 0.001	< 0.001	< 0.001	0.0027	< 0.001	< 0.001
YMW-1	5/11/2016	0.0099	0.0047	0.0061	0.028	0.11	0.0051	0.35	0.025	0.021	< 0.2	< 0.02	< 0.02	< 0.02	< 0.002	< 0.002	< 0.002	0.34	< 0.002	0.098	< 0.002	< 0.002	0.14	0.0079	< 0.002
YMW-2	5/11/2016	0.029	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.27	< 0.005	< 0.005	< 0.5	< 0.05	< 0.05	< 0.05	< 0.005	< 0.005	< 0.005	0.27	< 0.005	0.051	0.0055	< 0.005	0.083	< 0.005	< 0.005
YMW-4	5/10/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0013	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
YMW-5	5/13/2016	< 0.005	< 0.005	0.011	0.022	< 0.005	0.043	0.33	< 0.005	< 0.005	< 0.5	< 0.05	< 0.05	< 0.05	< 0.005	< 0.005	< 0.005	0.33	< 0.005	0.071	< 0.005	< 0.005	0.074	< 0.005	< 0.005
YMW-6	5/11/2016	< 0.001	< 0.001	< 0.001	0.0012	< 0.001	0.0021	0.0062	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	0.0062	< 0.001	0.0043	< 0.001	< 0.001	0.023	< 0.001	< 0.001
YMW-7	5/12/2016	< 0.005	< 0.005	0.0053	0.017	< 0.005	0.024	0.051	< 0.005	< 0.005	< 0.5	< 0.05	< 0.05	< 0.05	< 0.005	< 0.005	< 0.005	0.051	< 0.005	0.055	< 0.005	< 0.005	0.23	< 0.005	< 0.005
YMW-8	5/12/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
YMW-9	5/12/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
YMW-10	5/12/2016	0.022	< 0.005	0.056	0.16	0.17	0.057	0.99	0.042	0.039	< 0.5	< 0.05	< 0.05	< 0.05	< 0.05	0.0073	0.0092	< 0.005	0.99	< 0.005	0.63	0.0071	0.006	0.63	0.16
YMW-11	5/13/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	0.0017	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
YMW-13	5/11/2016	0.012	< 0.01	< 0.01	0.28	< 0.01	0.066	0.62	< 0.01	< 0.01	< 1	< 0.1	< 0.1	< 0.01	< 0.001	< 0.001	< 0.001	0.031	< 0.001	0.18	< 0.001	< 0.001	0.035	< 0.001	< 0.001
YMW-14	5/13/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.021	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	0.021	< 0.001	0.11	< 0.001	< 0.001	0.0094	< 0.001	< 0.001
YMW-15	5/13/2016	0.028	0.028	0.21	0.75	1.1	0.26	5.2	0.25	0.29	< 1	< 0.1	< 0.1	< 0.1	0.038	0.059	< 0.01	4.9 </td							

TABLE 2
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS, AUGUST 18, 2016

SECHEM, INC.
Norcross, Gwinnett County, Georgia
HSI Site Number 10515

Constituents (mg/L)	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (total)	cis-1,2-Dichloroethene	Ethylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes (total)
WQS (mg/L)	NS	0.016	NS	71	13	0.037	NS	NS	21	0.0033	5.98	10	0.03	0.0024	NS
SW-1	0.044	< 0.001	0.011	0.01	< 0.001	< 0.001	0.33	0.36	< 0.001	0.17	0.0057	0.0027	0.19	0.014	< 0.001
SW-2	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	0.0036	0.0036	< 0.001	0.002	< 0.001	< 0.002	0.0062	< 0.001	< 0.001
SW-3	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001
SW-4	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001

Prepared by: RLA 11/28/2016

Checked by: DME 11/18/2016

Notes:

mg/L - micrograms per liter

WQS - Georgia Instream Water Quality Standard

NS - No standard

Bold - Concentration exceeds laboratory reporting limit

Bold and Shaded - Concentration exceeds WQS

TABLE 3
SUMMARY OF GROUNDWATER ELEVATION DATA
MAY 9, 2016

SECHEM, INC.
Norcross, Gwinnett County, Georgia
HSI Site Number 10515

Location	Top of Casing Elevation feet MSL	Depth to Water feet BTOC	Groundwater Elevation
YMW-1	1071.49	26.48	1045.01
YMW-2	1056.35	15.05	1041.30
YMW-4	1072.07	30.21	1041.86
YMW-5	1050.62	15.12	1035.50
YMW-6	1050.43	17.16	1033.27
YMW-7	1037.15	5.31	1031.84
YMW-8	1060.00	16.06	1043.94
YMW-9	1044.92	4.41	1040.51
YMW-10	1039.80	6.35	1033.45
YMW-11	1036.11	3.93	1032.18
YMW-13	1057.08	21.86	1035.22
YMW-14	1045.24	9.85	1035.39
YMW-15	1051.88	16.27	1035.61
YMW-16	1038.94	5.45	1033.49
YMW-17	1057.97	10.76	1047.21
YMW-18	1051.25	10.26	1040.99
YMW-19	1072.33	25.00	1047.33
YG-1	1040.89	7.47	1033.42
YG-6	1036.99	7.31	1029.68
HMW-1	1070.72	NM	NM
HMW-2	1075.66	18.39	1057.27
WMW-1	1083.98	29.32	1054.66
WMW-2	1084.70	24.45	1060.25
SMW-1	1089.61	27.00	1062.61
SMW-2	1074.74	25.65	1049.09
SMW-3	1086.73	31.12	1055.61
SMW-4	1085.53	24.33	1061.20
SG-5	1087.55	29.66	1057.89
SRW-1	1073.62	24.78	1048.84

Prepared By: RLA 12/5/2016

Checked By: DME 12/8/2016

Notes

MSL - Above mean sea level

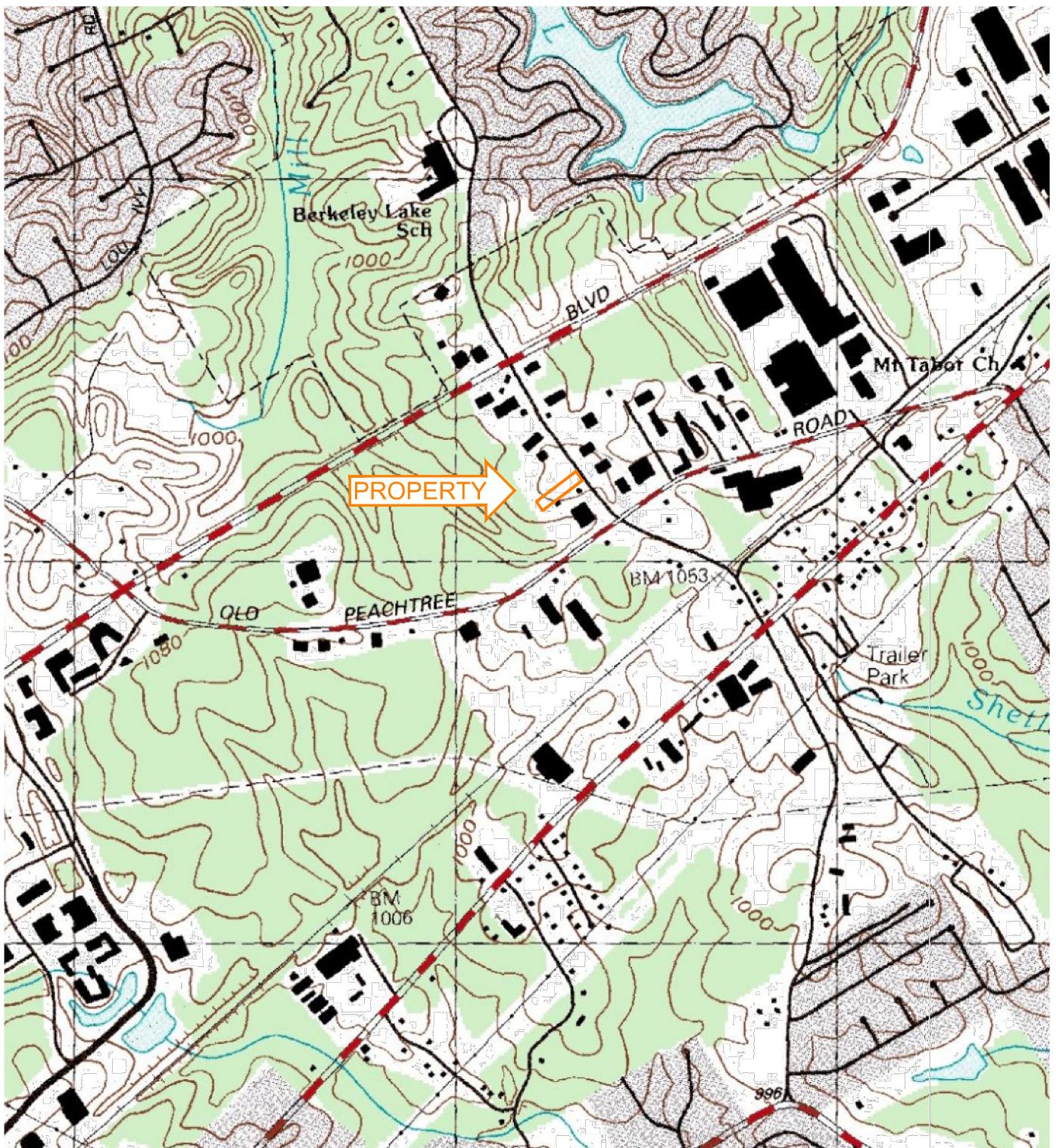
BTOC - Below top of casing

NM - Not measured

TABLE 4: PROJECTED MILESTONE SCHEDULE

Date	Activity
December 2016	Deactivate AS/SVE system
February 2017	VRP Application approved
March 2017	Site-wide groundwater and surface water sampling event
May 2017	First VIRP Progress Report
September 2017	Site-wide groundwater and surface water sampling event
November 2017	Second VIRP Progress Report
March 2018	Site-wide groundwater and surface water sampling event
May 2018	Third VIRP Progress Report
September 2018	Site-wide groundwater and surface water sampling event
November 2018	Fourth VIRP Progress Report
March 2018	Site-wide groundwater and surface water sampling event
May 2018	Fifth VIRP Progress Report
September 2018	Site-wide groundwater and surface water sampling event
November 2018	Sixth VIRP Progress Report
March 2019	Site-wide groundwater and surface water sampling event
May 2019	Seventh VIRP Progress Report
September 2019	Site-wide groundwater and surface water sampling event
November 2019	Eighth VIRP Progress Report
March 2020	Site-wide groundwater and surface water sampling event
May 2020	Ninth VIRP Progress Report
February 2021	Compliance Status Report

FIGURES



0 625 1250 2500
SCALE IN FEET



SOURCE: MYTOPO MAP PASS (MAPCARD) TOPOGRAPHIC MAP, NORCROSS, GEORGIA

FILENAME: gc_sechem_vip_and_app_figures_recovering

SECHEM, INC.

4580 SOUTH BERKELEY LAKE ROAD
NORCROSS, GEORGIA
HSI SITE NUMBER 10515

PROJECT NO. 02.20160244.00



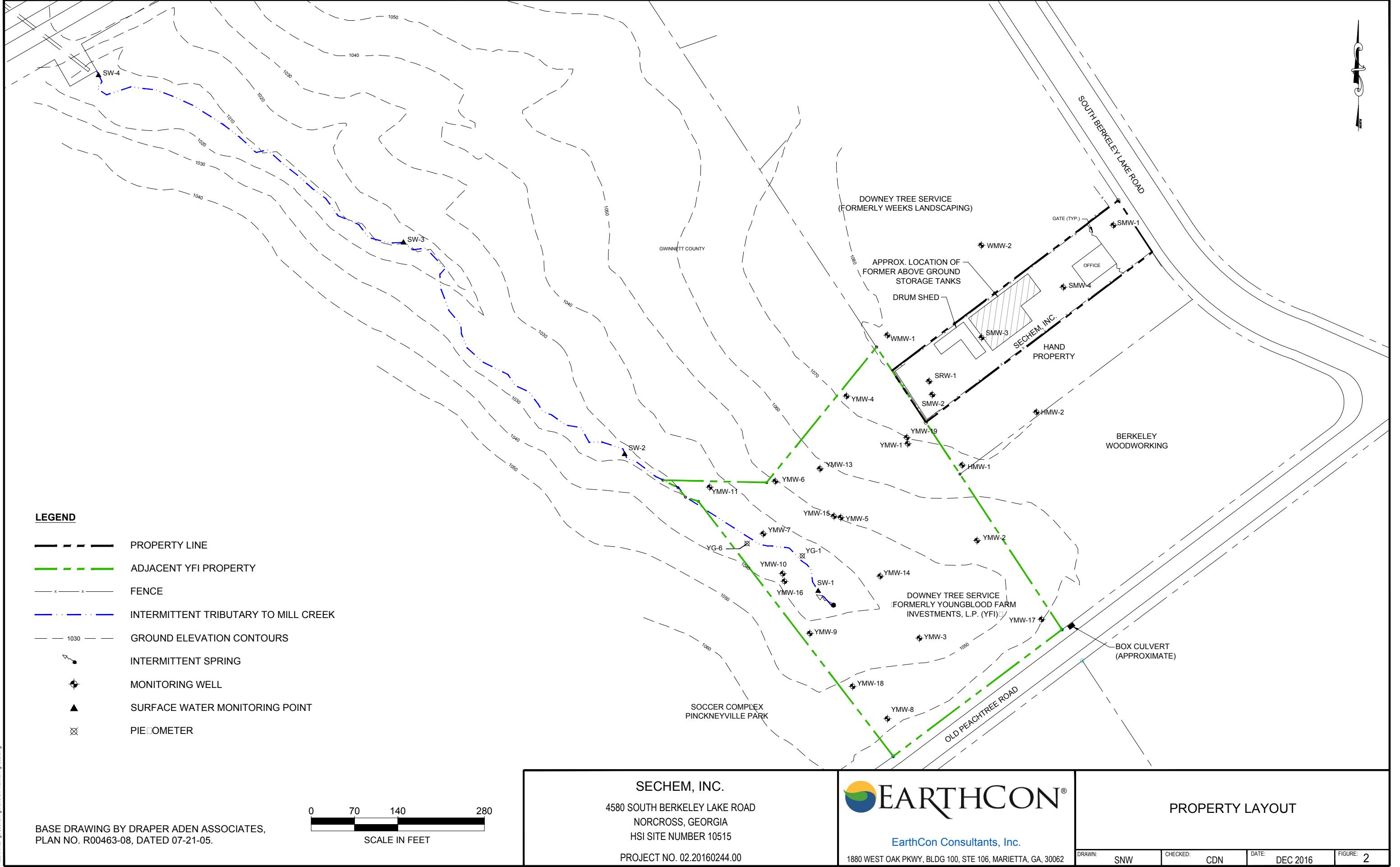
EARTHCON®

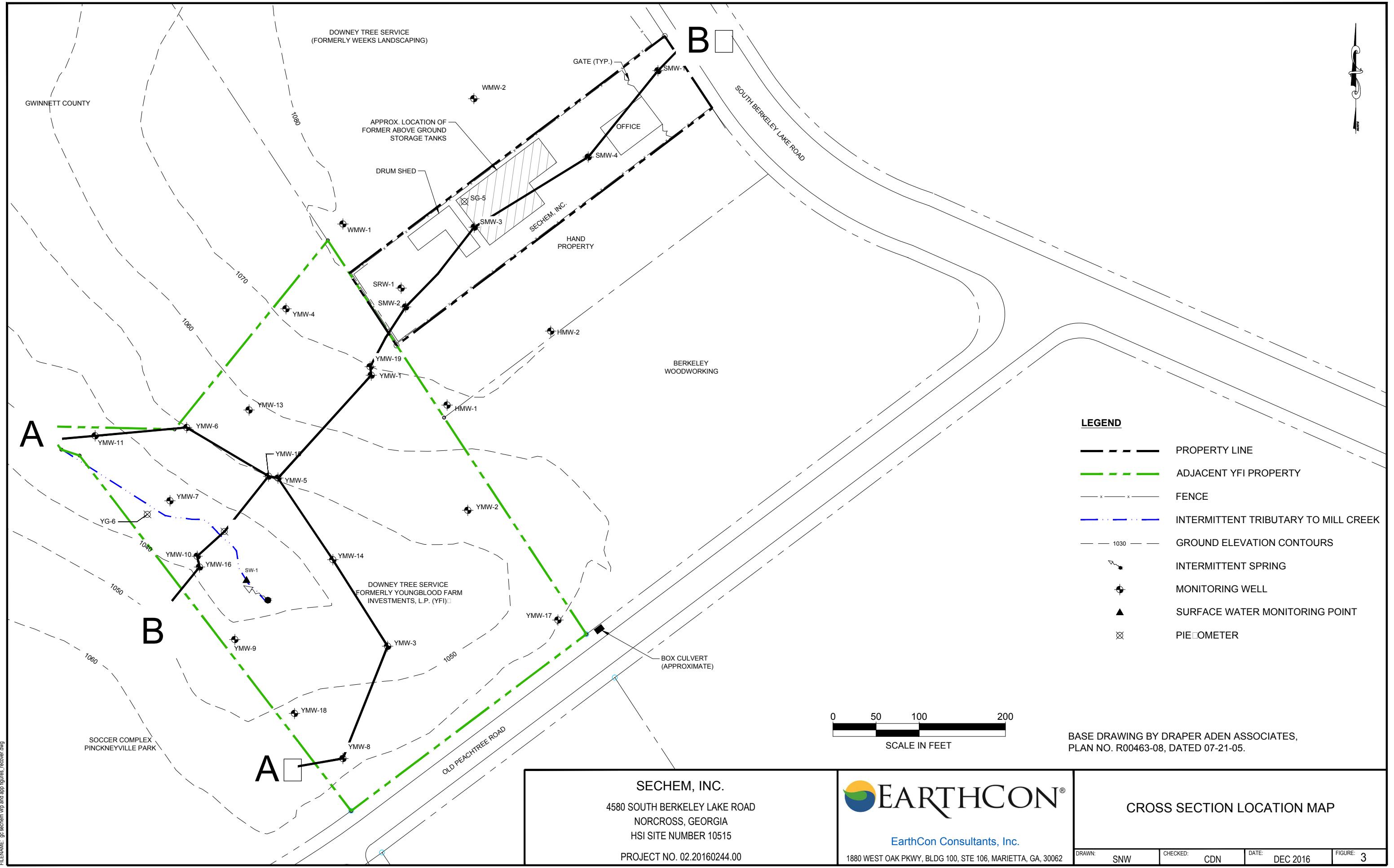
EarthCon Consultants, Inc.

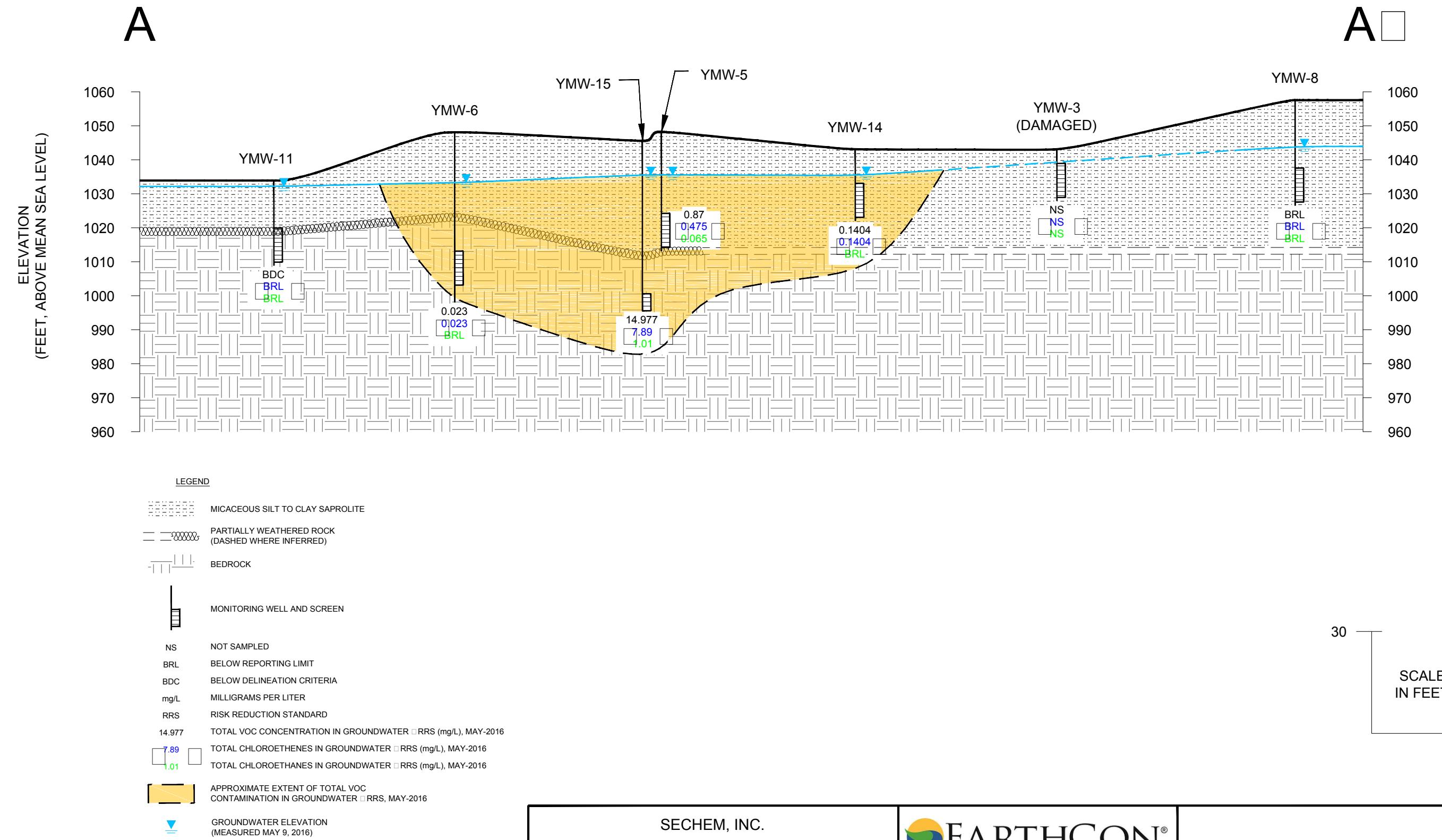
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

PROPERTY LOCATION

DRAWN: SNW CHECKED: CDN DATE: DEC 2016 FIGURE: 1

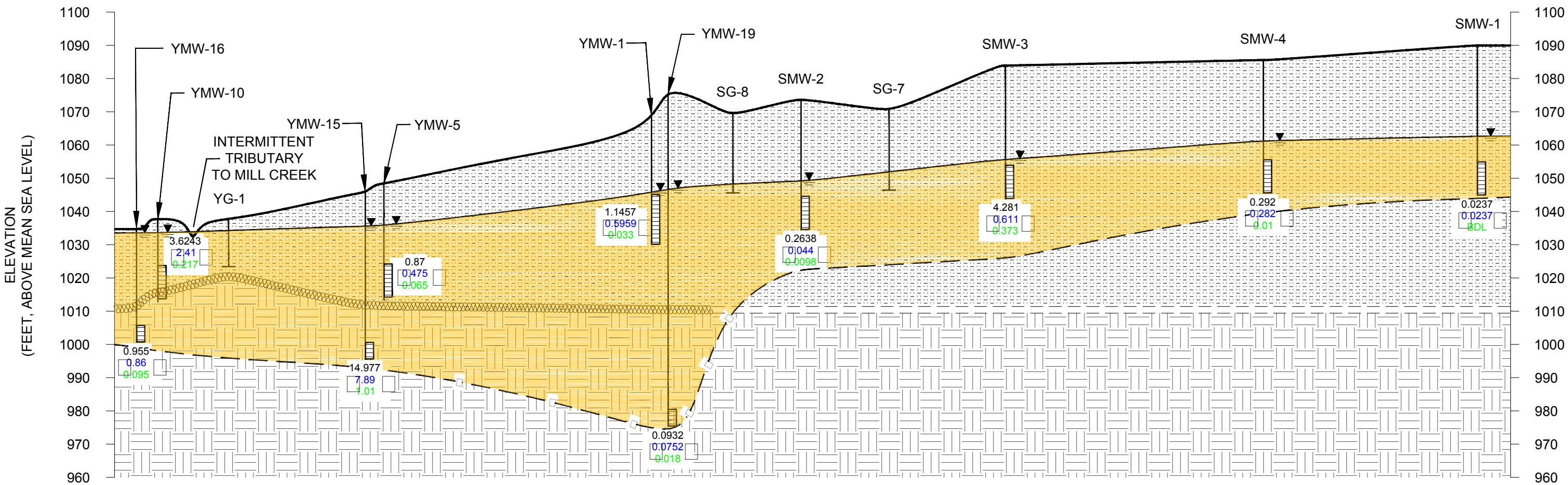
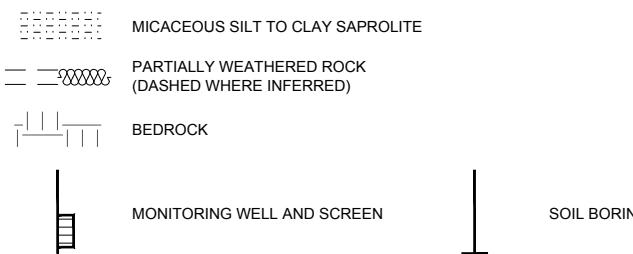






B

B

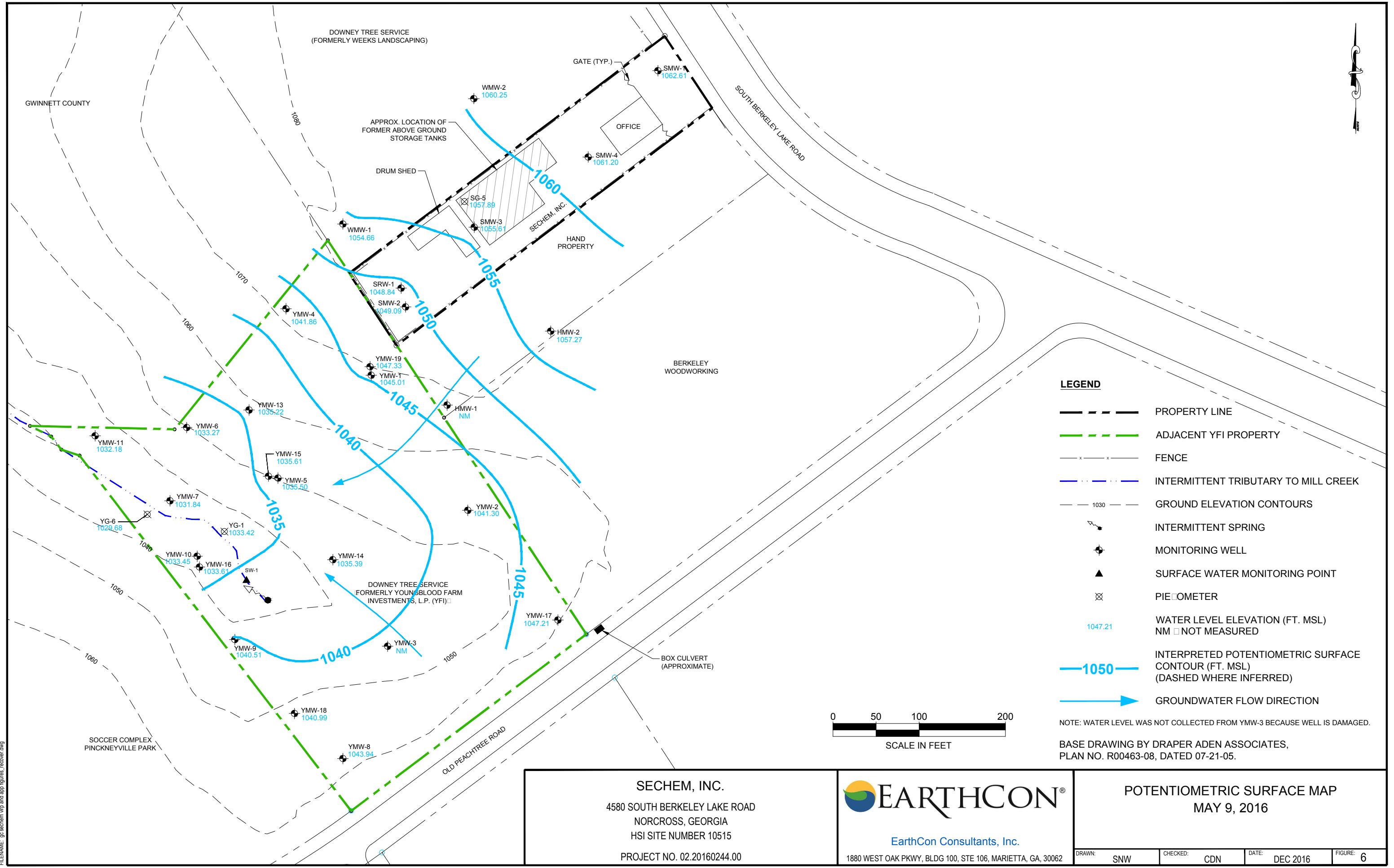
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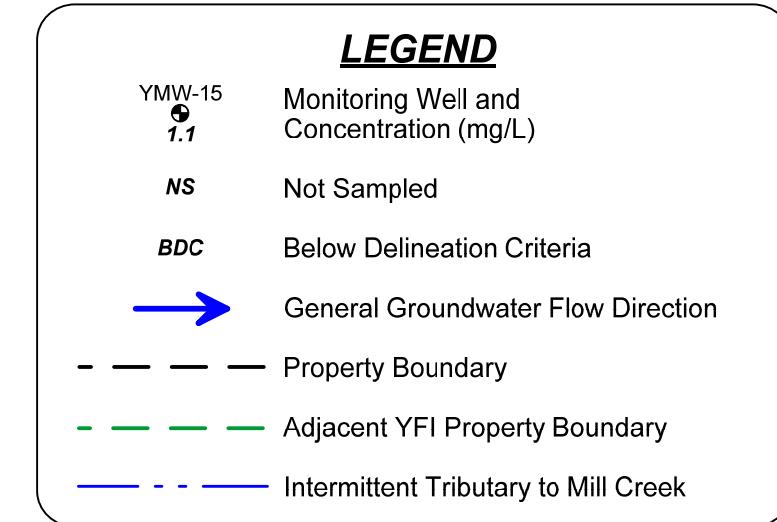
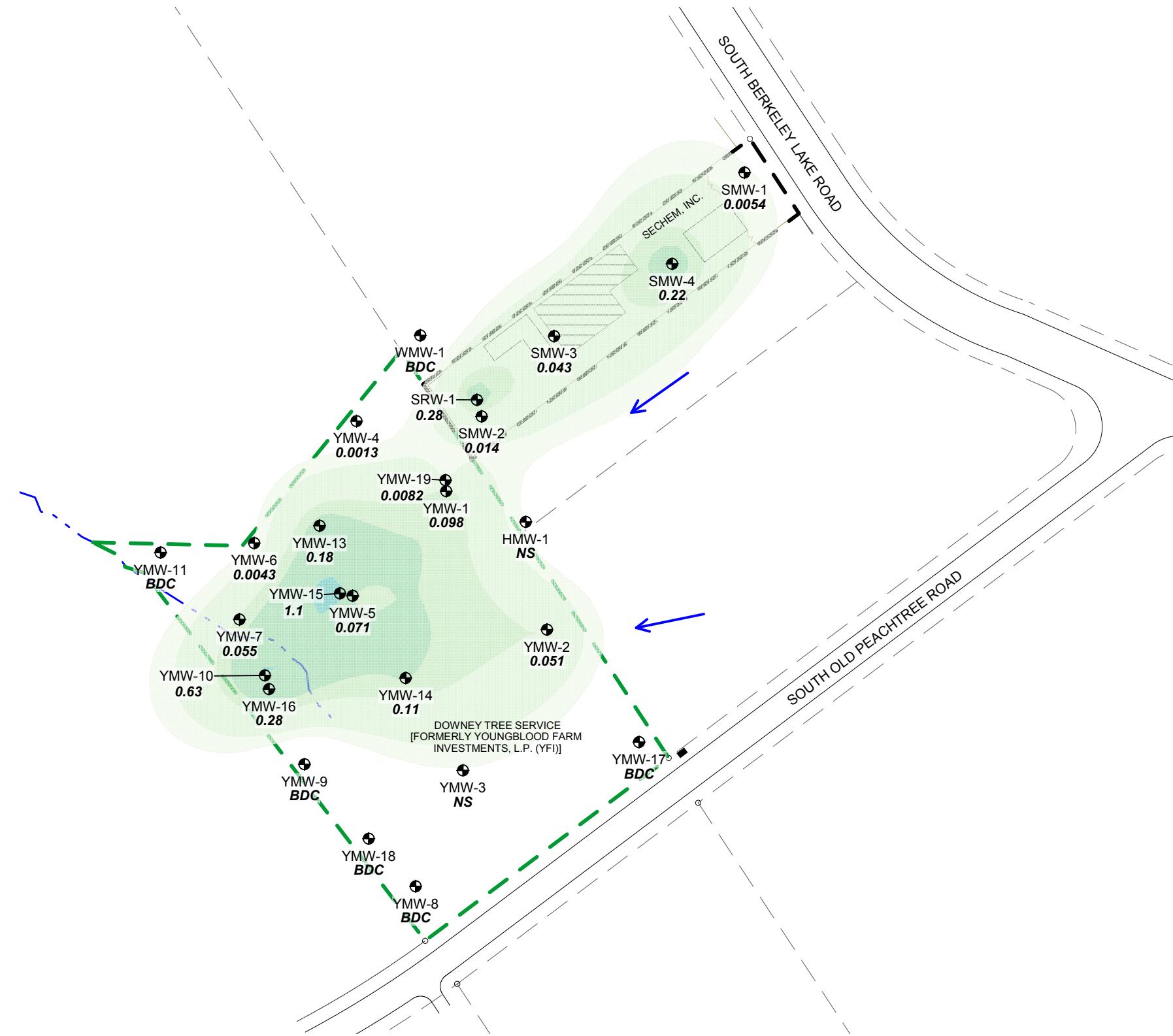
mg/L	MILLIGRAMS PER LITER
RRS	RISK REDUCTION STANDARD
14.977	TOTAL VOC CONCENTRATION IN GROUNDWATER □ RRS (mg/L), MAY-2016
7.89	TOTAL CHLOROETHENES IN GROUNDWATER □ RRS (mg/L), MAY-2016
1.01	TOTAL CHLOROETHANES IN GROUNDWATER □ RRS (mg/L), MAY-2016
	APPROXIMATE EXTENT OF TOTAL VOC CONTAMINATION IN GROUNDWATER □ RRS, MAY-2016
	GROUNDWATER ELEVATION (MEASURED MAY 9, 2016)

30

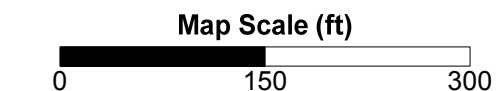
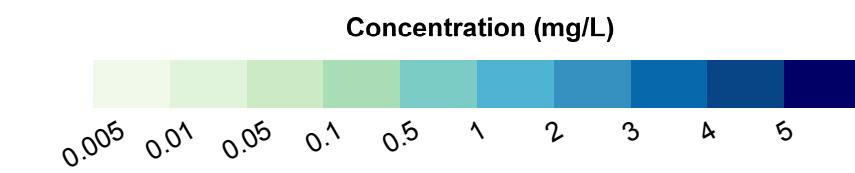
SCALE IN FEET

60





Delineation Criteria = Type 1 Risk Reduction Standard (RRS) = 0.005 mg/L



SECHEM, INC.
4580 South Berkeley Lake Road
Norcross, Georgia
HSI Site Number 10515

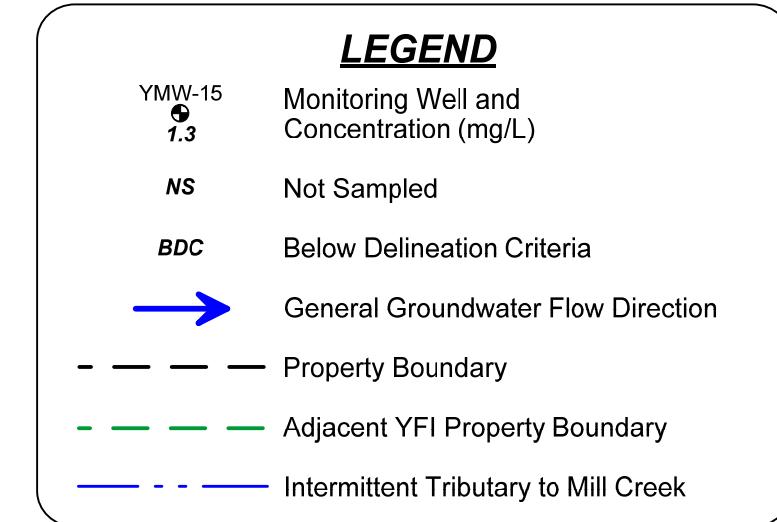
Project Number: 02.20160244.00

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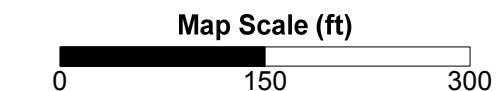
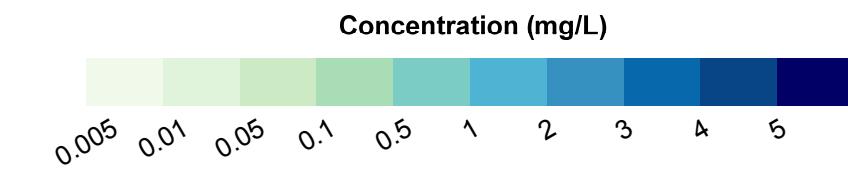
1880 West Oak Parkway, Bldg. 100 Suite 106
Marietta, Georgia 30062

Isoconcentration Map
Tetrachloroethene (PCE)
May-2016

Prepared by: SNW Checked by: CDN Figure: 7



Delineation Criteria = Type 1 Risk Reduction Standard (RRS) = 0.005 mg/L



SECHEM, INC.
4580 South Berkeley Lake Road
Norcross, Georgia
HSI Site Number 10515

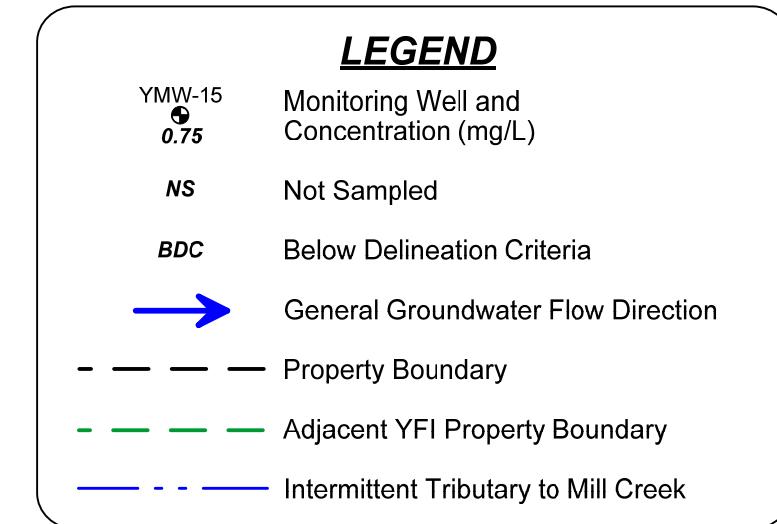
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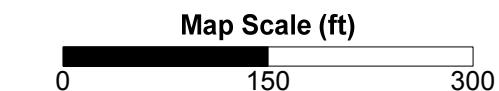
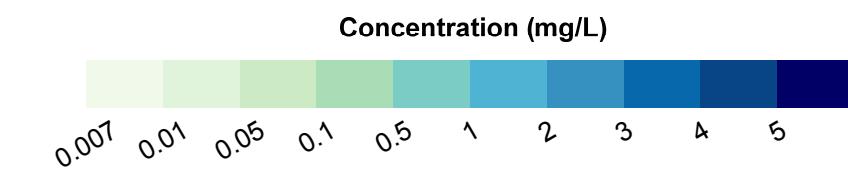
1880 West Oak Parkway, Bldg. 100 Suite 106
Marietta, Georgia 30062

Isoconcentration Map
Trichloroethene (TCE)
May-2016

Prepared by: SNW Checked by: CDN Figure: 8



Delineation Criteria = Type 1 Risk Reduction Standard (RRS) = 0.007 mg/L



SECHEM, INC.
4580 South Berkeley Lake Road
Norcross, Georgia
HSI Site Number 10515

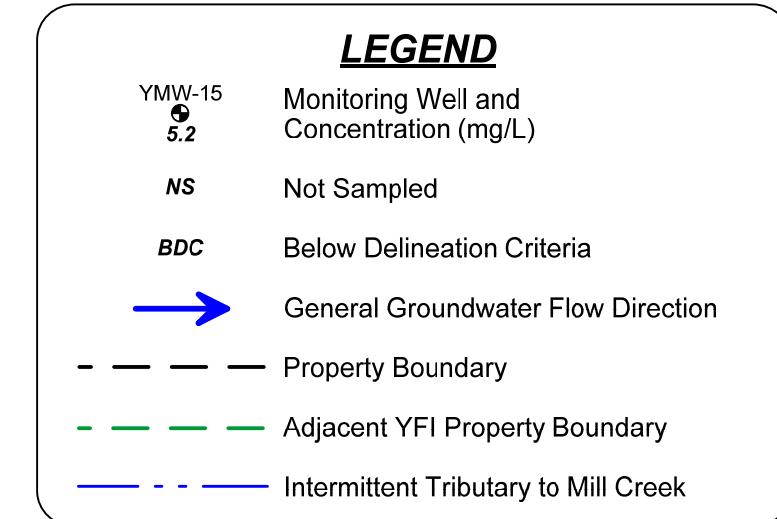
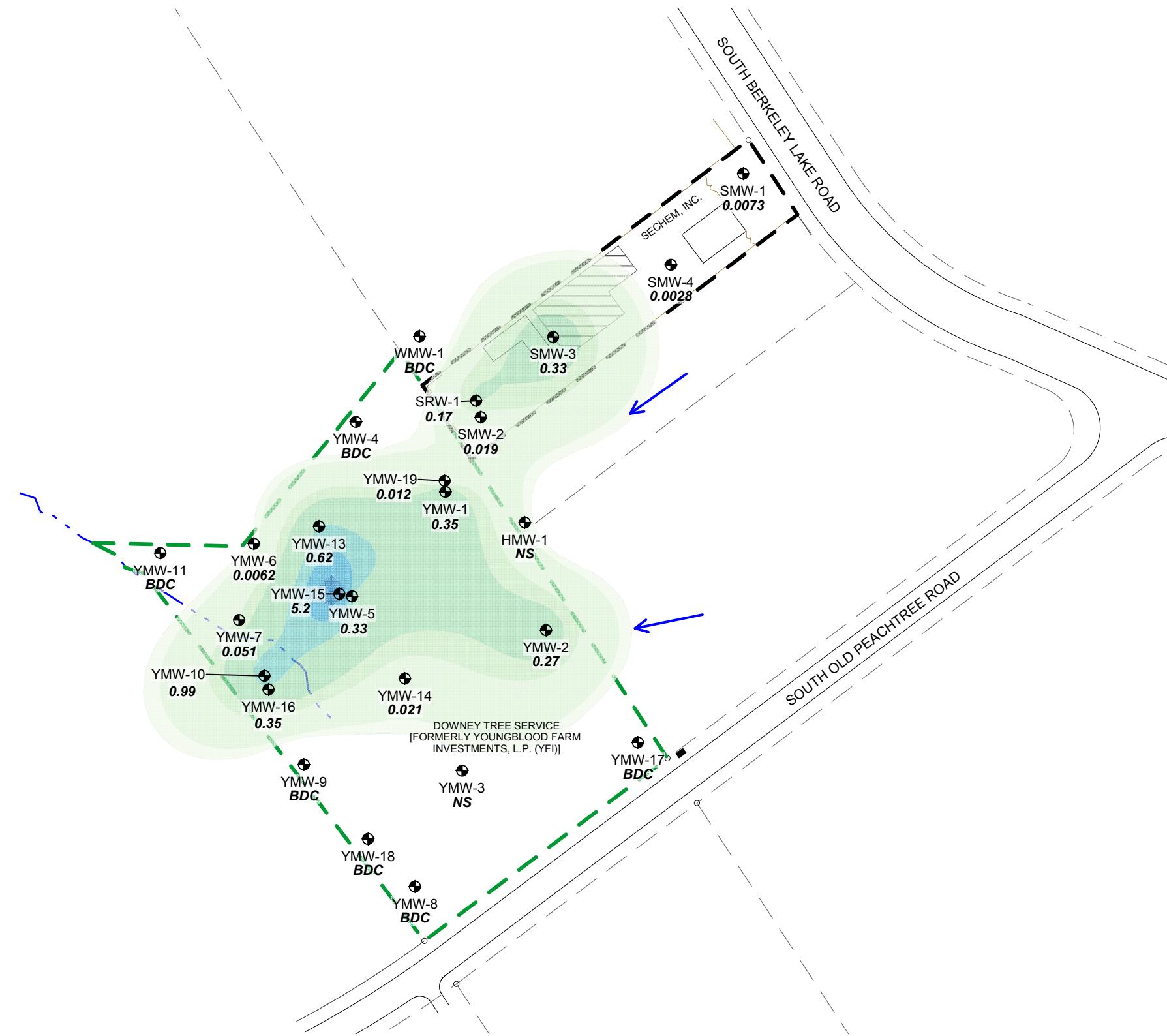
Project Number: 02.20160244.00

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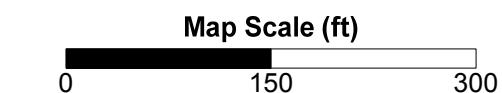
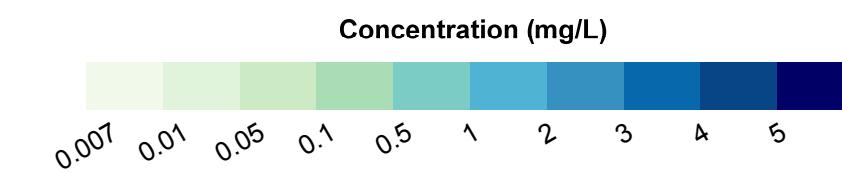
1880 West Oak Parkway, Bldg. 100 Suite 106
Marietta, Georgia 30062

Isoconcentration Map
1,1-Dichloroethene (1,1-DCE)
May-2016

Prepared by: SNW Checked by: CDN Figure: 9



Delineation Criteria = Type 1 Risk Reduction Standard (RRS) = 0.007 mg/L



SECHEM, INC.
4580 South Berkeley Lake Road
Norcross, Georgia
HSI Site Number 10515

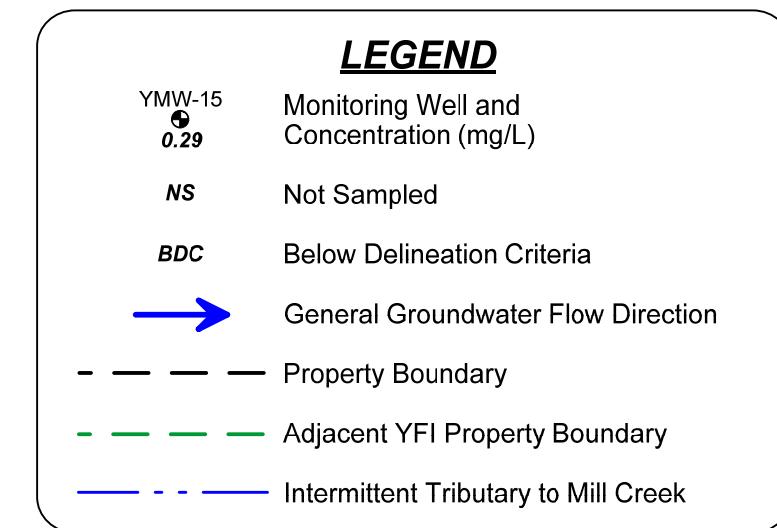
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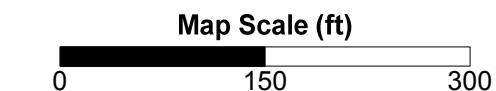
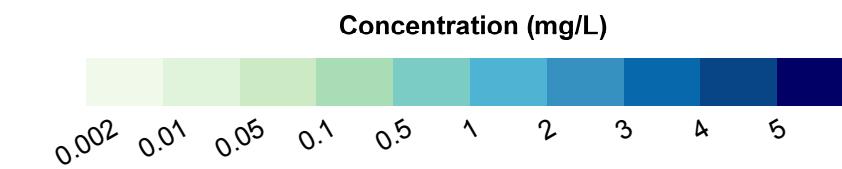
1880 West Oak Parkway, Bldg. 100 Suite 106
Marietta, Georgia 30062

Isoconcentration Map
1,2-Dichloroethene (1,2-DCE) Total
May-2016

Prepared by: SNW Checked by: CDN Figure: 10



Delineation Criteria = Type 1 Risk Reduction Standard (RRS) = 0.002 mg/L



SECHEM, INC.
4580 South Berkeley Lake Road
Norcross, Georgia
HSI Site Number 10515

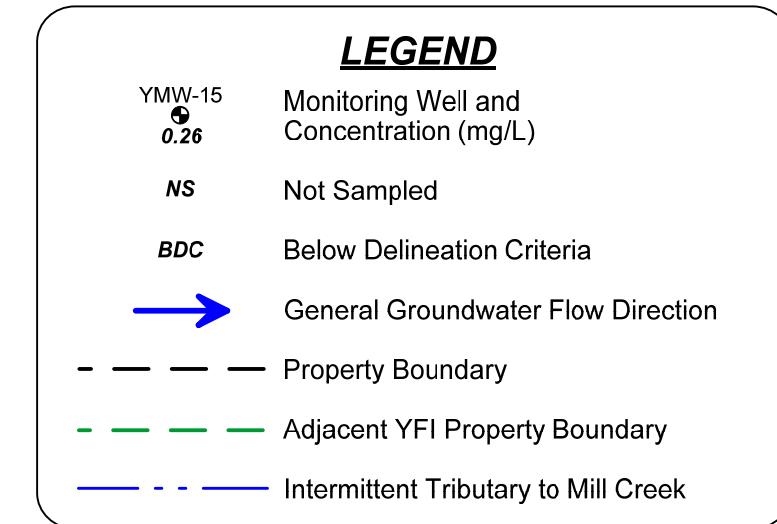
Project Number: 02.20160244.00

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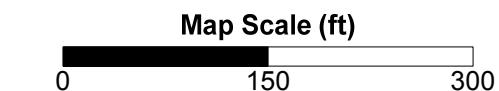
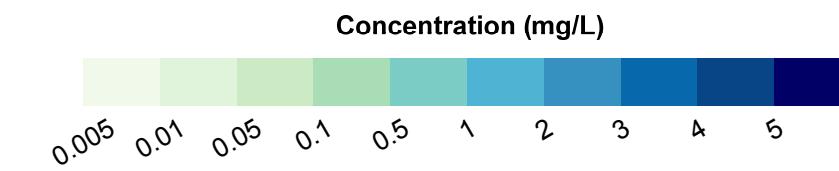
1880 West Oak Parkway, Bldg. 100 Suite 106
Marietta, Georgia 30062

Isoconcentration Map
Vinyl Chloride (VC)
May-2016

Prepared by: SNW Checked by: CDN Figure: 11



Delineation Criteria = Type 1 Risk Reduction Standard (RRS) = 0.005 mg/L



SECHEM, INC.
4580 South Berkeley Lake Road
Norcross, Georgia
HSI Site Number 10515

Project Number: 02.20160244.00

 EARTHCON®

1880 West Oak Parkway, Bldg. 100 Suite 106
Marietta, Georgia 30062

Isoconcentration Map
1,2-Dichloroethane (1,2-DCA)
May-2016

Prepared by: SNW Checked by: CDN Figure: 12

APPENDIX A
VIRP APPLICATION FORM AND CHECKLIST

Voluntary Investigation and Remediation Plan Application Form and Checklist

VRP APPLICANT INFORMATION					
COMPANY NAME	SECHEM, INC.				
CONTACT PERSON/TITLE	Rachel L. Odzer / Manager, Environmental Projects				
ADDRESS	654 Judge Street, Harleyville, SC 29448				
PHONE	(803) 496-2851	FAX		E-MAIL	Rachel.Odzer@ccpv.com
GEORGIA CERTIFIED PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER OVERSEEING CLEANUP					
NAME	Carol D. Northern		GA PE/PG NUMBER	PG No. 000793	
COMPANY	EarthCon Consultants, Inc.				
ADDRESS	1880 West Oak Parkway, Building 100, Suite 106				
PHONE	770-973-2100	FAX	770-973-7395	E-MAIL	cnorthern@earthcon.com
APPLICANT'S CERTIFICATION					
<p>In order to be considered a qualifying property for the VRP:</p> <ul style="list-style-type: none"> (1) The property must have a release of regulated substances into the environment; (2) The property shall not be: <ul style="list-style-type: none"> (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 I 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. 					
<p>In order to be considered a participant under the VRP:</p> <ul style="list-style-type: none"> (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. 					
<p>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.</p>					
<p>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.</p>					
APPLICANT'S SIGNATURE					
APPLICANT'S NAME/TITLE (PRINT)	Stephen P. Holt, P.E. / Director, Environmental Affairs			DATE	1/5/17

QUALIFYING PROPERTY INFORMATION (For additional qualifying properties, please refer to the last page of application form)			
HAZARDOUS SITE INVENTORY INFORMATION (if applicable)			
HSI Number	10515	Date HSI Site listed	10/23/1998
HSI Facility Name	SECHEM, INC.	NAICS CODE	48442
PROPERTY INFORMATION			
TAX PARCEL ID	6269 007	PROPERTY SIZE (ACRES)	1.0
PROPERTY ADDRESS	4580 S. Berkeley Lake Road		
CITY	Norcross	COUNTY	Gwinnett
STATE	Georgia	ZIPCODE	30092
LATITUDE (decimal format)	33.969759°	LONGITUDE (decimal format)	-84.183058
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)	SECHEM, INC., a fourth tier subsidiary of Giant Cement Holding, Inc.	PHONE #	(803) 496-2851
MAILING ADDRESS	654 Judge Street		
CITY	Harleyville	STATE/ZIPCODE	South Carolina / 29448
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.)	Check No. 98683 Check Date: 10/31/16	
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 C	
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	Section 4.0 Section 5.0 Table 4	

	<p>during the preceding period. A Gantt chart format is preferred for the milestone schedule.</p> <p>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:</p>	
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;	Table 4
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;	Table 4
5.c.	Within 30 months after enrollment, the participant must update the site CSM to include vertical delineation, finalize the remediation plan and provide a preliminary cost estimate for implementation of remediation and associated continuing actions; and	Table 4
5.d.	Within 60 months after enrollment, the participant must submit the compliance status report required under the VRP, including the requisite certifications.	Table 4
6.	<p>SIGNED AND SEALED PE/PG CERTIFICATION AND SUPPORTING DOCUMENTATION:</p> <p>"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, <u>et seq.</u>). 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.</p> <p>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.</p> <p>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."</p> <p>Carol D. Northern, PG #000793</p> <p>Printed Name and GA PE/PG Number</p> <p><u>Carol Northern</u></p> <p>Signature and Stamp</p>	 <p>1/5/17</p> <p>Date</p>

ADDITIONAL QUALIFYING PROPERTIES (COPY THIS PAGE AS NEEDED)

PROPERTY INFORMATION			
TAX PARCEL ID	6269 011	PROPERTY SIZE (ACRES)	4.21
PROPERTY ADDRESS	South Old Peachtree Road		
CITY	Norcross	COUNTY	Gwinnett
STATE	Georgia	ZIPCODE	30092
LATITUDE (decimal format)	33.968862°	LONGITUDE (decimal format)	-84.184141°
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)	Christa & Jeramey's World II	PHONE #	
MAILING ADDRESS	5055 Shadburn Road		
CITY	Cumming	STATE/ZIPCODE	Georgia / 30041-3960

PROPERTY INFORMATION			
TAX PARCEL ID		PROPERTY SIZE (ACRES)	
PROPERTY ADDRESS			
CITY		COUNTY	
STATE		ZIPCODE	
LATITUDE (decimal format)		LONGITUDE (decimal format)	
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)		PHONE #	
MAILING ADDRESS			
CITY		STATE/ZIPCODE	

PROPERTY INFORMATION			
TAX PARCEL ID		PROPERTY SIZE (ACRES)	
PROPERTY ADDRESS			
CITY		COUNTY	
STATE		ZIPCODE	
LATITUDE (decimal format)		LONGITUDE (decimal format)	
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)		PHONE #	
MAILING ADDRESS			
CITY		STATE/ZIPCODE	

**APPENDIX B
WARRANTY DEED**

TRUSTEE'S DEED
XWARRANTY DEED (FORM 36A)

STATE OF GEORGIA

Return To Ike W. Cobb
McCalla, Raymer, Padrick
Cobb, Nichols & Clark
2301 Parklake Drive, N.E., Suite
Atlanta, Georgia 30345

DEKALB

County

THIS INDENTURE, made the 22nd day of May , in the year one thousand nine hundred NINETY FIVE , between Mamie Loretta Disspain and Charles Edward Disspain, not individually, but as Co-Trustees of THE PAUL EDWARD DISSPAIN RESIDUARY TRUST U/W PAUL EDWARD DISSPAIN, Item VII

of the County of Gwinnett , and State of Georgia, as party or parties of the first part, hereinafter called Grantor, and Sechem, Inc.

as party or parties of the second part, hereinafter called Grantee (the words "Grantor" and "Grantee" to include their respective heirs, successors and assigns where the context requires or permits).

WITNESSETH: That Grantor for and in consideration of the sum of TEN AND NO/100 DOLLARS (\$10.00) AND OTHER GOOD AND VALUABLE CONSIDERATION, in hand paid at and before the sealing and delivery of these presents, the receipts whereof is hereby acknowledged, has granted, bargained, sold, aliened, conveyed and confirmed, and by these presents does grant, bargain, sell, alien, convey and confirm unto the said Grantee,

See Exhibit "A" attached hereto and made a part hereof.

GWINNETT CO. GEORGIA
REAL ESTATE TRANSFER TAX

\$ 214.00
GARY R YATES CLERK OF
SUPERIOR COURT

FILED & RECORDED
CLERK SUPERIOR COURT
GWINNETT COUNTY, GA.
95 JUN 26 AM 8:00
GARY R. YATES, CLERK

SEE WILL OF PAUL EDWARD DISSPAIN RECORDED IN MINUTE BOOK 553, PAGES 120 THROUGH 143, DEKALB COUNTY PROBATE RECORDS.

THIS CONVEYANCE is made subject to all zoning ordinances, easements and restrictions of record affecting said described property.

TO HAVE AND TO HOLD the said described property, with all and singular the rights, members and appurtenances thereof, to the same being, belonging, or in anywise appertaining, to the only proper use, benefit and behoof of the said Grantee forever in FEE SIMPLE.

AND THE SATED PROPERTY IS HEREBY CONVEYED TO THE GRANTEE AS OWNED BY THE GRANTOR.

IN WITNESS WHEREOF, the Grantor has signed and sealed this deed, the day and year above written.

Signed, sealed and delivered in the presence of:


Witness
Signature
Notary Public
My Commission Expires
May 3, 1999

Mamie Loretta Disspain (Seal)
Mamie Loretta Disspain, AS CO-TRUSTEE
Charles Edward Disspain (Seal)
Charles Edward Disspain, AS CO-TRUSTEE

311685

all that tract or parcel of land lying and being in Land Lot 269 of the 6th District of Gwinnett County, Georgia, as set out on a plat of survey for J. P. Dickey, dated February 10, 1969, and recorded in Plat Book R, page 29, Gwinnett County Records, and more particularly described as follows:

BEGINNING at an iron pin on the southwesterly side of Berkeley Lake Road, 400 feet northwesterly along the southwesterly side of Berkeley Road from the corner formed by the intersection of the southwesterly side of Berkeley Lake Road and the right-of-way of Old Peachtree Road; running thence South 55 degrees 39 minutes West a distance of 454.2 feet to an iron pin; running thence North 31 degrees 30 minutes West, 100 feet to an iron pin; running thence North 55 degrees 40 minutes East, a distance of 453.7 feet to the southwesterly side of Berkeley Lake Road; running thence South 31 degrees 44 minutes East, a distance of 100 feet to the point of beginning.

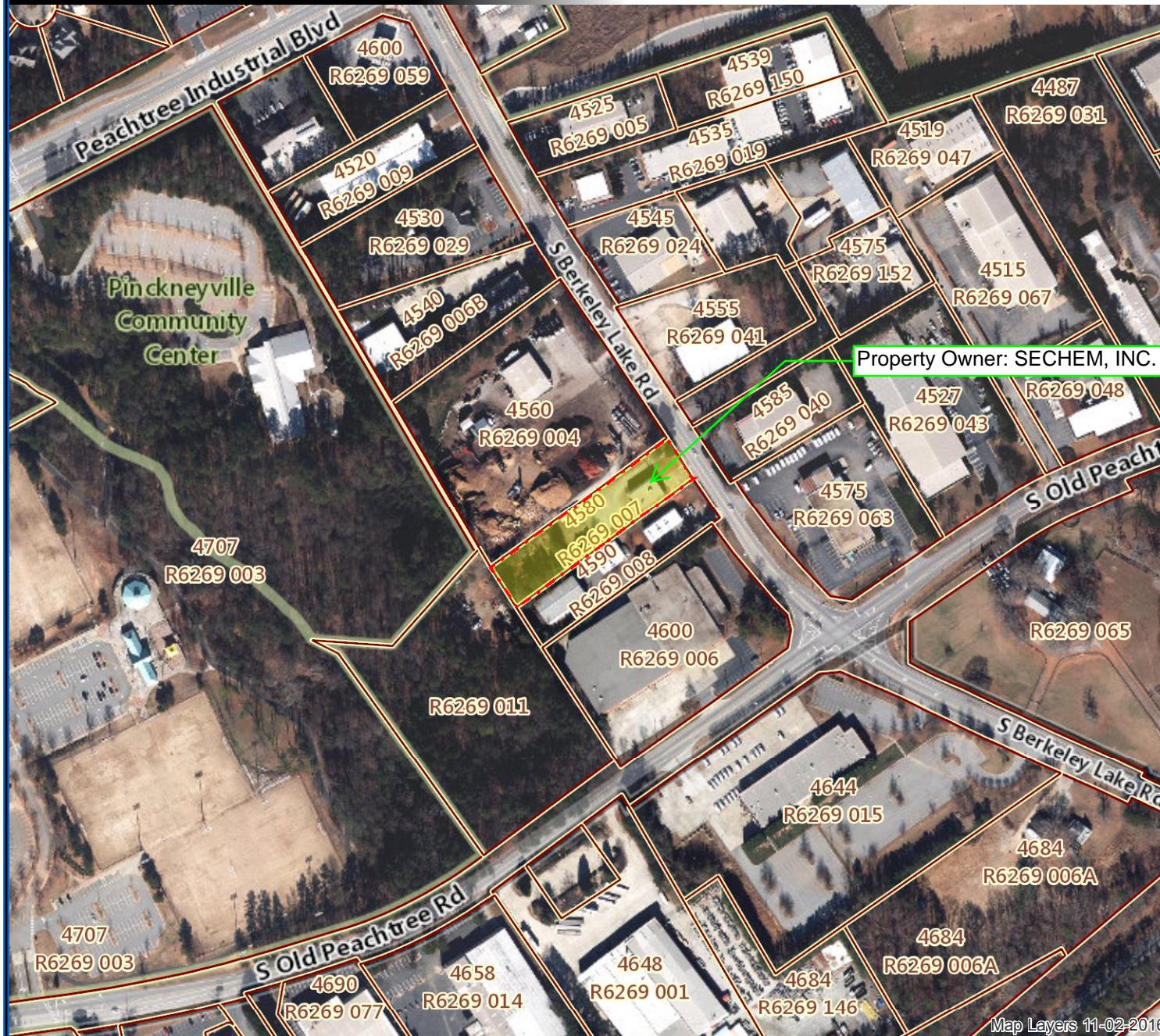
**APPENDIX C
TAX MAP**



#

0 165 330 660 ft

- Property Parcels
- County Boundary



11/28/2016

N



This map is a graphical representation of data obtained from aerial photography, recorded deeds, plats, engineering drawings and other public records and data. Gwinnett County does not warrant the accuracy or currency of the data it has provided and does not guarantee the suitability of the data for any purpose, expressed or implied. ALL DATA IS PROVIDED AS IS, WITH ALL FAULTS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. This map is the proprietary product of Gwinnett County and in no event will Gwinnett County be liable for damages, including any loss of profits, lost savings, or other incidental or consequential damages arising out of the use of or inability to use this map.

Map Layers 11-02-2016

APPENDIX D
HISTORICAL SOIL AND SEDIMENT DATA

HISTORICAL DATA AND SAMPLING LOCATIONS 1995 – 2002

**(CSR PREPARED BY DRAPER ADEN ASSOCIATES, SEPTEMBER 2000 &
CSR ADDENDUM PREPARED BY DRAPER ADEN ASSOCITES, APRIL 2002)**

APPENDIX D
HISTORICAL SOIL ANALYTICAL DATA

SECHEM, INC.
Norcross, Gwinnett County, Georgia
HSI Site Number 10515

Constituent (mg/kg)		1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trichlorobenzene	1,3,5-Trimethylbenzene	1,2-Dichlorobenzene	1,2-Dichloroethane (total)	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	4-Methyl-2-pentanone	Acetone	Benzene	Carbon disulfide	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	Methylene chloride	Naphthalene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes (total)	Total Petroleum Hydrocarbons
Youngblood Farms LLC Property																														
2-1*	5/26/1995	0.02	< 0.005	< 0.005	< 0.005	--	--	--	< 0.005	< 0.005	--	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	--	0.022	0.008	--	0.003	< 0.005	< 0.005	< 0.010		
3-1*	5/26/1995	100	< 5	< 5	< 5	--	--	--	< 5	7	--	--	< 5	< 5	< 5	< 5	< 5	< 5	--	9.5	--	< 5	300	37	--	26	< 5	63	3.59	
3-2*	5/26/1995	73	< 5	< 5	< 5	--	--	--	< 5	< 5	--	--	< 5	< 5	< 5	< 5	< 5	< 5	--	7.8	--	< 5	170	24	--	8	< 5	52	1.37	
5-1*	5/26/1995	0.01	< 0.005	< 0.005	< 0.005	--	--	--	< 0.005	< 0.005	--	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	--	0.024	0.005	--	< 0.005	< 0.005	< 0.005	0.436		
6-3*	5/26/1995	< 5	< 5	< 5	< 5	--	--	--	< 5	< 5	--	--	< 5	< 5	< 5	< 5	< 5	< 5	--	< 5	--	25	5.9	--	< 5	< 5	< 5	< 0.010		
7-3*	5/26/1995	< 0.5	< 0.5	< 0.5	< 0.5	--	--	--	< 0.5	0.28	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	--	< 0.50	--	< 0.5	--	1.2	1	--	2.9	< 0.5	1.66	0.135
YG-1 4-5	7/22/2000	0.054	< 0.0049	0.093	0.034	< 0.0049	--	0.065	< 0.0049	0.150	0.039	--	--	< 0.0097	< 0.0097	< 0.097	< 0.0049	< 0.0049	< 0.0049	--	0.810	< 0.0049	0.160	< 0.0049	--	0.130	0.025	0.006	--	
YG-2 11-12	7/22/2000	< 0.0048	< 0.0048	< 0.0048	< 0.0048	--	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	--	--	< 0.0096	< 0.0096	< 0.096	< 0.0048	< 0.0048	< 0.0048	--	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	--		
YG-3 1-2	7/22/2000	< 0.0049	< 0.0049	< 0.0049	< 0.0049	--	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	--	--	< 0.0098	< 0.0098	< 0.098	< 0.0049	< 0.0049	< 0.0049	--	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	--		
YG-4 19-20	7/22/2000	< 0.0049	< 0.0049	< 0.0049	< 0.0049	--	< 0.0049	0.010	0.052	< 0.0049	--	--	< 0.0098	< 0.0098	< 0.098	< 0.0049	< 0.0049	< 0.0049	--	< 0.049	< 0.0049	0.006	< 0.0049	--	0.013	< 0.0049	< 0.0049	--		
YG-5 23-24	7/22/2000	< 0.0047	< 0.0047	< 0.0047	< 0.0047	--	< 0.0047	< 0.0047	< 0.0047	< 0.0047	--	--	< 0.0095	< 0.0095	< 0.095	< 0.0047	< 0.0047	< 0.0047	--	< 0.047	< 0.0047	0.005	< 0.0047	--	0.10	< 0.0047	< 0.0047	--		
YG-6 0-1	9/12/2000	< 0.0049	< 0.0049	< 0.0049	< 0.0049	--	< 0.0049	< 0.0049	< 0.0049	< 0.0049	--	--	< 0.0097	< 0.0097	< 0.097	< 0.0049	< 0.0049	< 0.0049	--	< 0.049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	--			
YG-7 0-1	9/12/2000	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	< 0.005	< 0.005	< 0.005	--	--	< 0.0100	< 0.0100	< 0.100	< 0.005	< 0.005	< 0.005	--	< 0.050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--			
YG-8 0-1	9/12/2000	< 0.0048	< 0.0048	< 0.0048	< 0.0048	--	< 0.0048	< 0.0048	< 0.0048	< 0.0048	--	--	< 0.0095	< 0.0095	< 0.095	< 0.0048	< 0.0048	< 0.0048	--	< 0.048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	--			
YG-9 1-2	9/12/2000	< 0.0049	< 0.0049	< 0.0049	< 0.0049	--	< 0.0049	< 0.0049	< 0.0049	< 0.0049	--	--	< 0.0098	< 0.0098	< 0.098	< 0.0049	< 0.0049	< 0.0049	--	< 0.049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	--			
YG-10 4-5	9/12/2000	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	< 0.005	< 0.005	< 0.005	--	--	< 0.0099	< 0.0099	< 0.099	< 0.005	< 0.005	< 0.005	--	< 0.050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--			
YG-11 0-1	9/12/2000	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	< 0.005	< 0.005	< 0.005	--	--	< 0.0100	< 0.0100	< 0.100	< 0.005	< 0.005	< 0.005	--	< 0.050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--			
YG-12 0-1	9/12/2000	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	< 0.005	< 0.005	< 0.005	--	--	< 0.0100	< 0.0100	< 0.100	< 0.005	< 0.005	< 0.005	--	< 0.050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--			
YMW-15	7/24/2000	< 0.0048	< 0.0048	0.010	< 0.0048	< 0.0048	--	0.015	< 0.0048	0.087	< 0.0048	--	--	< 0.0095	< 0.0095	< 0.095	< 0.0048	< 0.0048	< 0.0048	--	0.085	< 0.0048	0.015	< 0.0048	0.022	< 0.0048	< 0.0048	--		
YMW-16	7/24/2000	< 0.0045	< 0.0045	0.0052	< 0.0045	--	0.0052	< 0.0045	0.044	< 0.0045	--	--	< 0.0091	< 0.00																

APPENDIX D
HISTORICAL STREAM SEDIMENT ANALYTICAL DATA

SECHEM, INC.
 Norcross, Gwinnett County, Georgia
 HSI Site Number 10515

Constituent (mg/kg)		1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,3-Dichlorobenzene	2-Butanone	4-Methyl-2-pentanone	Acetone	Benzene	Ethylbenzene	Methylene chloride	Naphthalene	Tetrachloroethene	Toluene	Trichloroethene	Vinyl chloride	Xylenes (total)
SW-1	7/20/2000	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	0.380	< 0.0048	< 0.0096	< 0.0096	< 0.0096	< 0.0048	< 0.0048	< 0.048	< 0.0048	1.800	< 0.0048	0.570	0.009	< 0.0048
SW-2	7/20/2000	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0095	< 0.0095	0.830	< 0.0047	< 0.0047	< 0.047	< 0.0047	0.012	< 0.0047	< 0.0047	< 0.0047	< 0.0047
SW-4	7/20/2000	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0095	< 0.0095	0.340	< 0.0047	< 0.0047	< 0.047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047
SW-6	7/20/2000	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0096	< 0.0096	< 0.0096	< 0.0048	< 0.0048	< 0.048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048
SW-10	7/20/2000	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0097	< 0.0097	< 0.0097	< 0.0097	< 0.0049	< 0.049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049
SW-20	7/20/2000	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0097	< 0.0097	0.110	< 0.0048	< 0.0048	< 0.048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048

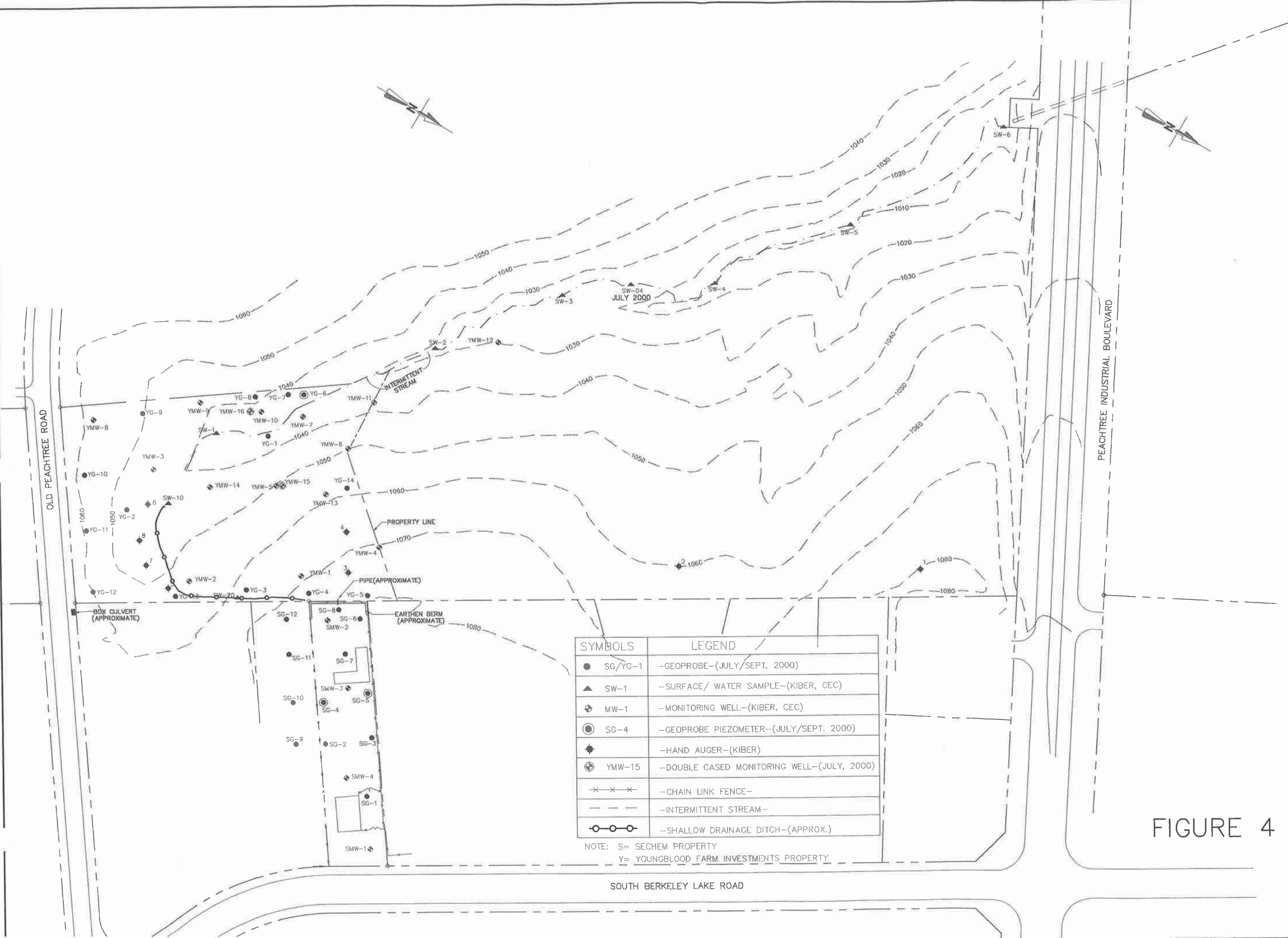
Notes

mg/kg - milligrams per kilogram

Bold - Concentration above laboratory reporting values

Created By: KAH 11/3/2016

Checked By: DME 11/18/2016



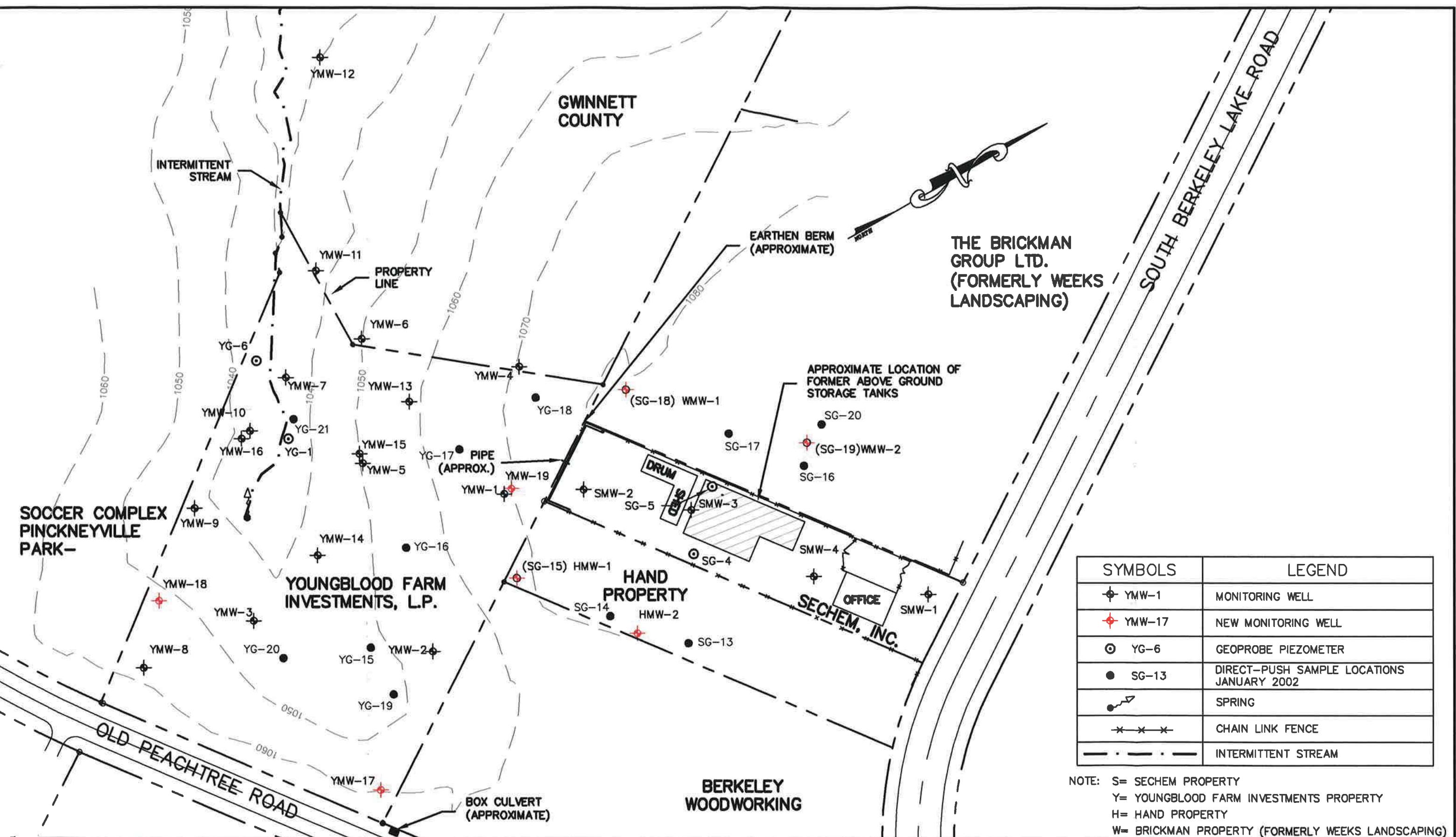
Draper Aden Associates
Engineering • Surveying • Environmental Services

Raleigh-Durham, NC
2828 Battleground Road, Suite 106
Raleigh, NC 27604
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SUBSURFACE INVESTIGATION LOCATION MAP-JULY & SEPT., 2000
COMPLIANCE STATUS REPORT-SECHEM, INC.
NORCROSS, GEORGIA

REVISIONS

DESIGNED BY: SGW
DRAWN BY: BMF
CHECKED BY: SGW
SCALE: 1" = 150'
DATE: 9/9/00
PROJECT NUMBER: R00463.01



HISTORICAL DATA AND SAMPLING LOCATIONS 2013

**(PHASE II CORRECTIVE ACTION PLAN ADDENDUM REPORT,
GOLDER ASSOCIATES INC., JUNE 2013)**

Table 3
Summary of Analytical Data - Subsurface Soil Borings
Phase II: Corrective Action Plan Addendum

Analyte	Unit	Type 1 and 3 All Soil RRS (ug/kg)	SB-1 (19.5ft bgs)	SB-2 (8.5 ft bgs)	SB-3 (19ft bgs)	SB-4 (20 ft bgs)	SB-5 (5.5 ft bgs)	SB-6 (20ft bgs)	SB-7 (19.5ft bgs)	SB-8 (19.5 ft bgs)	SB-9 (12.5 ft bgs)
CAP Addendum Constituents											
1,1,1-Trichloroethane	ug/kg	20000	<5.7	<49000	<370	<6.2	<900	<540	<470	<6.5	<6.1
1,1,2-Trichloroethane	ug/kg	500	<5.7	<49000	<370	<6.2	<900	<540	<470	<6.5	<6.1
1,1-Dichloroethane	ug/kg	400000	<5.7	<49000	<370	<6.2	<900	<540	<470	<6.5	<6.1
1,1-Dichloroethene	ug/kg	700	<5.7	<49000	<370	<6.2	<900	<540	<470	<6.5	<6.1
1,2-Dichlorobenzene	ug/kg	60000	<5.7	270000	<370	<6.2	2000	<540	760	43	30
1,2-Dichloroethane	ug/kg	500	97	<49000	<370	<6.2	<900	<540	<470	8.2	<6.1
1,2-Dichloroethene (total)	ug/kg	10000	<11	<98000	<740	<12	<1800	<1100	<940	59	<12
2-Butanone	ug/kg	200000	320	<240000	<1900	<31	<4500	19000	<2300	<33	<31
4-Methyl-2-pentanone	ug/kg	200000	<29	<240000	<1900	<31	<4500	<2700	<2300	<33	<31
Acetone	ug/kg	400000	730	<490000	<3700	<62	<9000	<5400	<4700	<65	<61
Benzene	ug/kg	500	<5.7	<49000	<370	<6.2	<900	<540	<470	<6.5	<6.1
Chlorobenzene	ug/kg	10000	<5.7	<49000	<370	<6.2	<900	<540	<470	<6.5	<6.1
Chloroform	ug/kg	10000	<5.7	<49000	<370	<6.2	<900	<540	<470	<6.5	<6.1
Ethylbenzene	ug/kg	70000	<5.7	<49000	<370	<6.2	<900	<540	<470	<6.5	<6.1
Methanol	ug/kg	2000000	<6900	<5800	11000	<7400	<6000	<7100	<7100	<7200	<7000
Methylene Chloride	ug/kg	500	<5.7	<49000	<370	<6.2	<900	<540	<470	52	<6.1
n-Butyl Acetate	ug/kg	500000	<6900	<5800	<6100	<7400	<6000	<7100	<7100	<7200	<7000
Tetrachloroethene	ug/kg	500	<5.7	<49000	<370	<6.2	<900	<540	<470	19	<6.1
Toluene	ug/kg	100000	<5.7	<49000	<370	<6.2	<900	<540	<470	<6.5	<6.1
Trichloroethene	ug/kg	500	<5.7	<49000	<370	<6.2	<900	<540	<470	25	<6.1
Vinyl Chloride	ug/kg	200	<5.7	<49000	<370	<6.2	<900	<540	<470	<6.5	<6.1
Total Xylenes	ug/kg	1000000	<11	<98000	<740	<12	<1800	<1100	<940	<13	19
Additional Constituents											
1,3-Dichlorobenzene	ug/kg	60000	<5.7	180000	<370	<6.2	<900	<540	<470	9	<6.1
1,4-Dichlorobenzene	ug/kg	7500	<5.7	110000	<370	<6.2	<900	<540	<470	8.2	<6.1
1,4-Dioxane	ug/kg	7000	86	<490000	4400	<62	<9000	<5400	<4700	<65	<61
Naphthalene	ug/kg	2000	<5.7	<49000	<370	<6.2	<900	<540	<470	7	10

Notes:

ug/kg - micrograms per kilogram

Bold values indicate analyte detections above laboratory reporting limits.

Highlighted values indicate analyte detections above Type 3 Soil RRS values from Table 1.

J¹ - Analyte values were replaced with field duplicate values.

Table 3
Summary of Analytical Data - Subsurface Soil Borings
Phase II: Corrective Action Plan Addendum

Analyte	Unit	Type 1 and 3 All Soil RRS (ug/kg)	SB-10 (19 ft bgs)	SB-11 (12.5ft bgs)	SB-12 (19.5ft bgs)	SB-13 (19.5ft bgs)	SB-14 (19.5ft bgs)	SB-15 (20ft bgs)	SB-16 (19ft bgs)	SB-17 (20ft bgs)
CAP Addendum Constituents										
1,1,1-Trichloroethane	ug/kg	20000	<6.1	<2600	<23000	<6.6	18	<6.6	<5	<500
1,1,2-Trichloroethane	ug/kg	500	<6.1	<2600	<23000	<6.6	<6.2	<6.6	<5	<500
1,1-Dichloroethane	ug/kg	400000	<6.1	<2600	<23000	<6.6	<6.2	<6.6	<5	<500
1,1-Dichloroethene	ug/kg	700	<6.1	<2600	<23000	<6.6	<6.2	<6.6	<5	<500
1,2-Dichlorobenzene	ug/kg	60000	23	55000	400000	42	74	<6.6	<5	<500
1,2-Dichloroethane	ug/kg	500	<6.1	<2600	<23000	<6.6	46	<6.6	<5	<500
1,2-Dichloroethene (total)	ug/kg	10000	<12	<5200	<45000	<13	13	13 J¹	<10	<1000
2-Butanone	ug/kg	200000	<30	<13000	<110000	<33	<31	<33	<25	<2500
4-Methyl-2-pentanone	ug/kg	200000	<30	<13000	<110000	<33	<31	<33	<25	<2500
Acetone	ug/kg	400000	<61	<26000	<230000	95	<62	<66	<50	<5000
Benzene	ug/kg	500	<6.1	<2600	<23000	<6.6	<6.2	<6.6	<5	<500
Chlorobenzene	ug/kg	10000	<6.1	<2600	<23000	<6.6	<6.2	<6.6	<5	<500
Chloroform	ug/kg	10000	<6.1	<2600	<23000	<6.6	<6.2	<6.6	<5	<500
Ethylbenzene	ug/kg	70000	<6.1	19000	81000	<6.6	<6.2	<6.6	<5	<500
Methanol	ug/kg	2000000	<6600	<7200	<6900	<7700	<7000	<7700	<6400	<7100
Methylene Chloride	ug/kg	500	<6.1	<2600	<23000	<6.6	200	<6.6	<5	2400
n-Butyl Acetate	ug/kg	500000	<6600	<7200	21000	<7700	<7000	<7700	<6400	<7100
Tetrachloroethene	ug/kg	500	<6.1	56000	320000	<6.6	38	<6.6	<5	<500
Toluene	ug/kg	100000	<6.1	37000	620000	<6.6	<6.2	<6.6	<5	<500
Trichloroethene	ug/kg	500	<6.1	<2600	42000	<6.6	64	<6.6	<5	<500
Vinyl Chloride	ug/kg	200	<6.1	<2600	<23000	<6.6	<6.2	<6.6	<5	<500
Total Xylenes	ug/kg	1000000	<12	110000	430000	<13	<12	<13	<10	<1000
Additional Constituents										
1,3-Dichlorobenzene	ug/kg	60000	<6.1	34000	<23000	<6.6	11	<6.6	<5	<500
1,4-Dichlorobenzene	ug/kg	7500	<6.1	22000	44000	<6.6	7	<6.6	<5	<500
1,4-Dioxane	ug/kg	7000	880	<26000	<230000	<66	<62	<66	<50	<5000
Naphthalene	ug/kg	2000	<6.1	13000	32000	<6.6	<6.2	<6.6	<5	<500

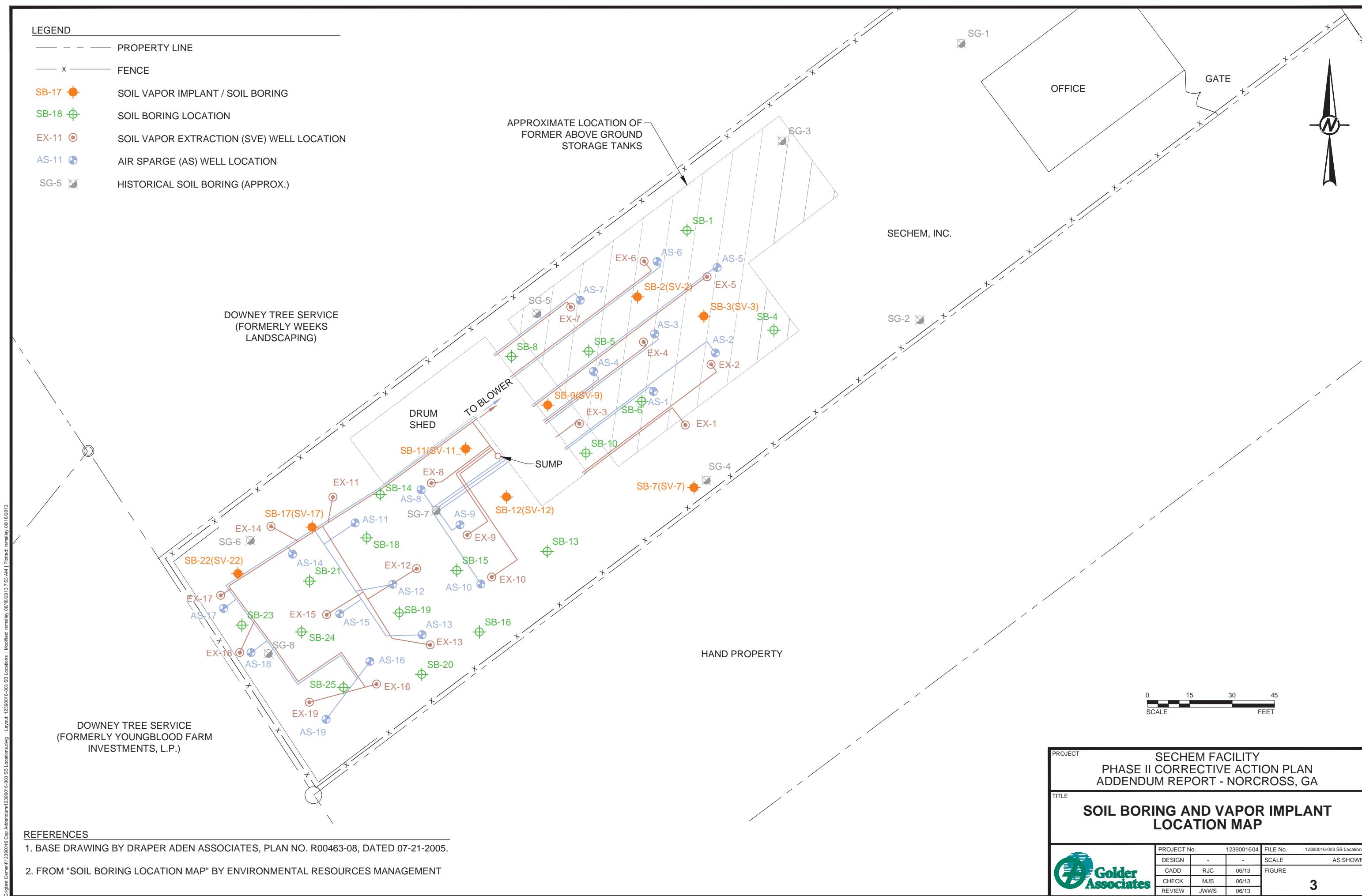
Notes:

ug/kg - micrograms per kilogram

Bold values indicate analyte detections above laboratory reporting limits.

Highlighted values indicate analyte detections above Type 3 Soil RRS values from Table 1.

J¹ - Analyte values were replaced with field duplicate values.



APPENDIX E
HISTORICAL GROUNDWATER DATA

APPENDIX E
HISTORICAL GROUNDWATER ANALYTICAL DATA

SECHEM, INC.
Norcross, Gwinnett County, Georgia
HSI Site Number 10515

		Constituent (mg/L)	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	2-Butanone	4-Methyl-2-pentanone	Acetone	Benzene	Carbon disulfide	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Dichlormethane	Ethylbenzene	Methanol	Naphthalene	n-Butyl acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes (total)
HMW-1	7/13/2006	< 0.0017	< 0.0017	< 0.0017	0.0086	< 0.0017	< 0.0017	< 0.0033	< 0.0017	< 0.0017	< 0.33	< 0.017	< 0.017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 1	< 0.0017	< 5	0.04	< 0.0017	--	0.013	< 0.0017	< 0.0033		
	3/13/2008	< 0.002	< 0.002	< 0.002	0.0093	< 0.002	< 0.002	< 0.004	< 0.002	< 0.002	< 0.1	< 0.02	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 1	< 0.002	< 5	0.048	< 0.002	--	0.015	< 0.002	< 0.004		
	9/30/2008	< 0.001	< 0.001	< 0.001	0.0083	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.001	< 5	0.021	< 0.001	--	0.013	< 0.001	< 0.002		
	3/24/2009	< 0.001	< 0.001	< 0.001	0.0014	< 0.001	< 0.001	0.0052	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.001	< 5	0.0066	< 0.001	--	0.0016	< 0.001	< 0.002		
	5/25/2010	0.0013	< 0.001	< 0.001	0.0078	< 0.001	< 0.001	0.0052	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.001	< 5	0.047	< 0.001	--	0.014	< 0.001	< 0.002		
	7/18/2011	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	1.4	< 0.002	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 1	< 0.005	< 5	0.008	< 0.001	--	0.002	< 0.001	< 0.002		
	6/28/2012	< 0.001	< 0.001	< 0.001	0.0029	< 0.001	0.0038	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 5	0.008	< 0.001	< 0.001	0.0038	< 0.001	< 0.002				
	6/13/2013	0.0038	< 0.001	< 0.001	0.0029	< 0.001	0.0038	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 5	0.008	< 0.001	< 0.001	0.0038	< 0.001	< 0.002				
	5/29/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			
	5/29/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			
SMW-1	7/13/2006	< 0.001	< 0.001	0.0032	0.0043	< 0.001	0.007	0.023	< 0.001	< 0.001	< 0.2	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.001	< 5	0.0088	< 0.001	--	0.031	< 0.001	< 0.002		
	3/13/2008	< 0.001	< 0.001	0.0026	0.003	< 0.001	0.0055	0.019	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.001	< 5	0.0067	< 0.001	--	0.023	< 0.001	< 0.002		
	9/30/2008	< 0.001	< 0.001	0.0036	0.0044	< 0.001	0.0083	0.026	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.001	< 5	0.0078	< 0.001	--	0.032	< 0.001	< 0.002		
	3/24/2009	< 0.001	< 0.001	0.0042	0.0052	< 0.001	0.0085	0.03	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.001	< 5	0.012	< 0.001	--	0.039	< 0.001	< 0.002		
	5/25/2010	< 0.001	< 0.001	0.003	0.003	< 0.001	0.0042	0.017	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.001	< 5	0.013	< 0.001	--	0.028	< 0.001	< 0.002		
	7/18/2011	< 0.001	< 0.001	0.0018	0.0013	< 0.001	0.0018	0.012	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 1	< 0.005	< 5	0.0079	< 0.001	--	0.013	< 0.001	< 0.002		
	6/28/2012	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.004	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 1	< 0.005	< 5	0.0047	< 0.001	--	0.0055	< 0.001	< 0.002		
	6/13/2013	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0017	< 0.002	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 1	< 0.005	< 5	0.0012	< 0.001	< 0.001	0.0018	< 0.001	< 0.002		
	5/28/2014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0016	< 0.001	< 0.001	< 0.02	< 0.001	< 0.001	< 0.025	< 0.001	< 0.001	< 0.001	&														

APPENDIX E
HISTORICAL GROUNDWATER ANALYTICAL DATA

SECHEM, INC.
Norcross, Gwinnett County, Georgia
HSI Site Number 10515

		Constituent (mg/L)																												
		1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	2-Butanone	4-Methyl-2-pentanone	Acetone	Benzene	Carbon disulfide	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Dichloromethane	Ethylbenzene	Methanol	Naphthalene	n-Butyl acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes (total)
SRW-1	7/14/2006	0.02	< 0.02	< 0.02	0.08	< 0.02	0.14	0.07	< 0.02	< 0.02	< 4	< 0.2	< 0.2	< 0.2	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 1	< 0.02	< 5	0.33	< 0.02	0.49	< 0.02	< 0.04			
	3/13/2008	0.017	< 0.017	< 0.017	0.088	< 0.017	0.13	0.071	< 0.017	< 0.017	< 0.83	< 0.17	< 0.17	< 0.17	< 0.017	< 0.017	< 0.017	< 0.017	< 0.017	< 1	< 0.017	< 5	0.39	< 0.017	--	0.45	< 0.017	< 0.033		
	6/26/2008	0.018	< 0.0067	0.016	0.048 J	< 0.0067	0.16	0.078	< 0.0067	< 0.0067	< 0.33	< 0.067	< 0.067	< 0.067	< 0.0067	< 0.0067	< 0.0067	< 0.0067	< 0.0067	< 1	< 0.0067	< 5	0.4	< 0.0067	--	0.52	< 0.0067	< 0.013		
	3/24/2009	< 0.012	< 0.012	0.014	0.062	< 0.012	0.11	0.085	< 0.012	< 0.012	< 0.62	< 0.12	< 0.12	< 0.12	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 1	< 0.012	< 5	0.3	< 0.012	--	0.41	< 0.012	< 0.025		
	5/25/2010	0.0094	< 0.005	0.015	0.037	< 0.005	0.14	0.09	< 0.005	< 0.005	< 0.25	< 0.05	< 0.05	< 0.05	< 0.011	< 0.005	< 0.005	< 0.005	< 0.005	1 U	< 0.005	< 5	0.27	< 0.005	--	0.38	< 0.005	< 0.01		
	7/18/2011	0.0048	0.0015	0.024	0.067	< 0.001	0.099	0.15	< 0.001	< 0.001	< 0.05	< 0.01	< 0.025	< 0.001	--	< 0.001	0.0034	< 0.005	< 0.005	< 0.001	< 1	< 0.005	< 5	0.45	< 0.001	--	0.46	< 0.001	< 0.002	
	6/26/2012	0.0071	< 0.005	0.025	0.092	< 0.005	0.18	0.16	< 0.005	< 0.005	< 0.25	< 0.05	< 0.05	< 0.13	< 0.05	--	< 0.005	< 0.005	< 0.025	< 5	< 0.025	< 5	0.49	< 0.005	--	0.52	< 0.005	< 0.01		
	6/13/2013	0.024	< 0.005	0.027	0.088	< 0.005	0.22	0.19	< 0.005	< 0.005	< 0.25	< 0.05	< 0.05	< 0.05	< 0.01	< 0.005	< 0.005	0.19	< 0.025	< 0.005	< 5	0.48	< 0.005	< 0.005	0.52	< 0.005	< 0.01			
	5/27/2014	< 0.005	< 0.005	0.032	0.099	< 0.005	0.2	0.2	< 0.005	< 0.005	< 0.25	< 0.05	< 0.05	< 0.13	< 0.05	< 0.005	< 0.005	0.2	< 0.025	< 0.005	< 5	0.45	< 0.005	< 0.005	0.46	< 0.005	< 0.01			
	5/27/2015	< 0.002	< 0.002	0.021	0.066	< 0.002	0.11	0.15	< 0.002	< 0.002	< 0.2	< 0.02	< 0.02	< 0.02	< 0.004	< 0.002	< 0.002	0.022	0.15	< 0.01	< 0.002	< 5	0.28	< 0.002	< 0.002	0.26	< 0.002	< 0.002		
	5/10/2016	< 0.002	< 0.002	0.025	0.064	< 0.002	0.11	0.17	< 0.002	< 0.002	< 0.2	< 0.02	< 0.02	< 0.02	< 0.004	< 0.002	< 0.002	0.026	0.17	< 0.01	< 0.002	< 5	0.28	< 0.002	< 0.002	0.23	< 0.002	< 0.002		
WMW-1	7/13/2006	< 0.001	< 0.001	< 0.001	< 0.001	0.0023	0.0065	< 0.001	< 0.001	< 0.2	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.0012	--	< 0.001	< 0.001	< 1	< 0.001	< 5	0.011	< 0.001	--	0.021	< 0.001	< 0.002	
	3/12/2008	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.25	0.21	< 0.05	< 0.077	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 1	< 0.005	< 5	< 0.005	< 0.005	--	< 0.005	< 0.01	< 0.005	< 0.01	
	9/30/2008	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005	< 0.25	< 0.05	< 0.05	< 0.05	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 1	< 0.005	< 5	< 0.005	< 0.005	--	< 0.005	< 0.01	< 0.005	< 0.01	
	3/24/2009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.015	0.015	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.001	< 5	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.002		
	5/25/2010	< 0.001	< 0.001	< 0.001	< 0.001	0.0013	0.0052	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.001	< 5	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.002		
	7/18/2011	< 0.001	< 0.001	< 0.001	< 0.001	0.0016	0.0023	< 0.001	< 0.001	< 0.05	< 0.01	< 0.025	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.005	< 5	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.002		
	6/26/2012	< 0.001	< 0.001	< 0.001	< 0.001	0.0013	< 0.002	< 0.001	< 0.001	< 0.05	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 1	< 0.005	< 5	< 0.005	< 0.0						

APPENDIX E

HISTORICAL GROUNDWATER ANALYTICAL DATA

SECHEM, INC.
Norcross, Gwinnett County, Georgia
HSI Site Number 10515

	Constituent (mg/L)	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	4-Methyl-1,2-pentanone	Acetone	Benzene	Carbon disulfide	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Dichloromethane	Ethylbenzene	Methanol	Naphthalene	n-Butyl acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes (total)	
YMW-5	7/12/2006	< 0.1	< 0.1	< 0.1 J	0.42 J	0.16	< 0.1	2.1	< 0.1	< 0.1	< 20	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	-	< 0.1	< 0.1	< 1	< 0.1	< 5	1.3 J	< 0.1	--	0.72	0.17	< 0.2	
	3/12/2008	< 0.17	< 0.17	0.31	0.67	0.59	< 0.17	4.6	< 0.17	< 0.17	< 8.3	< 1.7	< 1.7	< 0.17	< 0.17	< 0.17	< 0.17	-	< 0.17	< 0.17	< 1	< 0.17	< 5	1.3	< 0.17	--	1.5	0.3	< 0.33	
	12/16/2008	< 0.2	< 0.2	0.25	0.6	0.88	< 0.2	5.8	< 0.2	< 0.2	< 10	< 2	< 2	< 0.2	< 0.2	< 0.2	< 0.2	--	< 0.2	< 0.2	< 1	< 0.2	< 5	0.78	< 0.2	--	0.84	0.77	< 0.4	
	3/25/2009	< 0.17	< 0.17	0.24	0.7	0.61	< 0.17	4.9	< 0.17	< 0.17	< 8.3	< 1.7	< 1.7	< 0.17	< 0.17	< 0.17	< 0.17	--	< 0.17	< 0.17	< 1	< 0.17	< 5	1.4	< 0.17	--	1.2	0.43	< 0.33	
	9/29/2009	< 0.2	< 0.2	0.33	0.59	1	< 0.2	5.6	< 0.2	< 0.2	< 10	< 2	< 2	< 0.2	< 0.2	< 0.2	< 0.2	--	< 0.2	< 0.2	< 1	< 0.2	< 5	1.1	< 0.2	--	0.84	2	< 0.4	
	5/26/2010	< 0.083	< 0.083	0.12	0.4	0.2	0.085	2.8	< 0.083	< 0.083	< 4.2	< 0.83	< 0.83	< 0.083	< 0.083	< 0.083	< 0.083	--	< 0.083	< 0.083	< 1	< 0.083	< 5	0.98	< 0.083	--	0.72	0.31	< 0.17	
	4/26/2011	< 0.05	< 0.05	0.12	0.54	0.067	0.11	3.5	< 0.05	< 0.05	< 2.5	< 0.5	< 0.5	< 1.3	< 0.05	< 0.05	< 0.05	--	< 0.25	< 0.05	< 1	< 0.25	< 5	0.66	< 0.05	--	0.75	0.083	< 0.1	
	7/20/2011	< 0.05	< 0.05	0.1	0.49	< 0.05	0.11	3.1	< 0.05	< 0.05	< 2.5	< 0.5	< 0.5	< 1.3	< 0.05	< 0.05	< 0.05	--	< 0.25	< 0.05	< 1	< 0.25	< 5	0.93	< 0.05	--	0.85	< 0.05	< 0.1	
	10/4/2011	< 0.05	< 0.05	0.1	0.47	< 0.05	0.12	2.9	< 0.05	< 0.05	< 2.5	< 0.5	< 0.5	< 1.3	< 0.05	< 0.05	< 0.05	--	< 0.25	< 0.05	< 1	< 0.25	< 5	1	< 0.05	--	0.91	< 0.05	< 0.1	
	12/14/2011	0.049	< 0.02	0.11	0.45	0.081	0.073	2.7	< 0.02	< 0.02	< 1	< 0.2	< 0.2	< 0.05	< 0.02	< 0.02	< 0.02	--	< 0.1	< 0.02	< 5	< 0.1	< 5	0.65	< 0.02	--	0.86	0.071	< 0.04	
	6/27/2012	< 0.05	< 0.05	0.2	0.67	0.85	0.16	5.3	0.11	0.15	< 2.5	< 0.5	< 0.5	< 1.3	< 0.05	< 0.05	< 0.05	--	< 0.25	< 0.05	< 5	< 0.25	< 5	1.4	< 0.05	--	1.1	0.39	< 0.1	
	6/12/2013	< 0.05	< 0.05	0.19	0.65	0.63	0.22	4.6	0.099	0.12	< 2.5	< 0.5	< 0.5	< 1.3	< 0.05	< 0.05	< 0.05	--	4.5	< 0.25	< 0.05	< 5	< 0.25	< 5	0.77	< 0.05	< 0.05	0.83	0.33	< 0.1
	5/28/2014	0.055	< 0.05	0.21	0.84	0.84	0.26	5.6	0.14	0.17	< 2.5	< 0.5	< 0.5	< 1.3	< 0.05	< 0.05	< 0.05	--	5.6	< 0.25	< 0.05	< 5	< 0.25	< 5	0.9	< 0.05	< 0.05	1.1	0.36	< 0.1
	5/28/2015	< 0.05	< 0.05	0.21	0.72	1.3	0.32	5.6	0.22	0.27	< 5	< 0.5	< 0.5	< 0.5	< 0.05	< 0.05	< 0.05	--	5.6	< 0.25	< 0.05	< 5	< 0.25	< 5	0.94	< 0.05	< 0.05	1	0.3	< 0.05
	5/13/2016	< 0.005	< 0.005	0.011	0.022	< 0.005	0.043	0.33	< 0.005	< 0.005	< 0.5	< 0.05	< 0.05	< 0.05	< 0.01	< 0.005	< 0.005	< 0.05	< 5	< 0.025	< 0.005	< 5	< 0.025	< 0.005	0.071	< 0.005	< 0.005	0.074	< 0.005	< 0.005
YMW-6	7/18/2011	< 0.001	< 0.001	0.0018	0.0044	< 0.001	0.004	0.021	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	--	< 0.005	< 0.001	1.2	< 0.005	< 5	0.016	< 0.001	--	0.1	< 0.001	< 0.002	
	6/28/2012	< 0.002	< 0.002	0.004	0.011	< 0.002	0.016	0.044	< 0.002	< 0.002	< 0.1	< 0.02	< 0.02	< 0.05	< 0.002	< 0.002	< 0.002	--	< 0.01	< 0.002	< 5	< 0.01	< 5	0.034	< 0.002	--	0.26	< 0.002	< 0.004	
	6/13/2013	< 0.001	< 0.001	0.0011	0.0027	< 0.001	0.0033	0.013	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	0.013	< 0.005	< 0.001	< 5	< 0.005	< 5	0.008	< 0.001	< 0.001	0.059	< 0.001	< 0.002	
	5/28/2014	< 0.001	< 0.001	0.0011	0.0011	< 0.001	0.0014	0.0054	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	0.0054	< 0.005	< 0.001	< 5	< 0.005	< 5	0.0031	< 0.001	< 0.001	0.022	< 0.001	< 0.002	
	5/29/2015	< 0.001	< 0.001	0.0014	0.0029	< 0.001	0.0045	0.014	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.014	< 0.005	< 0.001	< 5	< 0.005	< 5	0.0095	< 0.001	< 0.001	0.053	< 0.001	< 0.001	
YMW-7	5/11/2016	< 0.001	< 0.001	0.012	< 0.001	0.021	0.0062	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.01	< 0.001	< 0.002	< 0.001	< 0.001	0.0062	< 0.005	< 0.001	< 5	< 0.005	< 5	0.0043	< 0.001	< 0.001	0.023	< 0.001	< 0.001	
	7/12/2006	< 0.017	< 0.017	< 0.017	< 0.017	< 0.017	< 0.017	< 0.033	< 0.017	< 0.017	< 3.3	< 0.17	< 0.17	< 0.017	< 0.017	< 0.017	< 0.017	--	< 0.017	< 0.017	< 1	< 0.017	< 5	0.093	< 0.017	--	0.36	< 0.017	< 0.033	
	3/12/2008	< 0.015	< 0.015	< 0.015	0.052	< 0.015	< 0.015	0.081	< 0.015	< 0.015	< 0.77	< 0.15	< 0.15	< 0.015	< 0.015	< 0.015	< 0.015	--	< 0.015	< 0.015	< 1	< 0.015	< 5	0.11	< 0.015	--	0.47	< 0.015	< 0.031	
	12/15/2008	< 0.02	< 0.02	0.11	< 0.02	0.02	0.19	< 0.02	< 0.02	< 1	< 0.2	< 0.2	< 0.02	< 0.02	< 0.02	< 0.02	--	< 0.02	< 0.02	< 1	< 0.02	< 5	0.18	< 0.02	--	0.69	< 0.02	< 0.04		
	3/24/2009	< 0.014	< 0.014	0.033	< 0.014	0.015	0.065	< 0.014	< 0.014	< 0.71	< 0.14	< 0.14	< 0.014	< 0.014	< 0.014	< 0.014	--	< 0.014	< 0.014	< 1	< 0.014	< 5	0.1	< 0.014	--	0.54	< 0.014	< 0.029		
	9/29/2009	< 0.012	< 0.012	0.025	< 0.012	0.016	0.044	< 0.012	< 0.012	< 0.62	< 0.12	< 0.12	< 0.012	< 0.012	< 0.012	< 0.012	--	< 0.012	< 0.012	< 1	< 0.012	< 5	0.065	< 0.012	--	0.4	< 0.012	< 0.025		
	5/26/2010	< 0.0067	< 0.0067	0.0099	< 0.0067	0.0082	0.025	< 0.0067	< 0.0067	< 0.33	< 0.067	< 0.067	< 0.067	< 0.067	< 0.067	< 0.067	--	< 0.0067	< 0.0067	< 1	< 0.0067	< 5	0.036	< 0.0067	--	0.21	< 0.0067	< 0.013		
	7/19/2011	0.0036	< 0.001	0.0034	0.037	< 0.001	0.022	0.04																						

APPENDIX E
HISTORICAL GROUNDWATER ANALYTICAL DATA

SECHEM, INC.
Norcross, Gwinnett County, Georgia
HSI Site Number 10515

		Constituent (mg/L)	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	2-Butanone	4-Methyl-2-pentanone	Acetone	Benzene	Carbon disulfide	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Dichloromethane	Ethylbenzene	Methanol	Naphthalene	n-Butyl acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes (total)
YMW-11	7/19/2011	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.05	< 0.01	< 0.025	< 0.001	-	< 0.001	0.0021	--	< 0.005	< 0.001	< 1	< 0.005	< 5	0.0014	< 0.001	--	< 0.001	< 0.001	< 0.002		
	6/27/2012	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.05	< 0.01	< 0.025	< 0.001	-	< 0.001	0.0022	--	< 0.005	< 0.001	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002			
	5/28/2014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.05	< 0.01	< 0.025	< 0.001	< 0.002	< 0.001	0.0023	< 0.001	< 0.005	< 0.001	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002			
	5/28/2014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.05	< 0.01	< 0.025	< 0.001	< 0.002	< 0.001	0.0024	< 0.001	< 0.005	< 0.001	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002			
	5/29/2015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.001	< 0.002	< 0.001	0.0019	< 0.001	< 0.005	< 0.001	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			
	5/13/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.1	< 0.01	< 0.01	< 0.001	< 0.002	< 0.001	0.0017	< 0.001	< 0.005	< 0.001	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			
YMW-13	7/13/2006	< 0.17	< 0.17	< 0.17	0.48	< 0.17	< 0.17	< 0.33	< 0.17	< 0.17	< 33	< 1.7	< 1.7	< 0.5	< 0.05	< 0.05	< 0.05	--	0.27	< 0.05	< 1	< 0.05	< 5	0.87	< 0.05	--	1.8	< 0.05	< 0.1		
	3/12/2008	0.096	< 0.05	< 0.05	0.43	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 2.5	< 0.5	< 0.5	< 0.33	< 0.033	< 0.033	< 0.033	--	0.049	< 0.033	< 1	< 0.033	< 5	0.54	< 0.033	--	1.1	< 0.033	< 0.067		
	12/16/2008	0.049	< 0.033	< 0.033	0.28	< 0.033	< 0.033	< 0.067	< 0.033	< 0.033	< 1.7	< 0.33	< 0.33	< 0.33	< 0.033	< 0.033	< 0.033	--	< 0.033	< 0.033	< 1	< 0.033	< 5	0.65	< 0.033	--	1.2	< 0.033	< 0.067		
	9/29/2009	0.059	< 0.033	< 0.033	0.27	< 0.033	< 0.033	0.1	< 0.033	< 0.033	< 1.7	< 0.33	< 0.33	< 0.25	< 0.025	< 0.025	< 0.025	--	< 0.025	< 0.025	< 1	< 0.025	< 5	0.62	< 0.025	--	0.91	< 0.025	< 0.05		
	4/27/2011	0.061	< 0.005	0.0054	0.29	< 0.005	< 0.005	0.11	< 0.005	< 0.005	< 0.25	< 0.05	< 0.05	< 0.13	< 0.005	< 0.005	< 0.005	--	< 0.025	< 0.005	< 1	< 0.025	< 5	0.5	< 0.005	--	1.1	< 0.005	< 0.01		
	7/20/2011	0.045	< 0.01	< 0.01	0.22	< 0.01	0.016	0.061	< 0.01	< 0.01	< 0.5	< 0.1	< 0.1	< 0.25	< 0.01	--	< 0.01	< 0.01	--	< 0.05	< 0.01	2.8	< 0.05	< 5	0.32	< 0.01	--	0.76	< 0.01	< 0.02	
	10/5/2011	0.03	< 0.01	< 0.01	0.17	< 0.01	0.028	0.047	< 0.01	< 0.01	< 0.5	< 0.1	< 0.1	< 0.25	< 0.01	--	< 0.01	< 0.01	--	< 0.05	< 0.01	3.1	< 0.05	< 5	0.46	< 0.01	--	0.65	< 0.01	< 0.02	
	12/13/2011	0.03	< 0.01	< 0.01	0.15	< 0.01	0.027	0.039	< 0.01	< 0.01	< 0.5	< 0.1	< 0.1	< 0.25	< 0.01	--	< 0.01	< 0.01	--	< 0.05	< 0.01	< 5	< 0.05	< 5	0.33	< 0.01	--	0.62	< 0.01	< 0.02	
	6/28/2012	0.023	< 0.01	< 0.01	0.18	< 0.01	0.054	0.06	< 0.01	< 0.01	< 0.5	< 0.1	< 0.1	< 0.25	< 0.01	--	< 0.01	< 0.01	--	< 0.05	< 0.01	< 5	< 0.05	< 5	0.36	< 0.01	--	0.76	< 0.01	< 0.02	
	6/13/2013	0.023	< 0.01	< 0.01	0.21	< 0.01	0.022	0.14	< 0.01	< 0.01	< 0.5	< 0.1	< 0.1	< 0.25	< 0.01	--	< 0.02	< 0.01	< 0.14	< 0.05	< 0.01	< 5	< 0.05	< 5	0.2	< 0.01	< 0.02	0.66	< 0.01	< 0.02	
	5/28/2014	0.019	< 0.01	< 0.01	0.24	< 0.01	0.034	0.28	< 0.01	< 0.01	< 0.5	< 0.1	< 0.1	< 0.25	< 0.01	< 0.02	< 0.01	0.57	< 0.05	< 0.01	< 5	< 0.05	< 5	0.14	< 0.01	< 0.01	0.4	< 0.01	< 0.02		
	5/29/2015	0.019	< 0.01	< 0.01	0.32	< 0.01	0.066	0.57	< 0.01	< 0.01	< 1	< 0.1	< 0.1	< 0.1	< 0.01	< 0.02	< 0.01	0.62	< 0.05	< 0.01	< 5	< 0.05	< 5	0.12	< 0.01	< 0.01	0.28	< 0.01	< 0.01		
	5/11/2016	0.012	< 0.01	< 0.01	0.28	< 0.01	0.066	0.62	< 0.01	< 0.01	< 1	< 0.1	< 0.1	< 0.01	< 0.002	< 0.															

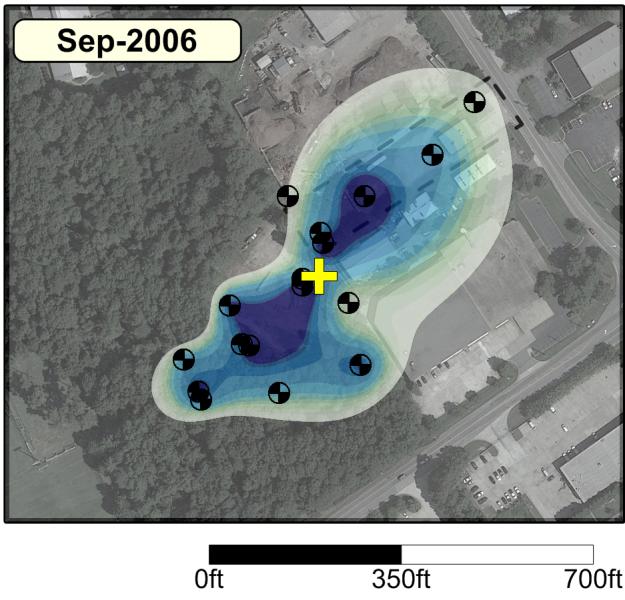
APPENDIX E
HISTORICAL GROUNDWATER ANALYTICAL DATA

SECHEM, INC.
Norcross, Gwinnett County, Georgia
HSI Site Number 10515

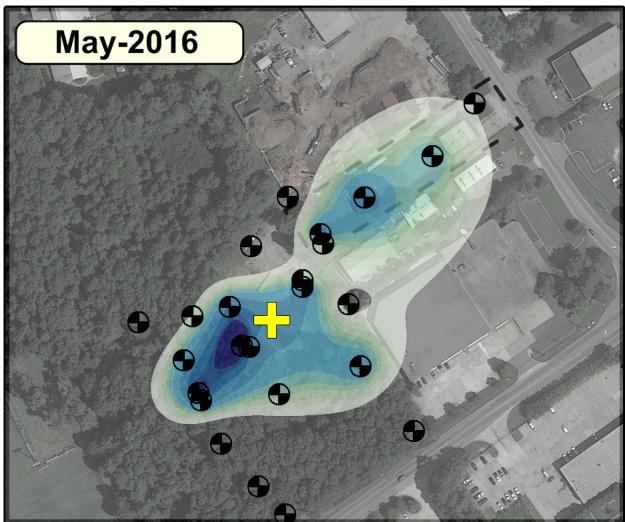
		Constituent (mg/L)																												
		1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	2-Butanone	4-Methyl-2-pentanone	Acetone	Benzene	Carbon disulfide	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Dichloromethane	Ethylbenzene	Methanol	Naphthalene	n-Butyl acetate	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes (total)
YMW-17	7/19/2011	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	--	< 0.001	< 0.001	< 0.005	< 1	< 0.005	< 5	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.002			
	6/27/2012	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	--	< 0.001	< 0.001	< 0.005	< 5	< 0.005	< 5	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.002			
	6/12/2013	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.002	< 0.001	< 0.001	< 0.005	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002			
	5/29/2014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.002	< 0.001	< 0.001	< 0.005	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002			
	5/28/2015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.1	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			
	5/12/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.1	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			
YMW-18	7/19/2011	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	--	< 0.001	< 0.001	< 0.005	< 1	< 0.005	< 5	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.002			
	6/27/2012	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	--	< 0.001	< 0.001	< 0.005	< 5	< 0.005	< 5	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.002			
	6/12/2013	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.002	< 0.001	< 0.001	< 0.005	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002			
	5/29/2014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	< 0.002	< 0.001	< 0.001	< 0.005	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002			
	5/28/2015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.1	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			
	5/13/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.1	< 0.01	< 0.01	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 5	< 0.005	< 5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001			
YMW-19	7/13/2006	< 0.0062	< 0.0062	< 0.0062	0.011	< 0.0062	0.018	0.028	< 0.0062	< 0.062	< 1.2	< 0.062	< 0.062	< 0.062	< 0.0062	< 0.0062	< 0.0062	--	< 0.0062	< 0.0062	< 1	< 0.0062	< 5	0.052	< 0.0062	--	0.16	< 0.0062	< 0.012	
	3/12/2008	< 0.01	< 0.01	< 0.01	0.014	< 0.01	0.02	0.041	< 0.01	< 0.5	< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 1	< 0.01	< 5	0.056	< 0.01	--	0.18	< 0.01	< 0.02		
	9/30/2008	< 0.0029	< 0.0029	0.0036	0.013	< 0.0029	0.022	0.033	< 0.0029	< 0.029	< 0.14	< 0.029	< 0.029	< 0.029	< 0.0029	< 0.0029	< 0.0029	--	< 0.0029	< 0.0029	< 1	< 0.0029	< 5	0.04	< 0.0029	--	0.15	< 0.0029	< 0.0057	
	3/24/2009	< 0.0091	< 0.0091	0.018	< 0.0091	0.03	0.074	< 0.0091	< 0.0091	< 0.45	< 0.091	< 0.091	< 0.091	< 0.091	< 0.091	< 0.091	< 0.091	--	< 0.091	< 0.091	< 1	< 0.091	< 5	0.089	< 0.091	--	0.3	< 0.091	< 0.018	
	5/25/2010	< 0.0025	< 0.0025	0.0051	0.017	< 0.0025	0.024	0.043	< 0.0025	< 0.0025	< 0.12	< 0.025	< 0.025	< 0.025	< 0.0025	< 0.0025	< 0.0025	--	< 0.0025	< 0.0025	1.8 U	< 0.0025	< 5	0.087	< 0.0025	--	0.19	< 0.0025	< 0.005	
	4/26/2011	< 0.002	< 0.002	0.0073	0.018	< 0.002	0.028	0.067	< 0.002	< 0.002	< 0.1	< 0.02	< 0.02	< 0.05	< 0.002	--	< 0.002	< 0.002	--	< 0.01	< 0.002	< 1	< 0.01	< 5	0.048	< 0.002	--	0.27	< 0.002	< 0.004
	7/20/																													

APPENDIX F
CHLOROETHENE AND CHLOROETHANE PLUME DIFFERENCE MAPS

Sep-2006

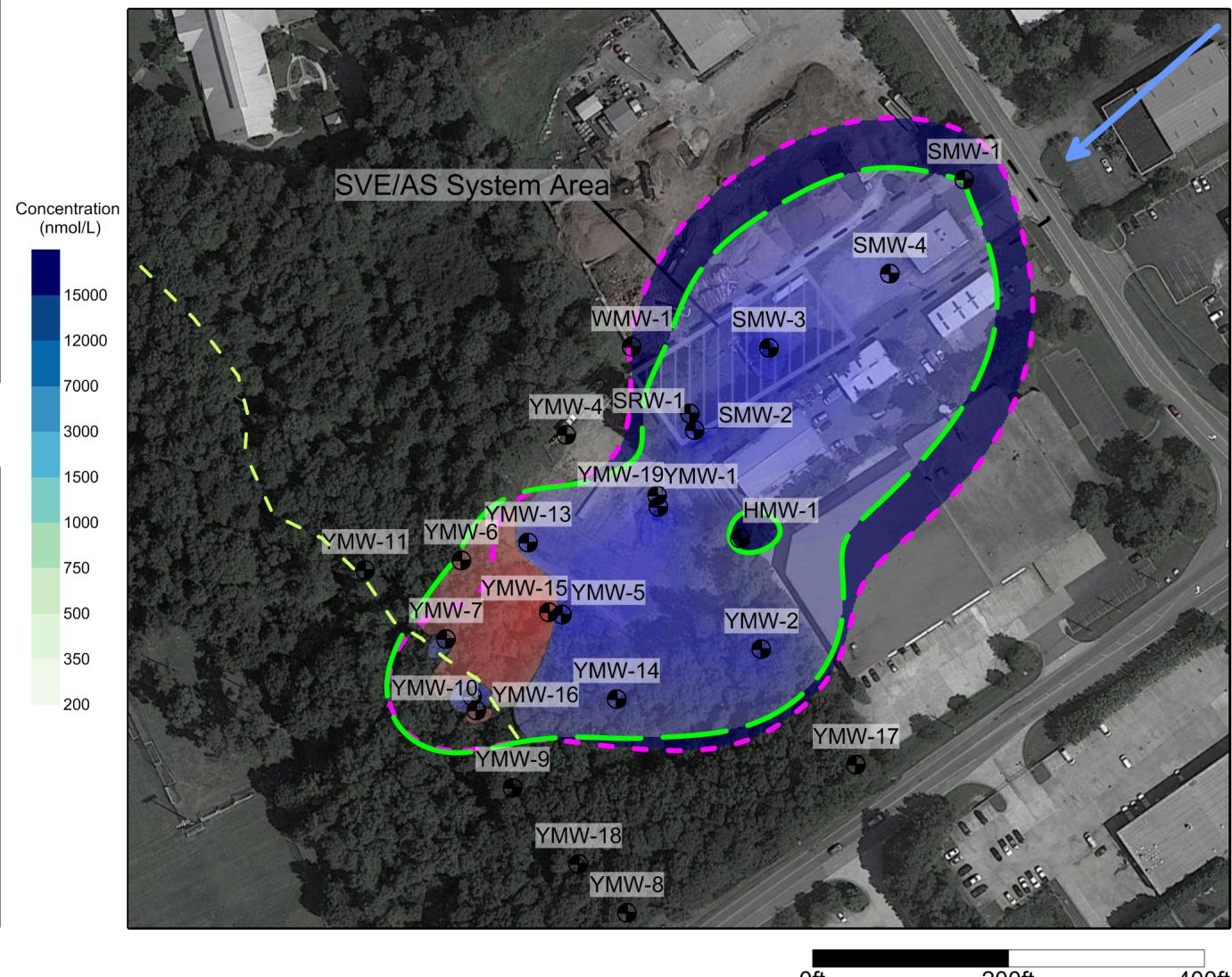


May-2016



Total Chloroethenes

Plume Differences Sep-2006 vs May-2016



LEGEND

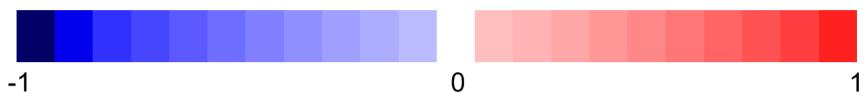


- MW-017 Monitoring Well
- Center of Mass
- General Groundwater Flow Direction
- *Source- Corrective Action Program 2015 Annual Report
- Approximate Property Boundary
- Intermittent Stream
- Sep-2006 Plume Boundary
- May-2016 Plume Boundary

Plume Characteristics

Area: 19% Decrease
Average Concentration: 63% Decrease
Mass Indicator: 70% Decrease
Mass Increase: 9.5 mole Increase
Mass Decrease: 98 mole Decrease

Plume Change Indicator



SECHEM, INC.
4850 South Berkeley Lake Road
Norcross, Georgia
HSI Site Number 10515

Project Number: 02.20160244.00

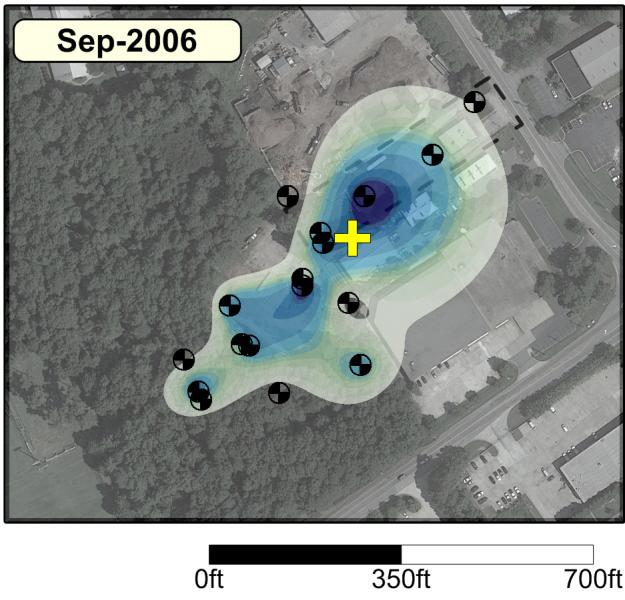


1880 West Oak Parkway, Bldg. 100 Suite 106
Marietta, Georgia 30062

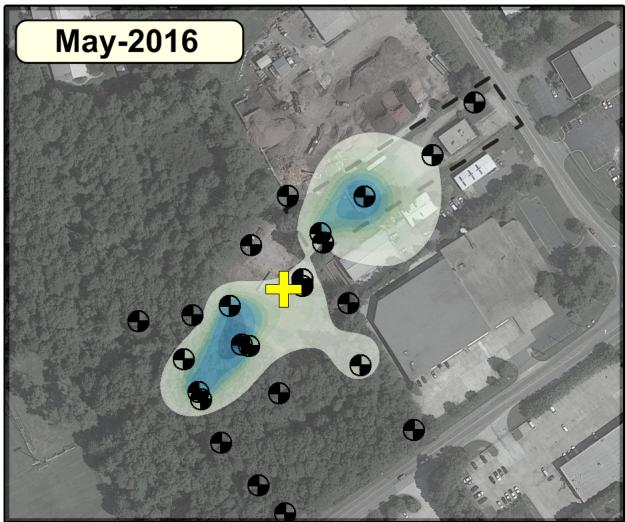
Total Chloroethenes
Plume Difference Map
Sept-2006 vs May-2016

Prepared by: JMB Checked by: _____
Figure: _____

Sep-2006

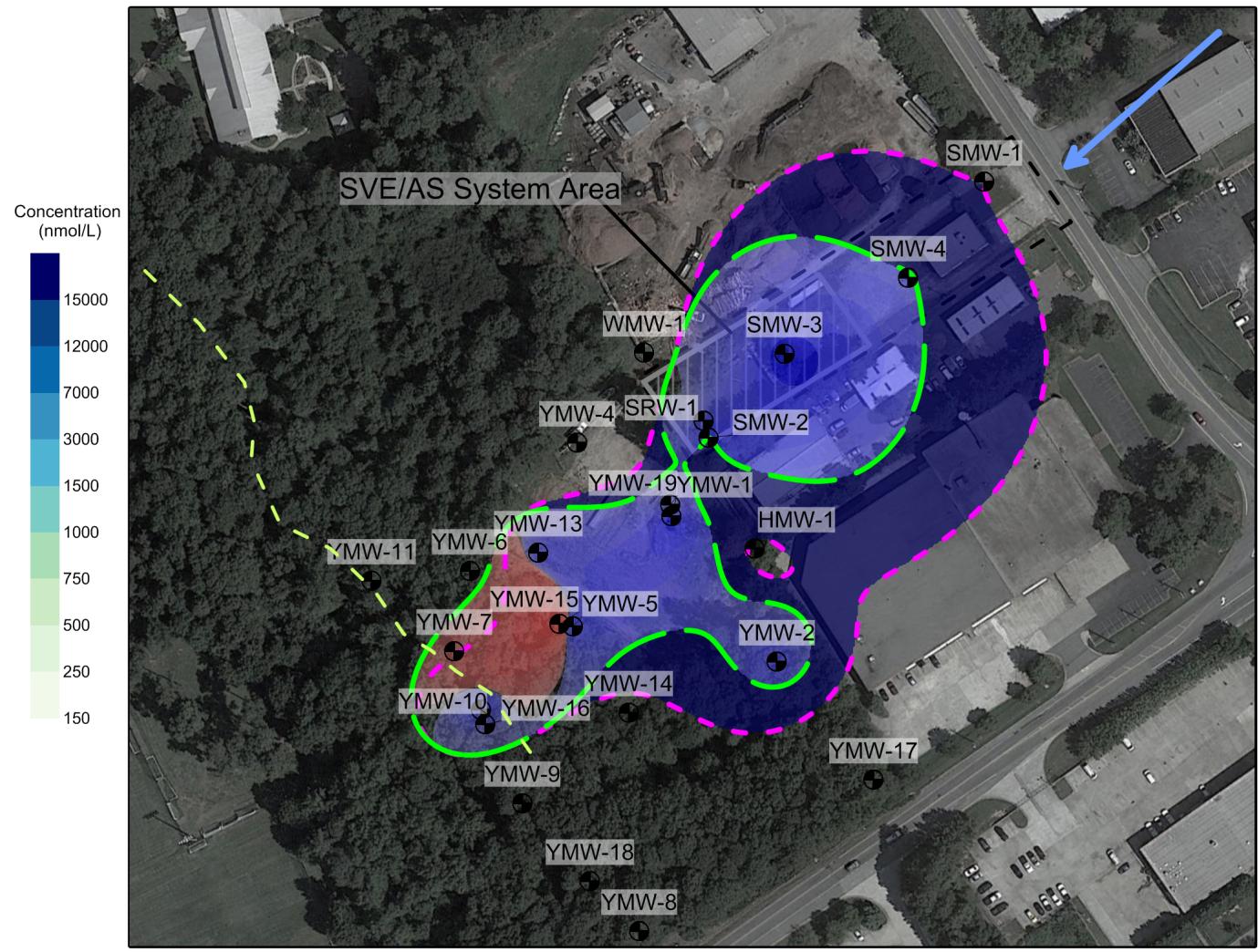


May-2016



Total Chloroethanes

Plume Differences Sep-2006 vs May-2016



LEGEND



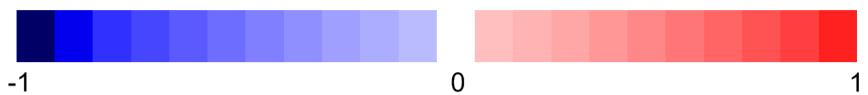
- Monitoring Well
- ⊕ Center of Mass
- General Groundwater Flow Direction
- - Approximate Property Boundary
- - Intermittent Stream
- - Sep-2006 Plume Boundary
- - May-2016 Plume Boundary

Plume Characteristics

Area: **47% Decrease**
Average Concentration: **69% Decrease**
Mass Indicator: **83% Decrease**
Mass Increase: **1.9 mole Increase**
Mass Decrease: **41 mole Decrease**

*Source- Corrective Action Program 2015 Annual Report

Plume Change Indicator



SECHEM, INC.
4850 South Berkeley Lake Road
Norcross, Georgia
HSI Site Number 10515

Project Number: 02.20160244.00

EARTHCON®

1880 West Oak Parkway, Bldg. 100 Suite 106
Marietta, Georgia 30062

Total Chloroethanes
Plume Difference Map
Sept-2006 vs May-2016

Prepared by: JMB Checked by: Figure:

APPENDIX G
HISTORICAL SURFACE WATER DATA

APPENDIX G
HISTORICAL SURFACE WATER ANALYTICAL DATA

Constituents (mg/L)		1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (total)	1,3-Dichlorobenzene	1,4-Dioxane	1,4-Dichlorobenzene	1,4-Dioxane	2-Butanone	4-Methyl-2-pentanone	Acetone	Benzene	Carbon disulfide	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Dichloromethane	Ethylbenzene	Methanol	Naphthalene	n-Butyl acetate	Toluene	Tetrachloroethylene	Trichloroethylene	Vinyl chloride	Xylenes (total)			
SW-1		7/14/2006 0.091	< 0.091	< 0.091	< 0.091	< 0.091	< 0.091	0.18	< 0.091	< 0.091	< 1.8	< 0.91	< 0.91	< 0.91	< 0.91	< 0.091	< 0.091	< 0.091	< 0.091	:	< 0.091	< 0.091	< 1	< 0.091	< 5	0.13	< 0.091	-	0.04	0.011	< 0.018		
		3/11/2008 0.32	< 0.091	< 0.091	0.093	< 0.091	< 0.091	2	< 0.091	< 0.091	< 4.5	< 0.91	< 0.91	< 0.91	< 0.91	< 0.091	< 0.091	< 0.091	< 0.091	--	< 0.091	< 0.091	< 1	< 0.091	< 5	2.5	0.42	--	1	< 0.091	< 0.18		
		12/15/2008 3.1	< 0.42	< 0.42	1.1	< 0.42	< 0.42	9.5	< 0.42	< 0.42	< 21	< 4.2	< 4.2	< 4.2	< 4.2	< 0.42	< 0.42	< 0.42	< 0.42	--	< 0.42	< 0.42	< 1	< 0.42	< 5	10	4.4	--	14	0.51	< 0.83		
		3/25/2009 0.17	< 0.062	< 0.062	0.068	< 0.062	< 0.062	1.9	< 0.062	< 0.062	< 3.1	< 0.62	< 0.62	< 0.62	< 0.62	< 0.062	< 0.062	< 0.062	< 0.062	--	< 0.062	< 0.062	< 1	< 0.062	< 5	1.7	0.2	--	0.93	0.07	< 0.12		
		9/28/2009 0.15	< 0.033	< 0.033	0.058	< 0.033	< 0.033	1.1	< 0.033	< 0.033	< 1.7	< 0.33	< 0.33	< 0.33	< 0.33	< 0.033	< 0.033	< 0.033	< 0.033	--	< 0.033	< 0.033	< 1	< 0.033	< 5	2.2	0.35	--	0.73	0.11	< 0.067		
		5/25/2010 0.032	< 0.017	< 0.017	< 0.017	< 0.017	< 0.017	0.56	< 0.017	< 0.017	< 0.83	< 0.17	< 0.17	< 0.17	< 0.17	< 0.017	< 0.017	< 0.017	< 0.017	--	< 0.017	< 0.017	< 1	< 0.017	< 5	0.28	0.021	--	0.21	0.018	< 0.033		
		7/19/2011 0.0054	< 0.001	0.0051	0.0018	< 0.001	< 0.001	0.086	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	< 0.001	< 5	< 0.005	< 5	0.15	< 0.001	--	0.019	0.004	< 0.002	
		11/18/2012 0.06	< 0.001	0.018	0.025	< 0.001	0.018	0.86	< 0.001	< 0.001	< 0.5	< 0.01	< 0.01	< 0.025	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	< 0.001	< 5	0.89	0.068	--	0.48	0.29	< 0.04			
		6/26/2012	Not Sampled (Dry)																														
		9/17/2012 0.0016	< 0.001	0.0031	0.0023	< 0.001	< 0.001	0.019	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	< 0.001	< 5	0.044	< 0.001	--	0.013	0.0028	< 0.002			
		11/18/2012 0.0022	< 0.001	0.013	0.01	< 0.001	< 0.001	0.18	< 0.001	< 0.001	< 0.05	< 0.01	< 0.01	< 0.025	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	< 0.001	< 5	0.091	0.0043	--	0.077	0.013	< 0.002			
		3/14/2013 0.12	< 0.01	0.029	0.044	< 0.01	< 0.01	1.2	< 0.01	< 0.01	< 0.5	< 0.1	< 0.1	< 0.25	< 0.01	< 0.02	< 0.01	< 0.01	1.5 J	< 0.05	< 0.05	< 0.01	< 5	< 0.05	< 0.05	< 0.01	< 5	1.7	0.27	0.015	0.89	0.081	0.025
		6/13/2013 0.068	< 0.01	0.035	0.029	< 0.01	< 0.01	1.4	< 0.01	< 0.01	< 0.5	< 0.1	< 0.1	< 0.25	< 0.01	< 0.02	< 0.01	< 0.01	1.4	< 0.05	< 0.05	< 0.01	< 5	< 0.05	< 0.05	< 0.01	< 5	1.2	0.088	0.014	0.52	0.064	< 0.02
		8/13/2013 0.0088	< 0.002	0.0077	0.0075	< 0.002	< 0.002	0.15	< 0.002	< 0.002	< 0.1	< 0.02	< 0.02	< 0.05	< 0.002	< 0.004	< 0.002	< 0.002	0.15	< 0.01	< 0.02	< 0.05	< 5	< 0.01	< 5	< 0.01	< 5	0.13	0.004	< 0.002	0.078	0.0086	0.004
		8/13/2013 (DUP) 0.0077	< 0.001	0.0077	0.008	< 0.001	< 0.001	0.16	< 0.001	< 0.001	< 0.05	< 0.01	< 0.025	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	0.15	< 0.005	< 0.005	< 0.001	< 5	< 0.005	< 0.005	< 0.001	< 5	0.13	0.0035	0.0015	0.072	0.0087	< 0.002
		11/18/2013 0.098	0.01	0.041	0.037	< 0.01	< 0.01	1.7	< 0.01	< 0.01	< 0.5	< 0.1	< 0.1	< 0.25	< 0.01	< 0.029	< 0.01	< 0.01	1.6	< 0.05	< 0.05	< 0.01	< 5	< 0.05	< 0.05	< 0.01	< 5	0.67	0.11	0.02	0.8	0.095	< 0.02
		3/20/2014 0.011	< 0.002	0.01	0.022	0.0076	0.018 J	0.22	0.0031	0.0025	< 0.1	< 0.02	< 0.02	< 0.05	< 0.002	< 0.004	< 0.002	< 0.002	0.22	< 0.01	< 0.002	< 5	< 0.01	< 5	< 0.01	< 5	0.12	< 0.002	< 0.002				

APPENDIX G

HISTORICAL SURFACE WATER ANALYTICAL DATA

SECHEM, INC.
Norcross, Gwinnett County, Georgia
HSI Site Number 10515

Prepared by: RLA 10/18/2016

Checked by: DME 11/18/2016

Notes:

mg/L - micrograms per liter

-- Constituent not analyzed

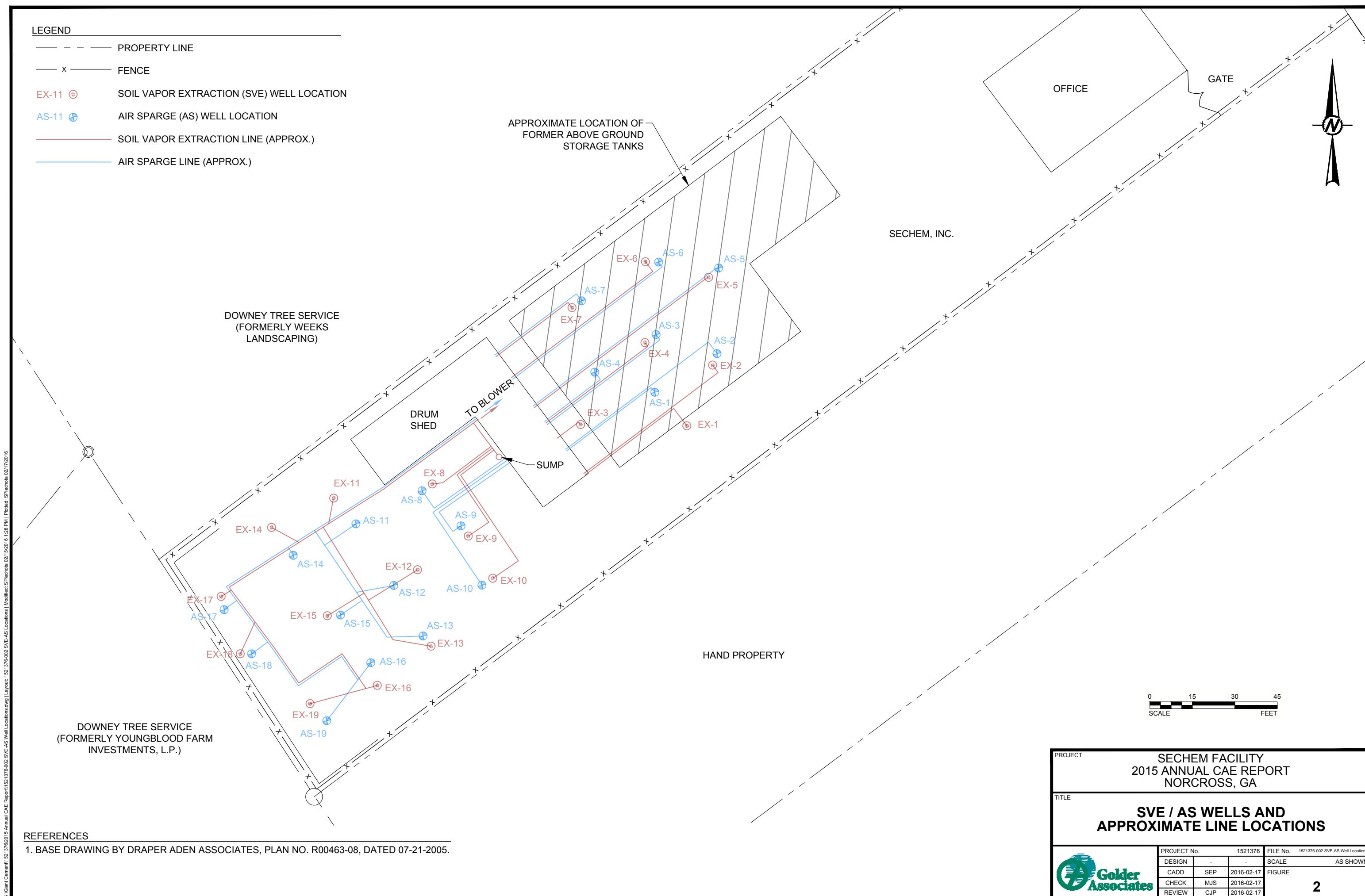
J - Estimated concentration

U - No detection

Bold - Concentrations above laboratory reporting limit

**APPENDIX H
AS/SVE WELLS AND LINES LOCATIONS FIGURE**

**(CORRECTIVE ACTION PROGRAM 2015 ANNUAL REPORT,
GOLDER ASSOCIATES INC., APRIL 2016)**



**APPENDIX I
SUMMARY OF SVE VOC MASS REMOVAL**

**(CORRECTIVE ACTION PROGRAM 2015 ANNUAL REPORT,
GOLDER ASSOCIATES INC. APRIL 2016)**

TABLE 6

**SVE Volatile Organic Compound Mass Removal
HSI Site 10515, Sechem Facility, Norcross, GA**

Measurement Date/Time	Elapsed Time	Time Since Startup	Influent VOC Concentration	Flow Rate	Flow Rate	Flow Rate	Emission Rate	Emission Rate	Periodic Mass Removed	Cumulative Mass Removed	Removal Rate
	(hours)	(days)	(mg/m3)	(ft3/min)	(ft3/hr)	(m3/hr)	(mg/hr)	(lbs/hr)	(lbs)	(lbs)	(lbs/day)
1/22/08 12:00	0.0	0.0	0	0	0	0.00	0	0	0	0	0
2/7/08 15:30	387.5	16.1	3,527	70.0	4,200	118.94	419,456	0.92	358	358	22.20
3/11/08 9:00	785.5	48.9	1,977	58.0	3,480	98.55	194,821	0.43	337	696	14.24
4/17/08 15:04	894.1	86.1	1,468	67.9	4,073	115.36	169,370	0.37	334	1,030	11.96
5/29/08 13:49	1006.7	128.1	2,533	63.1	3,783	107.13	271,372	0.60	602	1,632	12.74
6/26/08 14:10	672.4	156.1	4,715	49.5	2,967	84.03	396,214	0.87	587	2,220	14.22
7/31/08 11:47	837.6	191.0	3,652	53.5	3,210	90.91	331,957	0.73	613	2,833	14.83
8/28/08 15:45	676.0	219.2	5,242	45.4	2,725	77.18	404,565	0.89	603	3,436	15.68
9/30/08 16:00	792.2	252.2	7,944	58.7	3,520	99.69	791,954	1.75	1,383	4,819	19.11
10/29/08 15:10	695.2	281.1	2,843	57.6	3,457	97.89	278,304	0.61	427	5,246	18.66
11/25/08 16:40	649.5	308.2	1,949	60.3	3,619	102.50	199,713	0.44	286	5,532	17.95
12/15/08 14:48	478.1	328.1	1,840	58.9	3,534	100.08	184,152	0.41	194	5,726	17.45
1/30/09 8:51	1098.0	373.9	3,368	84.7	5,079	143.84	484,444	1.07	1,173	6,899	18.45
2/19/09 15:16	486.4	394.1	3,485	32.5	1,947	55.14	192,160	0.42	206	7,105	18.03
3/26/09 8:40	833.4	428.9	1,325	61.0	3,660	103.65	137,338	0.30	252	7,357	17.16
4/30/09 8:40	840.0	463.9	2,207	62.5	3,750	106.20	234,383	0.52	434	7,791	16.80
5/27/09 15:07	654.5	491.1	407	54.5	3,270	92.61	37,728	0.08	54	7,846	15.98
6/26/09 8:50	713.7	520.9	1,276	69.3	4,159	117.79	150,286	0.33	237	8,082	15.52
7/30/09 14:52	822.0	555.1	518	67.0	4,021	113.88	58,967	0.13	107	8,189	14.75
8/18/09 10:01	451.2	573.9	782	69.5	4,170	118.09	92,397	0.20	92	8,281	14.43
1/26/10 14:15	3868.2	735.1	267	70.0	4,200	118.94	31,758	0.07	271	8,552	11.63
3/25/10 11:25	1389.2	793.0	597	53.5	3,210	90.91	54,272	0.12	166	8,718	10.99
9/1/10 11:38	3840.2	953.0	1,001	67.0	4,020	113.85	113,960	0.25	965	9,683	10.16
10/28/10 9:38	1366.0	1009.9	950	69.5	4,171	118.11	112,206	0.25	338	10,021	9.92
2/18/11 14:50	2717.2	1123.1	765 ⁽¹⁾	94.5	5,670	160.57	122,839	0.27	736	10,757	9.58
4/27/11 14:30	1631.7	1191.1	579	80.0	4,800	135.94	78,707	0.17	283	11,040	9.27
7/21/11 11:05	2036.6	1276.0	209	85.3 ⁽²⁾	5,118	144.94	30,293	0.07	136	11,176	8.76
10/5/11 10:56	1823.9	1352.0	288	90.5	5,430	153.78	44,357	0.10	178	11,355	8.40
3/29/12 8:48	4221.9	1527.9	641	40.8	2,445	69.24	44,384	0.10	413	11,768	7.70
6/1/12 13:07	1540.3	1592.0	533	97.7	5,861	165.99	88,475	0.20	300	12,069	7.58
8/16/12 11:56	1822.8	1668.0	352	92.0	5,522	156.39	55,051	0.12	221	12,290	7.37
11/16/12 16:41	2212.8	1760.2	0.44	5.8	349	9.87	4	0.00001	0.021	12,290	6.98
12/31/12 11:35	1074.9	1805.0	613	43.9	2,634	74.59	45,727	0.10	108	12,398	6.87

**SVE Volatile Organic Compound Mass Removal
HSI Site 10515, Sechem Facility, Norcross, GA**

Measurement Date/Time	Elapsed Time	Time Since Startup	Influent VOC Concentration	Flow Rate	Flow Rate	Flow Rate	Emission Rate	Emission Rate	Periodic Mass Removed	Cumulative Mass Removed	Removal Rate
	(hours)	(days)	(mg/m3)	(ft3/min)	(ft3/hr)	(m3/hr)	(mg/hr)	(lbs/hr)	(lbs)	(lbs)	(lbs/day)
3/14/13 9:25	1749.8	1877.9	590	42.8	2,566	72.66	42,875	0.09	165	12,564	6.69
6/17/13 12:40	2283.3	1973.0	256	40.6	2,436	68.99	17,633	0.04	89	12,652	6.41
8/13/13 15:00	1370.3	2030.1	379	47.2	2,832	80.20	30,365	0.07	92	12,744	6.28
11/18/13 14:49	2327.8	2127.1	156	52.5	3,150	89.21	13,941	0.03	72	12,816	6.02
3/20/14 9:15	2922.4	2248.9	265	65.4	3,925	111.16	29,458	0.06	190	13,006	5.78
6/5/14 11:00	1849.8	2326.0	122	48.3	2,900	82.12	10,019	0.02	41	13,046	5.61
9/11/14 14:00	2355.0	2424.1	146	62.4	3,744	106.03	15,480	0.03	80	13,127	5.42
12/4/14 10:00	2012.0	2507.9	117	91.4	5,483	155.29	18,169	0.04	81	13,207	5.27
3/17/15 10:35	2472.6	2610.9	170	79.3	4,760	134.81	22,869	0.05	125	13,332	5.11
5/27/15 15:17	1708.7	2682.1	211	44.1	2,646	74.93	15,799	0.03	60	13,392	4.99
9/24/15 14:45	2879.5	2802.1	137 a	49.6	2,976	84.28	11,578	0.03	74	13,465	4.81
12/7/15 8:00	1769.3	2875.8	137	49.6	2,976	84.28	11,578	0.03	45	13,510	4.70
12/21/15 8:00	336.0	2889.8	0	0.0	0	0.00	0	0.00	0	13,510	4.68
3/20/16 14:45	2502.8	2980.1	209	1358	81,480	2307.51	482,270	1.06	2,661	16,172	5.43

Notes:

a. Re-sample result from October 2015

Air was not sampled during the 4th quarter of 2015 due to SVE blower malfunction. The midpoint from 11/23/2015, the last O&M system check, and 12/21/2015, system restart, was used for the measurement date. The SVE system was assumed to be operating the same as the third quarter on 12/7/2016.

VOC - Volatile Organic Compound; VOC concentrations based on monthly laboratory analytical data; System flow rates measured with velocity meter (see field notes)

mg/m3 - Milligrams per Cubic Meter; ft3/min - Cubic Feet per Minute; ft3/hr - Cubic Feet per Hour; m3/hr - Cubic Meters per Hour; mg/hr - Milligrams per Hour; lbs - Pounds;

lbs/hr - Pounds per Hour