aec

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> RECEIVED Georgia EPD

JAN 2 4 2013

Response and Remediation Program

January 18, 2013

Mr. Yue Han Response and Remediation Program Land Protection Branch Georgia Environmental Protection Division 2 Martin Luther King, Jr. Drive, SE Atlanta, GA 30334-9000

CERTIFIED MAIL 7007 14909 0003 2617 6067 RETURN RECEIPT REQUESTED

Re: Semiannual Status Report - January 2013

Voluntary Remediation Program

Former Dry Cleaning Depot, HSI Site No. 10880

Roswell, Fulton County, Georgia Tax Parcel ID No. 12-1902-0412-049-1

AEC Report ECC-3051.03

Dear Mr. Han:

Atlanta Environmental Consultants (AEC), on behalf of Mr. Edwin Chang, K.I.C. Management, LLC, former Dry Cleaning Depot, 1073 Alpharetta Street, Roswell, Fulton County, Georgia, is pleased to present the third Semiannual Status Report for the above referenced facility. The Georgia Environmental Protection Division (Georgia EPD) accepted the former Dry Cleaning Depot into the Voluntary Remediation Program (VRP) in a letter dated July 10, 2011. Progress in the Voluntary Remediation Program (VRP), is summarized in this letter report and the Updated Conceptual Site Model (CSM), enclosed. Responses to the Georgia Environmental Protection Division (EPD) correspondence are presented below in a Comment and Response format.

GEORGIA EPD CORRESPONDENCE

Previous Submittals

The previous Semiannual Status Report (SASR) was submitted in August 2012. The following schedule was specified in the SASR:

- The July 10, 2012 semiannual progress report shall demonstrate horizontal delineation on the qualifying property; this task has been completed.
- The July 10, 2013 semiannual progress report shall demonstrate complete horizontal delineation; and
- The January 10, 2014 semiannual progress report shall demonstrate complete horizontal and vertical delineation, finalize the remediation plan and provide a preliminary cost estimate for

implementation of remediation and associated continuing actions. EPD recommends that the participant finalize approval of cleanup standards for all regulated substances prior to this submittal.

• By July 10, 2016, a Compliance Status Report (CSR) must be submitted, including certifications.

Georgia EPD Correspondence dated November 15, 2012

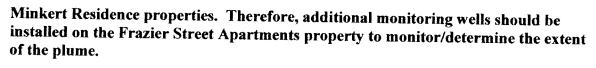
This letter, received November 20, 2012, included the following Comments:

<u>Comment 1.</u> Please collect soil samples inside the former dry-cleaning building to determine if soil contamination is present and acting as an on-going source for releases of tetrachloroethene (PCE).

Collection of soil samples from inside the building is neither practical nor advisable due to the potential hazards of compromising the structural integrity of the building's floor. The former dry-cleaning building is not constructed on level ground. Consequently, while the front of the building appears to be slab-on-grade, the building's floor is elevated substantially above grade over much of its areal extent, including the likely location of the former dry cleaning machine. The floor elevation at the rear of the building, where all or almost all of the possible sources inside, at, or near the building are located, exceeds two feet above ground surface. It is very unlikely that the concrete slab is two feet thick at the rear. It appears more likely to be a structurally supported floor with air space under it; AEC believes there is a crawl space under the building in the rear, although no opening was identified. AEC recommends structural evaluation of the flooring system, and then developing, evaluating and recommending appropriate methods of sampling under the building.

One of the objectives of locating MW-6 hydraulically down-gradient of the building and as close as practical to the down-gradient side of a number of potential sources, e.g., delivery truck loading and unloading, drum unloading, drum storage, used PCE accumulation, trash and items for disposal accumulation (including rags, filters, etc.) and possibly the drycleaning machine, was to assist in evaluating soil concentrations of PCE and associated compounds in shallow soils near these potential sources inside and/or just outside the rear entrance of the building. The soil boring at MW-6 showed no detectable PCE at the 5-foot depth and only 0.007 mg/kg PCE at the 20-foot depth. This information suggests little or no PCE or related compounds in shallow soils in this potential source area, making it unlikely that shallow soils under the building are a source of dry-cleaning fluids in this area. While AEC acknowledges that this data is insufficient to draw a final conclusion regarding this possible source area, we believe that this can be considered preliminary information in support of a tentative conclusion, while we are in the process of more fully understanding the structural details of the building's floor support system.

Comment 2. EPD concurs with you that horizontal delineation where access is not available will be completed 24 months from VRP inception, or July 10, 2013. Based on previous data collected from the Frazier Street Apartments and Minkert Residence and groundwater flow direction at the site, the groundwater contamination plume has migrated off your property and onto the Frazier Street Apartment and



AEC is currently evaluating existing data and formulating a plan to address delineation of offsite contamination. The property owner of the Frazier Street Apartments property has been contacted in an effort to secure a right-of-entry agreement. Once a right-of-entry agreement has been secured, AEC will propose monitoring well locations. AEC has also requested information from the property owner regarding the precise locations of the former abandoned temporary wells. Placement of new monitoring wells in their original locations will assist in making more effective comparisons to previously developed data.

Comment 3. While EPD understands more information may help you to provide a cost estimate for implementation of remediation and associated actions, you should be able to work out a preliminary cost estimate along with the financial assurance based on the current data and proposed remedy. Therefore, EPD requests that you provide a cost estimate for implementation of remediation and corrective actions in your next Semiannual Report due January 10, 2013.

AEC proposed demonstration of complete horizontal and vertical delineation, a remediation plan and a cost estimate for implementation of remediation and associated continuing actions by January 10, 2014 in the milestone schedule submitted with the VRP Application and in subsequent submittals. While AEC is willing to make reasonable efforts to assist you with your request, sufficient information is not currently available, is not likely be available by January 10, 2013, and any information provided must, therefore be considered preliminary. Preparation of a financial assurance instrument amount based on such a preliminary estimate would be premature.

Comment 4. EPD concurs with your recommendation that vapor intrusion pathway should be investigated further. Specifically, an approach should be proposed to investigate possible vapor intrusion in the Frazier Street Apartments Building as the concentrations of PCE were detected in groundwater samples collected inside the Frazier [Street] Apartments property. Please be advised that in accordance with the 2010 USEPA document "Review of the Draft 2002 Subsurface Vapor Intrusion Guidance", it is generally not appropriate to use a single-line-of evidence approach to evaluate the vapor intrusion pathway based on soil gas data collected externally from buildings in conjunction with generic attenuation factors, or in conjunction with attenuation factors determined using the J&E model. Therefore, EPD requests that for a residential structure nearest to a monitoring location or any additional groundwater delineation locations that yield a higher concentration of the volatile constituents of concern in groundwater at the site include two vapor intrusion sampling events for sub-slab and/or indoor air with concurrent outdoor sampling. Please note that sub-slab sampling with concurrent indoor air and outdoor air sampling is preferred.

AEC is currently evaluating vapor intrusion pathway investigation approaches to be recommended for the Frazier Street Apartments property. AEC has contacted a

representative of the Frazier Street Apartments property for site access, flooring systems structural details and associated structural information for use in selection of appropriate methods. Sufficient information regarding flooring systems design, structural systems embedded in or under the floor, foundation and/or footers under the floor, utilities under the floor, and other potential conflicts will need to be thoroughly detailed before suitable location(s) for penetration of the floor can be proposed.

<u>Comment 5.</u> There has been insufficient data collected for EPD to comment on the conclusions contained on Page 6 of the report. EPD recommends the collection of additional data and the use of modeling software (e.g. Biochlor) to support the fate and transport conclusions asserted in the report.

AEC is currently planning additional data collection and monitoring activities in order to develop additional data to more fully substantiate our conclusions. In the meantime, certain conclusions may be considered preliminary until more fully substantiated.

PROGRESS REPORT UPDATE

Updated Conceptual Site Model

An updated Conceptual Site Model report was prepared following completion of horizontal delineation as referenced above. As no new data was developed since the previous SASR, updates do not include major changes. However, all available data, including previously developed data from a variety of sources, has been reviewed to assist in developing a more complete picture of the site and site area. The Georgia EPD's comments are acknowledged and will be appropriately addressed in light of available data, and as additional data and information becomes available.

Additional revisions and updates will be made to the CSM in accordance with the Schedule as specified in the Approval letter, dated July 10, 2011.

Please do not hesitate to contact us should you have any questions.

Thank you.

Sincerely,

ATLANTA ENVIRONMENTAL CONSULTANTS

Peter T. Kallay, P.E.

Manager, Environmental Services

pc: Edwin Chang, K.I.C. Management

Richard A. Wingate, Esq., Hallman & Wingate LLC

PROJECTED MILESTONE SCHEDULE

Former Dry Cleaning Depot 1073 Alpharetta Street Roswell, Fulton County, Georgia 30075 HSI #10880

Reviewed and Updated: January 17, 2012

The following listing presents the projected Milestone Schedule for implementation of the Voluntary Remediation Program (VRP) at property containing the former Dry Cleaning Depot, 1073 Alpharetta Street, Roswell, Fulton County, Georgia. HSI #10880.

Plan, Report or Action	Date to be Submitted
Submit Preliminary Conceptual Site Model	at time of VRP Application $\sqrt{}$
Complete Horizontal Delineation where Access is Available	12 months after enrollment $\sqrt{}$
Complete Horizontal Delineation where Access is not Available	24 months
Complete Vertical Delineation	30 months
Final Voluntary Remediation Plan	30 months
Preliminary Cost Estimate for Implementation of Remediation and Associated Actions	30 months
Submit Compliance Status Report Including Required Certifications	60 months
Semi-Annual Status Reports with Updated Conceptual Site Model	Every 6 months $\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$

AEC Proj. No.	ECC-3051
Client	K.I.C. Management LLC
Client/File No.	HSI Site No. 10880
Time Period	August to December 2012

Atlanta Environmen Consultants TIME SUMMARY REPORT

1073 Alpharetta St., Roswers A January 17, 201 Site Loc Signature Date

DATE	HOURS	ACTIVITY DESCRIPTION
8/3	1.50	Receive Terri's Draft review comments and CADDed Figures. Discuss. Revise Report. Assemble report, figures, text.
9/8	1.00	Consult with Edwin Chang regarding Report conclusions and recommendations. Print, organize SASR and CSM reports.
8/8	1.75	Semi-Annual Status Report and CSM publishing, assembly and check all items present, clear and complete.
6/8	1.25	Final check of Semi-Annual Status Report and Conceptual Site Model. Final edits and corrections. Bind reports.
8/13	1.00	Finalize, sign and seal Reports. Duplicate reports. Prep to mail and mail reports to GAEPD, Mr. Chang and Mr. Wingate.
11/30	1.00	Receive correspondence from GAEPD: Comments. Review letter and discuss with Mr. Edwin Chang.
12/6	1.00	Obtain and review Prospective Purchaser Compliance Status Report (PPCSR) for Frazier Street Apts and Minkert Residence.
12/8	0.50	Copy PPCSR for Frazier Street Apartments and Minkert Residence, and mail to Edwin Chang.
12/21	1.25	Start drafting Semi-Annual Status Report, including responses to GAEPD Comments letter.
12/22	2.00	Continue drafting SASR. Review and revise. Develop strategy to address additional investigation requirements.
12/29	1.50	Continue drafting, reviewing and revising SASR. Review CSM and begin updating. Discuss Frazier Street Apts access with Bill Bartlett.
12/31	2.25	Continue SASR and CSM reports development. Discuss Frazier Street Apts Right of Entry with John Lundeen, Coro Realty.
	16.00	

ECC-3051	K.I.C. Management LLC	HSI Site No. 10880	January 2013
AEC Proj. No.	Client	Client/File No.	Time Period

Atlanta Environmen. Consultants TIME SUMMARY REPORT

Signature January 18, 2013

CONCEPTUAL SITE MODEL

FORMER DRY CLEANING DEPOT 1073 Alpharetta Street Roswell, Fulton County, Georgia 30075 HSI #10880

Prepared For:

Mr. Edwin Chang K.I.C. Management, LLC 2270 Evergreen Lane Lawrenceville, Georgia 30043

January 2013

AEC Project Number ECC-3051

Peter T. Kallay, P.E.

Atlanta Environmental Consultants 3440 Blue Springs Road, Suite 503 Kennesaw, Georgia 30144

> Phone (678) 738-7004 Fax (678) 569-2419

Registered Professional Engineer Certification

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

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

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

Name	Peter T. Kellay, P.E.	
Signature		
Date	01/18/2013	
		Georgia Stamp or Seal

Site Description

The site is a commercial property in the City of Roswell, Fulton County Tax Parcel # 12-1902-0412-049-1, and contains one single story commercial concrete block building located at 1073 Alpharetta Street (also known as Georgia Highway 9 and Georgia Highway 120), Roswell, Fulton County, Georgia 30075, with a concrete slab foundation constructed in 1968. The building has been used primarily as a dry cleaners, operating under the names One Hour Martinizing, O'Hara's Cleaners, Care Cleaners, and Dry Cleaning Depot. During the later years of operation, the use of PCE was discontinued. The building was vacant from approximately 2006 to 2009. The building currently houses Stargate Technologies, a computer and video games store.

Site Surface and Subsurface Physical Setting

The site is situated on fill material (soil), averaging approximately 2 to 3 feet deep overlying native silt and clayey silt soils. Partially weathered rock occurs at 15 to 20 feet deep under much of the site except near Alpharetta Street. Competent rock underlies much of the site at 20 to 25 feet deep except near Alpharetta Street. Competent rock is progressively deeper from the rear of the property toward Alpharetta Street, approximately 30 feet deep at the rear of the building onsite, and deeper than the completion depth of MW-1 near the front of the site, 45 feet. The site is underlain by the Powers Ferry Formation, in the Sandy Spring Group in the Northern Piedmont physiographic province of Georgia. The Powers Ferry Formation consists of undifferentiated biotite-quartz-plagioclase gneiss (metagraywacke), mica schist and amphibolite; a mappable mica schist unit; and a banded iron formation (McConnell and Abrams 1984).

The front of the site facing Alpharetta Street has the highest elevation, and the property slopes down toward the rear, facing Frazier Street. Stormwater onsite flows toward Frazier Street, then flows north along Frazier Street into a curbside storm drain.

Environmental Assessment and Graphical 3-Dimensional Conceptual Site Model

Environmental Assessment indicated the presence of tetrachloroethene (PCE) in soils and groundwater. Minor degradation of PCE was found; a single groundwater sample had a minimal detectable quantity of trichloroethene (TCE) in 2008. Groundwater samples were collected on March 20 to 31, 2008 and June 27 to 28, 2012. All samples were analyzed by Advanced Chemistry Labs, Inc., a qualified analytical laboratory, and reported on April 7, 2008 and July 13, 2012. The highest concentration of PCE in soils was 0.44 milligrams per kilogram (mg/kg) PCE at 2 feet deep in MW-2. No volatile organic compounds (VOC) other than PCE were identified in soils during the 2008 soil sampling event. PCE concentrations were also identified in groundwater. The highest concentration of PCE identified was 1.040 milligrams per liter (mg/L) in MW-5; all 5 wells contained detectable PCE ranging from 0.006 mg/l in MW-1 to 1.040 mg/l in MW-5 during the 2008 groundwater sampling event. A single detection of TCE at 0.005 mg/l in MW-5 was identified in 2008. No VOCs other than PCE were identified in any other wells in 2008.

Monitoring well MW-6 was installed on June 27, 2012. Soil samples at MW-6 detected acetone at 0.130 mg/kg at the 5-foot depth and PCE at 0.007 mg/kg at the 20-foot depth.

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Each soil sample had only a single VOC detection. Groundwater sampling conducted on June 28, 2012 indicated no detectable concentrations of any EPA Method 8260B analyte in either MW-1 or MW-2. The highest detected PCE concentration onsite was identified as 0.249 mg/l in MW-5, the downgradient well. MW-6 had a PCE concentration of 0.145 mg/l. No other VOCs on the EPA Method 8260B analyte list were identified in any of the groundwater samples.

The attached Figures show a graphical three-dimensional representation of the surface and subsurface setting, potential sources of contamination, contaminant concentration contours, expected contaminant movement, receptors and pathways.

The former dry cleaning machine location, former dumpster location and underground utility lines including sanitary sewer will be appropriately addressed as the investigation progresses. MW-6 was installed at the down-gradient corner of the building (southeast corner) in the area most likely to be impacted by PCE.

Vapor Intrusion Pathway

Photoionization detector (PID) readings taken in and around the building on July 27-28, 2012 did not exceed 0.3 ppm. MW-6 was located as close as practical to the corner of the building nearest where PCE would most likely have been released. The PID reading of soils 1 foot deep was 0.6 ppm. No PCE or PCE degradation compounds were detected at the shallowest soil sample, at the 5-foot depth. Available data does not suggest the presence of any significant PCE or PCE-related compounds in vapor or adsorbed phases at or near the building footprint. AEC is currently investigating recommended approaches to further investigate the potential vapor intrusion pathway.

Potential Exposure during Potential Utility or other Subsurface Construction

AEC will resample soils in the area in which soils previously exceeded Notification Concentrations (NC). If soil concentrations exceed standards (including site-specific utility and construction worker cleanup standards) and significant work onsite occurs or is proposed, remediation of soils may be implemented if data indicate exposure. Site-specific utility and construction worker cleanup standards will be calculated and compared to soil and groundwater concentrations. Workers onsite shall be notified of the presence of soil VOC concentrations prior to beginning work and shall be aware of and trained in appropriate implementation of, and use of, engineering controls, work practices, personal protective equipment (PPE) or other appropriate means of precluding or minimizing contact. Construction areas, if any, shall be barricaded, surrounded with construction fencing and/or employ other appropriate means to preclude access by unauthorized persons.

Surface Water

Hog Wallow Creek is the nearest potential point of exposure. The U.S. Geological Survey (USGS) 7.5-minute series topographic map, Roswell, GA Quadrangle (Figure 1) shows a distance of approximately 1,400 feet is indicated in the direction of groundwater flow (east-southeast) from the source to Hog Wallow Creek. Available data does not suggest that any concentrations exceeding applicable standards will reach Hog Wallow Creek or any other

surface water body. Groundwater flow direction determined using potentiometric contour mapping is shown on Figure 1. At the calculated rate of groundwater migration, at an average 22.47 feet/year, groundwater from the site would reach Hog Wallow Creek in approximately 62 years. No other point of withdrawal between the site and Hog Wallow Creek was identified. At a rate of decrease of 76% in 4 years, concentrations offsite are also expected to approach non-detectable before the projected, estimated 62-year travel time to the nearest surface water. No groundwater use between the site and Hog Wallow Creek is known. The groundwater pathway appears to be incomplete.

Potential Pathways and Potential Receptors

Soil concentrations appear to be located in areas covered by asphalt. There is no likelihood of contact by any individual, other than a utility worker. The soil pathway appears to be incomplete.

No potential sources of contact with groundwater exist between the site and Hog Wallow Creek, located approximately 1,400 feet east of the site. At the natural rate of groundwater flow, an average of 22.47 feet/year, it would take an estimated 62 years to reach Hog Wallow Creek. Groundwater sampling results collected on the former Dry Cleaning Depot property indicated a 76% decrease in the highest groundwater concentrations detected onsite from 1.040 mg/l in 2008 to 0.249 mg/l in 2012. Natural attenuation mechanisms are anticipated to continue decreasing concentrations. No detectable concentrations are anticipated to reach Hog Wallow Creek. The groundwater pathway appears to be incomplete.

Soil concentrations are present primarily on the rear of the property, where no structures are located. Vapor phase will be investigated following the Milestone Schedule. Vapor intrusion is not likely, based upon the locations of the known soil contamination.

Suspected or Potential Sources of Regulated Substances

The Subject Property was the location of dry cleaning operations for approximately 40 years. PCE may have entered the environment during delivery and handling of containers (e.g., drums and buckets), pouring PCE into dry cleaning machines, draining spent PCE, sweeping and mopping of floors, PCE that vaporized, drips and spills, PCE-containing filters, rags, mops, etc. that may have been disposed, spent PCE handling, etc.

Pest USA is located across Alpharetta Street and a former Esso service station, which was later operated as an independent service station, formerly existed adjacent to the south side of the former Dry Cleaning Depot site. Other businesses exist or previously existed nearby and upgradient of the Subject Property on the busy commercial thoroughfare of Alpharetta Street (also known as Georgia Highway 9 and Georgia Highway 120).

Proposed Additional Assessment and Risk Reduction Standards

Soil concentrations of PCE are low to non-detectable in soil borings conducted on site. Groundwater will be delineated to appropriate concentrations representating appropriate standards for commercial property with no receptors or completed pathways within 1,400 feet of the site, or as determined at the time of final selection of the remedy. The most

current Risk Reduction Standards, rules and concentrations (or concentrations developed using a RRS Evaluation) as adopted by the Georgia Environmental Protection Division (EPD) at the time of the delineation will be utilized.

Exposure pathways will be evaluated to include human and ecological receptors. AEC has prepared and presented a figure showing the probable point of entry of groundwater into surface water (see Figure attached).

Additional assessment will be conducted following the Milestone Schedule. It is proposed that the investigation will be conducted to the following site-specific delineation criteria:

Site delineation will be completed to Voluntary Remediation Program Type I Residential Risk Reduction Standards.

Additional Delineation Where Access is Available

On June 27 to 28, 2012, AEC conducted additional delineation where access was available to evaluate potential sources that may have been formerly located in or adjacent to the building located onsite. Dry cleaners operating onsite during the most recent years (2005 and years previous) that dry cleaners have operated onsite reportedly operated only a drop-off/pickup store; no dry cleaning was conducted onsite. Both the dry cleaning machine and the dumpster had been removed from the property before AEC's initial site visit, and previous business and/or property owners were not available to verify site-specific information during their presence onsite. Therefore, exact locations of the former dry cleaning machine(s) and dumpster could not be definitively determined.

AEC installed MW-6 at the hydraulically down-gradient corner of the building (southeast corner) in the area most likely to be down-gradient of any former dry cleaning machine(s), PCE drum storage location(s), loading and unloading of drums, disposal of spent filters and associated activities. The former dumpster was believed to have been located in the area at the northeast corner of the building. Any release in this area would likely be detected in groundwater in either MW-6 or MW-4. The location of the new monitoring well MW-6, as well as existing monitoring wells, is depicted in Figures 2, 3, 4 and 5.

Soil samples collected on June 27, 2012 from soil boring MW-6 identified acetone at 0.130 mg/kg at 5 feet deep, and PCE at 0.007 mg/kg at 20 feet deep. These were the only VOCs detected in these soil samples; each sample had a single VOC detection. Acetone has never been detected onsite previously. No acetone was detected in either the deeper soil sample at this location nor in groundwater at MW-6, nor at any other location onsite. The concentration detected, 0.130 mg/kg, is less than the Georgia Notification Concentration (NC). Acetone at a concentration less than NC will not be further investigated.

The detection of PCE at 20 feet deep, only a few feet above the water table, at 0.007 mg/kg, is most likely associated with minor volatilization of PCE in groundwater. No PCE was detected at the 5-foot depth at this location, PCE was detected in groundwater, and the 20-foot sample was closer to the depth of groundwater than to the 5-foot sample. This detection poses no likelihood of any contact with any individuals at or near ground surface nor any significant likelihood of migration in vapor phase into any building.

Groundwater samples collected on June 28, 2012 from monitoring wells onsite identified the highest concentrations of PCE at MW-5, the down-gradient well, at 0.249 mg/l. This concentration indicated a 76% decrease in groundwater concentration from the 2008 sampling event, in both this well and the highest groundwater concentration of PCE onsite detected onsite in both groundwater sampling events (2008 and 2012). MW-6 exhibited 0.145 mg/l PCE in groundwater. MW-4 and MW-3 exhibited lower concentrations than MW-5. MW-1 and MW-2 had no detectable PCE concentrations. No other VOC detection, besides PCE, was identified in any groundwater sample onsite.

Risk Reduction Standards Proposed

Risk Reduction Standards (RRS) proposed for groundwater are as follows, from Table 1 of Appendix III unless otherwise noted:

Constituent	Delineation of Groundwater (mg/l)		
Tetrachloroethene (PCE)	0.005		
Trichloroethene (TCE)	0.005		
Cis-Dichloroethene (cis-DCE)	0.07*		
Trans-DCE	0.1		
Vinyl Chloride	0.002		

^{*} Federal Maximum Contaminant Level (MCL).

Risk Reduction Standards for soils are as follows, from Appendix I:

Constituent	Delineation of Soil (mg/kg)		
PCE	0.18		
TCE	0.13		
Cis-DCE	0.53		
Trans-DCE	0.53		

Proposed Remedies

In the event current shallow soil concentrations remain above Notification Concentrations (NC), paving with asphalt will be the primary remedy to ensure no contact with site workers or members of the public. A long-term maintenance and monitoring plan will be proposed.

In the event further investigation indicates that site-specific risk reduction standards may be an appropriate part of the proposed remedy, a point of demonstration (POD) well will be proposed with an appropriate monitoring schedule.

Soil contamination is proposed to be addressed by use of Engineering Control consisting of an asphalt cover. Subsurface investigation will be conducted to investigate other pathways. In the event the final remedy for the facility involves restricting groundwater use or other institutional controls, an approved environmental covenant, conforming to O.C.G.A. 44-16-1 et seq. will be implemented for the impacted property.

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In the event Engineering Controls are utilized, a long-term maintenance and monitoring plan will be developed. In the event the final remedy for the facility involves restricting groundwater use or other institutional controls, an approved environmental covenant, conforming to O.C.G.A. 44-16-1 et seq. will be implemented for the impacted property.

In the event cleanup standards for soil based on Type 2, 4 or 5 RRS are selected as the final remedy, then soil concentrations protective of groundwater at a point of exposure for groundwater or a hypothetical point of drinking water exposure located a distance of 1,000 feet downgradient from the delineated site contamination will be established. Acquisition of site-specific groundwater data will be addressed. In the event the final remedy for the facility involves restricting groundwater use or other institutional controls, an approved environmental covenant, conforming to O.C.G.A. 44-16-1 et seq. will be implemented for the impacted property.

The 76% decrease in the highest PCE concentrations detected in groundwater onsite within an approximately 4-year timeframe suggests that evaluation of Monitored Natural Attenuation (MNA) as a remedy for groundwater PCE concentrations identified onsite should be considered. MNA is recommended as a potential remedy for groundwater concentrations identified onsite. Residual concentrations in soils and groundwater onsite are likely to decrease via natural attenuation mechanisms over time. Available data suggests that natural attenuation may be effective in reducing concentrations at this site.

CONCLUSIONS

Completion of Additional Assessment and previous assessments at the Subject Property, on which the former Dry Cleaning Depot was located, 1073 Alpharetta Street, Roswell, Fulton County, Georgia 30075 suggests the following conclusions:

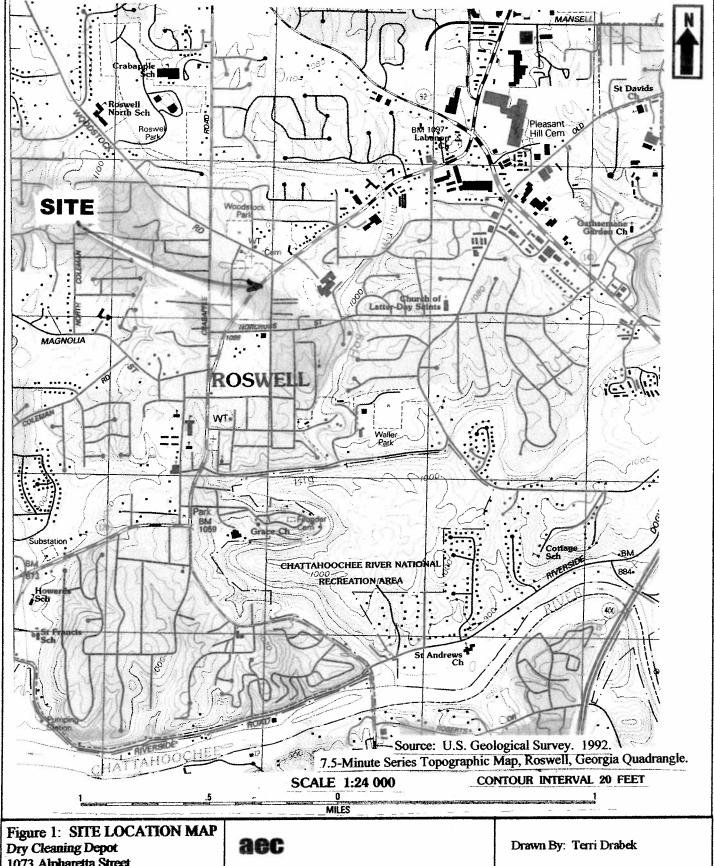
- Installation of Monitoring Well MW-6 downgradient of the potential source, the dry cleaning machine and other potential related former sources, indicated no presence of PCE or related compounds in shallow soils at this location adjacent to the side of the building that was the likely location of drum loading and unloading, drum storage, likely dry cleaning machine location, carryout of spent filters and related equipment and activities.
- Groundwater sampling of all monitoring wells on the former Dry Cleaning Depot property indicated PCE concentrations have generally decreased in concentration since previously sampled. The highest PCE concentration in groundwater onsite decreased from 1.040 mg/l in 2008 to 0.249 mg/l in 2012, a decrease of 76%.
- Groundwater flow direction onsite has been determined to be toward the southeast. This groundwater flow direction has been consistently southeast, with variation of no more than a few degrees during gauging events conducted over several years in the permanent monitoring wells installed onsite.
- The rate of groundwater flow and dissolved concentration migration, along with the apparent rate of PCE concentration decrease over time onsite, suggests that PCE

- concentrations exceeding applicable standards will not reach the nearest surface water before natural attenuation processes effectively decrease these concentrations to below detection limits or applicable standards.
- The 76% decrease in the highest concentration of PCE onsite over 4 years suggests that Natural Attenuation may effectively reduce concentrations at this site, and Monitored Natural Attenuation (MNA) should be evaluated as a remedy for this site.

RECOMMENDATIONS

Completion of Additional Assessment and previous assessments at the former Dry Cleaning Depot property, 1073 Alpharetta Street, Roswell, Fulton County, Georgia 30075 suggests the following Recommendations:

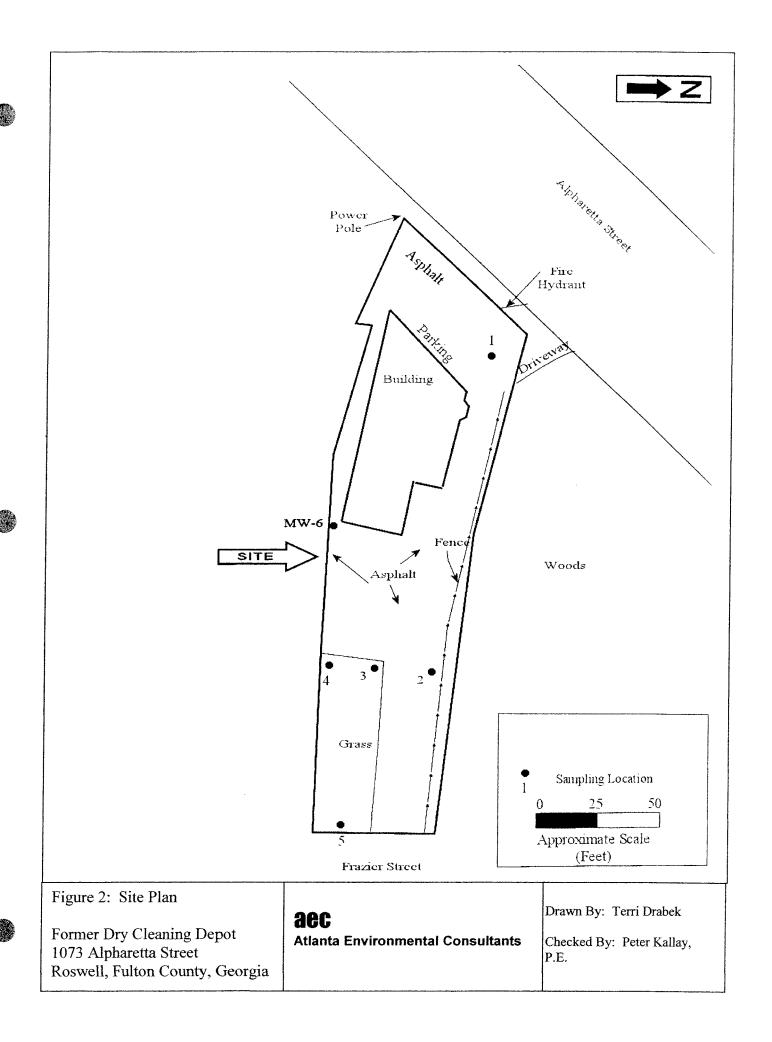
- Horizontal delineation has been effectively completed, with the source generally appearing to be toward the rear of the building and the rear of the property.
 This phase should be considered complete.
- It is recommended that site investigation in accordance with the Voluntary Remediation Program (VRP) continue in accordance with the attached Milestone Schedule.
- It is recommended that Monitored Natural Attenuation be fully evaluated and considered as a remedy for groundwater concentrations of PCE identified at this site, based on significant decreases in PCE concentrations in groundwater observed onsite over a 4-year timeframe.

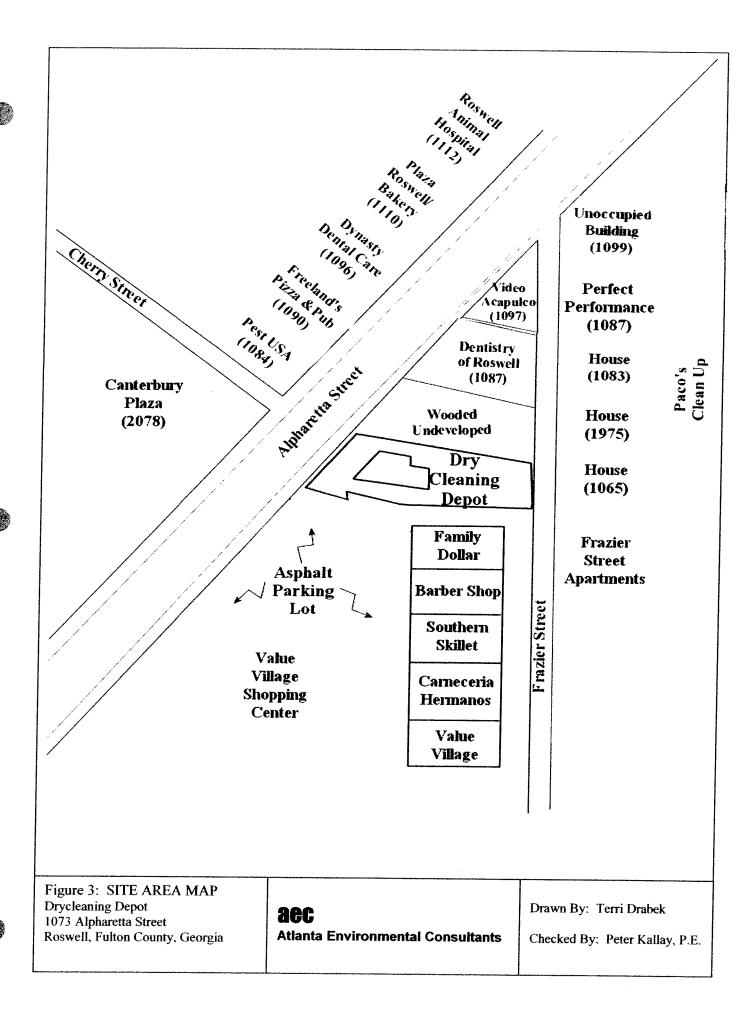


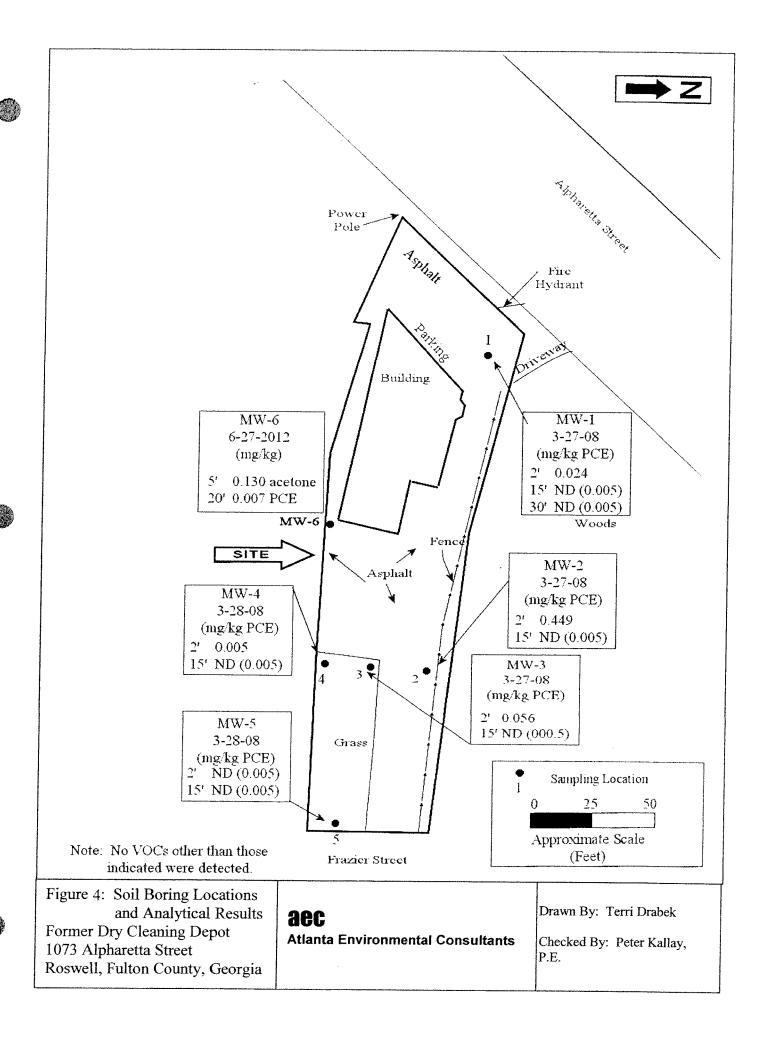
1073 Alpharetta Street Roswell, Fulton County, Georgia

Atlanta Environmental Consultants

Checked By: Peter Kallay, P.E.







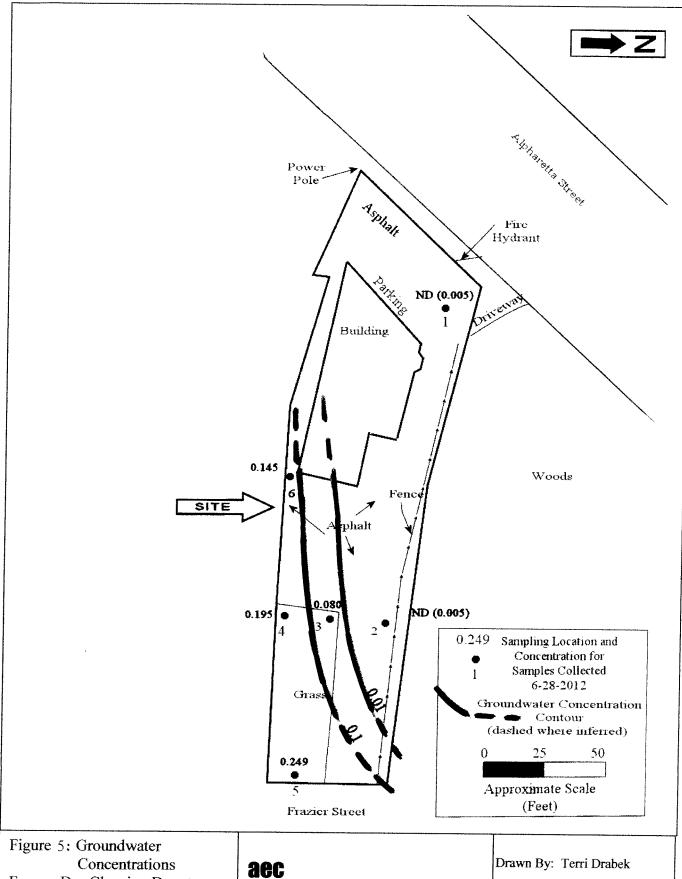


Figure 5: Groundwater
Concentrations
Former Dry Cleaning Depot
1073 Alpharetta Street
Roswell, Fulton County, Georgia

accAtlanta Environmental Consultants

Checked By: Peter Kallay,



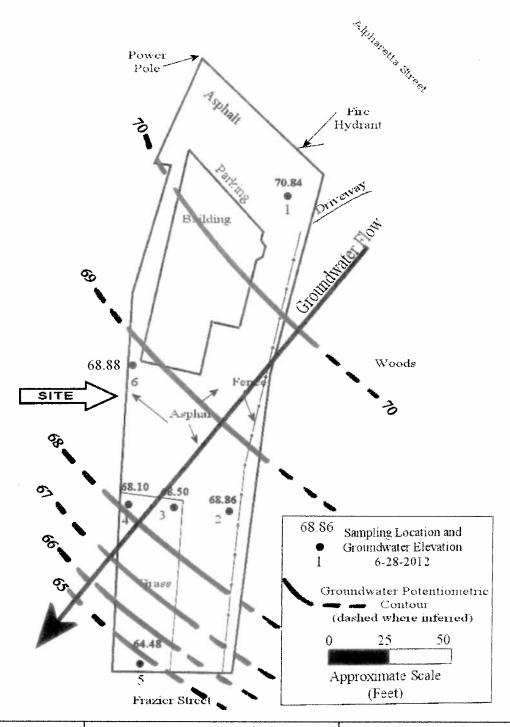


Figure 6: Potentiometric Map

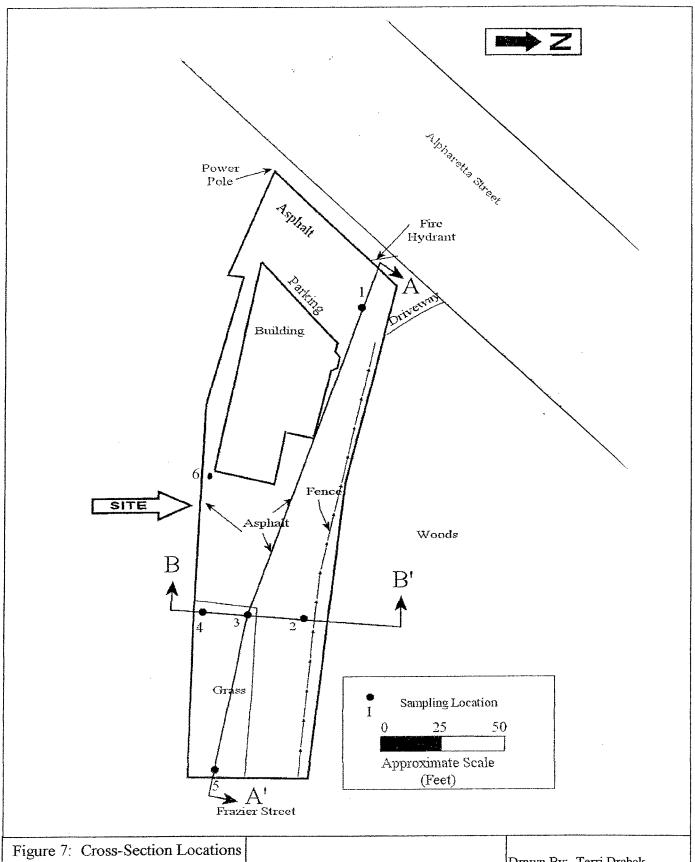
Former Dry Cleaning Depot 1073 Alpharetta Street Roswell, Fulton County, Georgia

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Atlanta Environmental Consultants

Drawn By: Terri Drabek

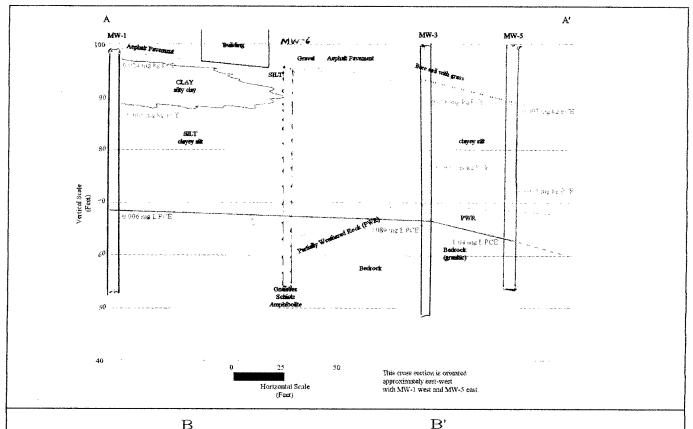
Checked By: Peter Kallay,



Former Dry Cleaning Depot 1073 Alpharetta Street Roswell, Fulton County, Georgia **aec**Atlanta Environmental Consultants

Drawn By: Terri Drabek

Checked By: Peter Kallay,



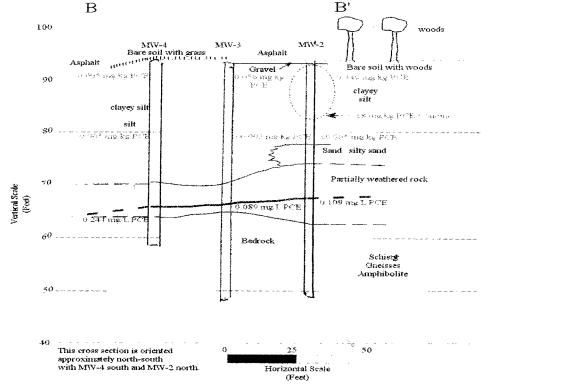


Figure 8: Cross-Section Detail

Former Dry Cleaning Depot 1073 Alpharetta Street Roswell, Fulton County, Georgia

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Drawn By: Terri Drabek

Checked By: Peter Kallay,

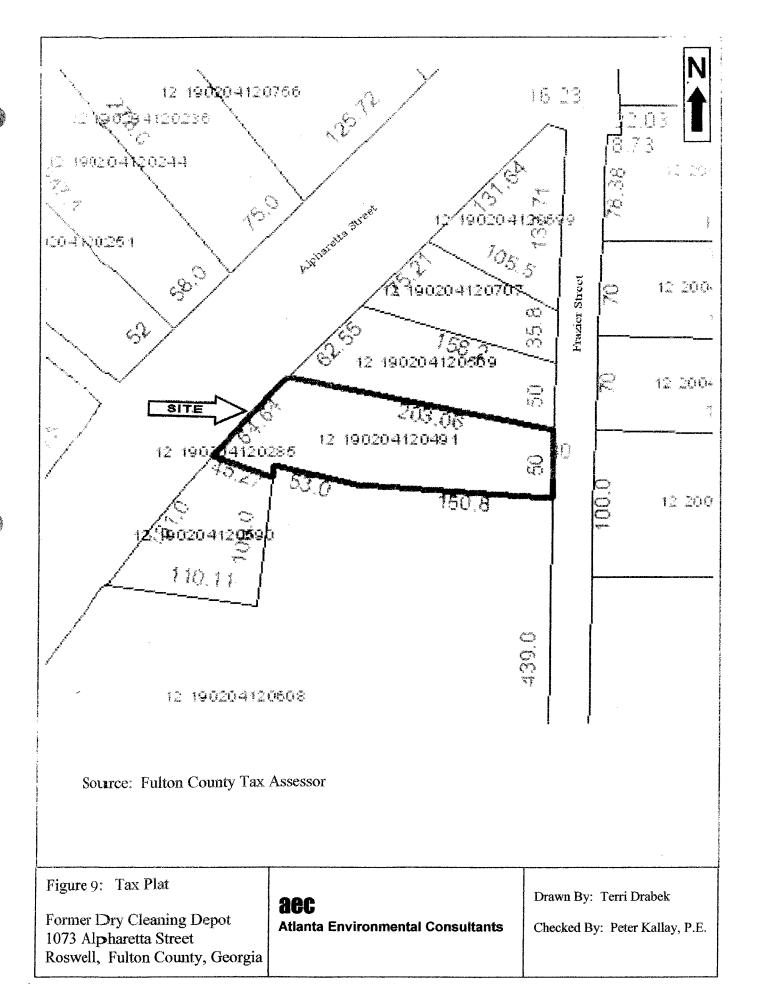


TABLE 1. Soil Analytical Results Former Dry Cleaning Depot 1073 Alpharetta Street Roswell, Fulton County, Georgia 30075

SAMPLE	SAMPLE	SAMPLE	ANALYT	ICAL RESULTS - Mil	ligrams Per Kilogra	m (mg/kg)
ID	DEPTH	DATE	PCE	TCE	OTHER	NOTES
	(ft)				COMPOUNDS	
MW-1 1'	1'	3/27/2008	0.024	ND (0.005)	ND	
MW-1 15'	15'	3/27/2008	ND (0.005)	ND (0.005)	ND	
MW-1 30'	30'	3/27/2008	ND (0.005)	ND (0.005)	ND	
MW-2 1'	2'	3/27/2008	0.44	ND (0.005)	ND	
MW-2 15'	15'	3/27/2008	0.071	ND (0.005)	ND	
-						
MW-3 1'	2'	3/27/2008	0.056	ND (0.005)	ND	
MW-3 15'	15'	3/27/2008	ND (0.005)	ND (0.005)	ND	
MW-4 1'	2'	3/28/2008	0.005	ND (0.005)	ND	
MW-4 15'	15'	3/28/2008	ND (0.005)	ND (0.005)	ND	
MW-5 1'	2'	3/28/2008	ND (0.005)	ND (0.005)	ND	
MW-5 15'	15'	3/28/2008	ND (0.005)	ND (0.005)	ND	
MW-6 5'	5'	6/27/2012	ND	ND (0.005)	0.130	Acetone
MW-6 20'	20'	6/27/2012	0.007	ND (0.005)	ND	

NOTES:

Concentrations are given in milligrams per kilogram (mg/kg).

Volatile Organic Compounds (VOC) were extracted by EPA Method 5035 and were analyzed by EPA Method 8260B

ND = Not Detected (I.e., compound, if present, is Below Quantitation Limits)

PCE = Tetrachloroethene, also known as perchloroethylene, tetrachloroethylene, or perc

TCE = Trichloroethene, also known as trichloroethylene

Table 2. Water Table Elevations Former Dry Cleaning Depot 1073 Alpharetta Street Roswell, Fulton County, Georgia

DATE	TOP-OF-CASING	DEPTH TO	WATER TABLE	NOTES
MEASURED	ELEVATION	WATER	ELEVATION	
	(feet)	(feet)	(feet)	
3/28/2008	98.72	29.73	68.99	
3/31/2008	98.72	29.64	69.08	
6/27/2012	98.72	27.89	70.83	
6/28/2012	98.72	27.88	70.84	
3/28/2008				
3/31/2008	93.77	26.49		
6/27/2012	93.77	24.89		
6/28/2012	93.77	24.91	68.86	
2/00/2000	02.51	27.56	65.05	
6/28/2012	93.51	25.01	68.50	
3/28/2008	93 39	33 47	59.92	
<u> </u>	93.39	25.29	68.10	
0,20,20:-				
3/28/2008	89.37	26.42	62.95	
3/31/2008	89.37	26.38	62.99	
6/27/2012	89.37	24.88	64.49	
6/28/2012	89.37	24.89	64.48	
0.107/0040	00.71	22.52	64.18	
	3/28/2008 3/31/2008 6/27/2012 6/28/2012 3/28/2008 3/31/2008 6/27/2012 6/28/2012 3/28/2008 3/31/2008 6/27/2012 6/28/2012 3/28/2008 3/31/2008 6/27/2012 6/28/2012 3/28/2008 3/31/2008 6/27/2012 6/28/2012	MEASURED ELEVATION (feet) 3/28/2008 98.72 3/31/2008 98.72 6/27/2012 98.72 6/28/2012 98.72 3/28/2008 93.77 3/31/2008 93.77 6/27/2012 93.77 6/28/2012 93.77 3/28/2008 93.51 6/27/2012 93.51 6/28/2012 93.51 3/28/2008 93.39 3/31/2008 93.39 3/31/2008 93.39 6/27/2012 93.39 3/28/2008 89.37 3/31/2008 89.37 3/31/2008 89.37 3/28/2012 89.37 6/27/2012 89.37 6/28/2012 89.37 6/28/2012 89.37 6/28/2012 89.37 6/28/2012 89.37 6/28/2012 89.37 6/28/2012 89.37	MEASURED ELEVATION (feet) WATER (feet) 3/28/2008 98.72 29.73 3/31/2008 98.72 29.64 6/27/2012 98.72 27.89 6/28/2012 98.72 27.88 3/28/2008 93.77 26.54 3/31/2008 93.77 24.89 6/27/2012 93.77 24.91 3/28/2008 93.51 27.56 3/31/2008 93.51 27.12 6/27/2012 93.51 24.91 6/28/2012 93.51 25.01 3/28/2008 93.39 33.47 3/31/2008 93.39 27.50 6/27/2012 93.39 25.25 6/28/2012 93.39 25.25 6/28/2012 93.37 26.42 3/31/2008 89.37 26.38 6/27/2012 89.37 24.88 6/28/2012 89.37 24.88 6/28/2012 89.37 24.89	MEASURED ELEVATION WATER (feet) ELEVATION (feet) 3/28/2008 98.72 29.73 68.99 3/31/2008 98.72 29.64 69.08 6/27/2012 98.72 27.89 70.83 6/28/2012 98.72 27.88 70.84 3/28/2008 93.77 26.54 67.23 3/31/2008 93.77 24.89 68.88 6/28/2012 93.77 24.91 68.86 3/28/2008 93.51 27.56 65.95 3/31/2008 93.51 27.12 66.39 6/27/2012 93.51 24.91 68.60 6/28/2012 93.51 25.01 68.50 3/28/2008 93.39 33.47 59.92 3/31/2008 93.39 27.50 65.89 6/27/2012 93.39 25.25 68.14 6/28/2012 93.39 25.29 68.10 3/28/2008 89.37 26.42 62.95 3/31/2008 89.37 <

Notes:

^{1.} Top of Casing Elevations are relative elevations, relative to an assumed height of instrument (H.I.) of 100.00 feet.

TABLE 3. Groundwater Analytical Results Former Dry Cleaning Depot 1073 Alpharetta Street Roswell, Fulton County, Georgia 30075

SAMPLE	ANALY	TICAL RESULTS	- Milligrams Per Liter	(mg/L)
ID and DATE sampled	PCE	TCE	OTHER COMPOUNDS	NOTES
MW-1 3-31-08	0.006	ND(0.005)	ND	
MW-1 6-28-12	ND(0.005)	ND(0.005)	ND	
MW-2 3-31-08	0.109	ND(0.005)	ND ND	
MW-2 6-28-12	ND(0.005)	ND(0.005)	ND	
MW-3 3-31-08	0.089	ND(0.005)	ND	
MW-3 6-28-12	0.086	ND(0.005)	ND	
MW-4 3-31-08	0.244	ND(0.005)	H ND	
MW-4 6-28-12	0.195	ND(0.005)	ND	
MW-5 3-31-08	1.040	0.005	ND ND	···-
MW-5 6-28-12	0.249	ND(0.005)	ND	
MW-6 6-28-12	0.145	ND(0.005)	ND	

NOTES:

Concentrations are given in milligrams per liter (mg/L)

Volatile Organic Compounds (VOC) were analyzed by EPA Method 8260B

ND = Not Detected (Below Quantitation Limits)

PCE = Tetrachloroethene, also known as perchloroethylene, tetrachloroethylene, or perc

TCE = Trichloroethene, also known as trichloroethylene