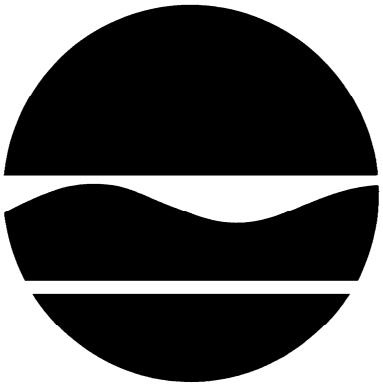
Remedial Investigation Work Plan

Ace Cleaners Site



Town of Sweden, Monroe County, N.Y.
Site No. 828133
December 2010

Prepared by: Jason Pelton
Remedial Bureau E
Division of Environmental Remediation

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1.0 SITE DESCRIPTION

This former dry cleaner site referred to as the Ace Cleaners is located at 4626 South Lake Road in the Town of Sweden, Monroe County, New York (Figure 1). The property includes a single one-story building on an approximate one acre parcel in a mixed retail, commercial, and residential area. The west-side of the property consists of a paved parking area and a dirt and gravel driveway. The east side of the site property is undeveloped and consists mostly of trees and brush. The property is bordered to the north by Sweden Lane, the west by Lake Road, the south by a retail business and to the east by a residential area. The site has been used for dry cleaning purposes since at least 1967.

This Ace Cleaners site was previously investigated by the New York State Department of Environmental Conservation (Department) Spills program (#0500215) and the Division of Environmental Enforcement. The investigation was performed to confirm allegations that spent dry cleaning solvent was discarded to the ground surface behind the building and into a sump within the site building. The investigation resulted in the excavation and the off-site removal of approximately 13.9 tons of PCE contaminated soil.

Following the initial investigation activities, the Department completed a Site Characterization in June 2010. Based on the completion of 15 shallow soil borings during the site characterization, the depth to bedrock ranges from approximately 8 feet to 17 feet beneath the ground surface. The overburden geology at the site consists of silt and sand with minor amounts of sand and gravel. Groundwater occurs at a depth of approximately 5 feet beneath the ground surface and flows in a north-northeast direction toward Brockport Creek and Lake Ontario.

2.0 SITE ENVIRONMENTAL ASSESSMENT

Based upon Site Characterization activities completed at the Ace Cleaners site, the primary contaminants of concern include tetrachloroethene (PCE) and PCE breakdown products (Trichloroethene (TCE), cis-1,2-Dichloroethene (cis-1,2-DCE), and vinyl chloride). PCE was the site contaminant detected at the highest concentration in various media including site soil, groundwater, and soil vapor. Specifically, PCE was detected at concentrations ranging from 20,000 ppb to 67,000 ppb in groundwater samples collected from the east-side of the site building. The PCE groundwater concentrations in the area of the east-side of the site building, along with groundwater from other areas of the site, significantly exceed the groundwater standard of 5 ppb. Similarly, PCE was detected at a maximum concentration of 40 ppm in a soil sample collected from a depth of approximately 11 feet below ground surface near the east-side of the site building. PCE was also detected in surrounding subsurface soil samples above the soil cleanup objectives for the protection of groundwater (1.3 ppm) at concentrations ranging from 13 to 35 ppm. The area where the highest PCE concentrations were detected in site soil and groundwater corresponds to the east side of the site building where disposal of waste dry cleaning solvents reportedly occurred. A soil vapor sample collected near the south-side of the site building and along the property line contained PCE at a concentration of 110,000 micrograms per cubic meter (ug/m3). PCE breakdown products including TCE, cis-1,2-DCE, and vinyl chloride were also detected in this soil vapor sample at concentrations of 1,700 ug/m3, 2,100 ug/m3, and 41,000 ug/m3

respectively. During earlier investigation activities at the site, PCE was also detected at a concentration of 18,000 ppm in a sludge sample collected from a sump within the site building. The overall presence and distribution of PCE suggests that former dry cleaning operations at the Ace Cleaners site has resulted in on-site soil contamination along with on-site and off-site groundwater and soil vapor contamination.

Although high concentrations of PCE (20,000 ppb to 67,000 ppb) are present in site groundwater located near the east side of the site building, PCE was also detected at a concentration of 2,000 ppb in off-site groundwater located approximately 300 feet east of the site building. A groundwater sample collected from a monitoring well located further downgradient of the site contained PCE at a concentration of 32 ppb. In off-site groundwater, PCE breakdown products including TCE and cis-1,2-DCE were detected at maximum concentrations of 190 ppb and 760 ppb respectively. The site characterization data indicates that the groundwater plume originates from the Ace Cleaners site and migrates off-site to the north and east.

The nearest surface water body is a small unnamed tributary to the Brockport Creek. The unnamed tributary borders the Ace Cleaners property line to the east and is located approximately 300 feet east of the site building. The unnamed tributary flows into the Brockport Creek located approximately 750 feet north of the Ace Cleaners site. PCE was detected at a concentration of 1.2 ppb and slightly above the surface water standard of 1 ppb in a surface water sample collected from the unnamed tributary at a distance of approximately 600 feet from the site. Based on the orientation of the off-site groundwater plume and the presence of PCE in off-site surface water, the site contaminants are migrating toward the unnamed tributary and the Brockport Creek. The majority of surface water runoff from the west-side of the site is captured by the storm water collection system located on Lake Road and Sweden Lane.

3.0 SCOPE OF WORK

Services required of the Callout Contractor include assistance to the Department Project Manager with implementation of a Remedial Investigation (RI) at the Ace Cleaners Site in Brockport, New York. The RI will expand on earlier Site Characterization work and will provide a thorough characterization of the nature and extent of contamination originating at the site, and will provide the necessary data to ultimately conduct a Feasibility Study.

The Department Project Manager has prepared this RI work plan and provided the RI work plan to the Callout Contractor. The work plan provides all the pertinent information on the field work, well construction details, sampling locations and methods, number of samples to be analyzed, parameters to be analyzed, and the analytical methods to be employed. Any portions of the RI which will be decided in the field are clearly identified.

The Callout Contractor is responsible for preparing a health and safety plan (HASP). The HASP should contain a section on community health and safety.

A Community Air Monitoring Plan (CAMP) may be required for intrusive field activities (e.g., test pitting) that are conducted during the investigation. The community air monitoring will be performed in accordance with the NYSDOH Generic CAMP.

The preparation and submittal of Data Usability Summary Reports (DUSRs) is mandatory for the first round of analytical results. The need for DUSRs in subsequent rounds of analytical work will be determined by the Department project manager.

Table 1 summarizes the total number of samples to be collected during the RI, the analytical methods that will be used, and the sampling identification system that will be used during the RI. With the exception of the indoor air samples collected using passive sorbent media, samples collected for laboratory analysis during the RI will be sent to the TestAmerica laboratory in Amherst, New York.

The overall objectives of this RI Callout for the Ace Cleaners site are to:

- Complete a test pit/test trench program near the rear of the site building to determine the extent of residual soil contamination and to possibly remove source material as part of an Interim Remedial Measure (IRM);
- Complete a series of subslab soil borings to determine if PCE contamination and a possible source area exists beneath the site building;
- Perform a floor drain and sewer utility to determine the disposition of materials that may have been disposed of in building floor drains;
- Characterize the distribution of contaminants in the overburden groundwater system, determine if the site contaminants have migrated into the shallow bedrock system, fully define the overburden stratigraphy, and define the limits of the groundwater plume through the installation of a series of overburden and shallow bedrock groundwater monitoring wells and the collection of both soil and groundwater samples for laboratory analysis;
- Based on the distribution of contaminants and groundwater flow patterns, determine the hydraulic relationship between the groundwater system and the surface water stream located immediately east of the site;
- Perform subslab and indoor air sampling to evaluate the potential for migration of vapors into on-site and off-site buildings; and
- Conduct a site survey and prepare a base map.

4.0 TEST PIT/TEST TRENCH PROGRAM

The scope of work will involve the excavation of a series of up to ten test pits/test trenches near the east-side of the site building (rear of site building). The test pits/test trenches will be excavated to fully define the limits of PCE contamination identified during the 2010 Site

Characterization. As part of an Interim Remedial Measure, PCE contaminated soil may be excavated and transported and disposed of off-site at a licensed disposal facility during the Test Pit/Test Trench program.

Based on previously collected data, it is expected that the test pits will be excavated to an average depth of approximately 12 to 13 feet below ground surface. The PCE contaminated soil at the site appears to be restricted to the 5 foot to 12 foot depth interval. During test pitting activities and based on field screening results combined with data previously collected during the Site Characterization, non-contaminated soil will be separated from contaminated soil. The ability to remove the PCE contaminated soil as an IRM during the Test Pit/Test Trench program will be determined in the field by Department staff and the Callout Contractor. Should PCE contaminated soil be removed from that site as part of an IRM, confirmation soil samples will be collected from the excavation for VOC laboratory analysis utilizing EPA Method 8260.

During the test pitting activities, the Department Project Manager will provide excavation oversight, classification of the soil, and the collection of soil samples for both field and laboratory analysis. The Empire Geoservices staff person will provide assistance during the test pitting program. Based on the field screening results, up to 10 soil samples will be collected for VOC laboratory analysis utilizing EPA Method 8260. During the test pitting/trenching program a total of three (3) soil samples will be collected for a full TCL/TAL laboratory analysis. Soil samples collected for laboratory analysis will be sent to the TestAmerica laboratory in Amherst, New York. Table 1 summarizes the total number of samples to be collected during the RI, the analytical methods that will be used, and the sampling identification system that will be used during the RI.

Field screening will involve a combination of headspace screening and the analysis of soil in the back-hoe bucket. Field screening and field observations will determine the actual length of each of the test pits/trenches. It is expected that the majority of the test pits/trenches will be approximately 15 to 20 feet in length. Figure 2 shows the general location where the test pits/trenches will be excavated.

All excavation equipment must be cleaned of all foreign matter, washed with a detergent, rinsed properly with water; or cleaned of foreign matter and sanitized with a pressure washer prior to use at the site. Other decontamination methods may be employed at the discretion of the Department Project Manager.

The test pitting/trenching program will be completed in accordance with appropriate health and safety requirements. The Callout Contractor will be responsible for the underground utility markout prior to the start of excavation activities.

5.0 SUBSLAB SOIL SAMPLING

Up to six (6) subslab soil borings will be advanced beneath the main floor of the Site building. The subslab soil samples will be collected by first coring a three-inch diameter hole through the building's concrete slab. Once the floor has been cored, the subslab soil samples will be collected using stainless steel core sampling equipment that will be advanced

using a slide hammer. The soil boring will be advanced to the top of bedrock. Based on the depth to bedrock information collected during the Site Characterization, it is expected that the subslab soil borings will be advanced to a depth of 12 to 13 feet below ground surface.

Continuous sampling of each boring will be completed to identify the subsurface geologic conditions. Photoionization detector (PID) headspace readings will be used to screen soil samples for the presence of VOCs as each soil sample is removed from the split-spoon sampler. At a minimum, PID headspace screening will completed for each one (1) foot depth interval. Based on the field screening results, up to eight (8) subslab soil samples will be collected for VOC laboratory analysis utilizing EPA Method 8260. Soil samples collected for laboratory analysis will be sent to the TestAmerica laboratory in Amherst, New York.

Following the completion of each subslab soil boring, the boring will be backfilled with bentonite chips to within a foot of the concrete slab. The remainder of the boring will be backfilled with gravel to the base of the concrete slab and cement will be placed in the cored portion of the concrete floor. The cement patch will be finished with a trowel to match the surrounding concrete floor.

6.0 MONITORING WELL DRILLING PROGRAM

A drilling program will be implemented as part of this Callout to evaluate the overburden and bedrock units, groundwater quality, and groundwater flow patterns. As shown on Figure 3, a total of 13 groundwater monitoring wells will be installed as part of the Ace Cleaners RI. Four (4) of the monitoring wells will be installed using a hollow stem auger drilling rig and screened in shallow bedrock. The remaining nine (9) groundwater monitoring wells will be installed using direct push technology and screened in the overburden directly above bedrock. As shown on Figure 3, each of the shallow bedrock wells will be paired with either an existing overburden monitoring well (GW-2 and GW-12 on Figure 3) or with a proposed overburden monitoring well to form a well couplet. The installation details for the overburden and bedrock monitoring wells are included in the following two sections.

For use during the RI, all drilling equipment must be cleaned of all foreign matter, washed with a detergent, rinsed properly with water; or cleaned of foreign matter and sanitized with a pressure washer. Other decontamination methods may be employed at the discretion of the Department Project Manager. During macrocore and split spoon soil sampling, the macrocores and split spoon samplers must be cleaned as above after each sample is collected.

6.1 Overburden Groundwater Monitoring Wells

A total of nine (9) direct push soil borings will be advanced at the Ace Cleaners site and subsequently completed as one (1) inch diameter groundwater monitoring wells. The monitoring wells will be located to supplement wells installed as part of the Ace Cleaners Site Characterization.

The soil borings will be advanced to the top of bedrock (estimated to be approximately 8 feet to 17 feet below ground surface). Soil samples will be collected continuously from the ground surface until refusal (presumed bedrock) using two or four foot long, 1 ½ -inch

diameter hollow acrylic sleeves. Samples sleeves will be brought to the surface for soil characterization and field screening.

The soil samples will be described and logged relative to their geologic character, features, and properties. The soil will be screened visually for evidence of contamination. In addition, soil samples will be collected at one foot intervals for headspace analysis. Field screening will involve placing the soil sample in a closed container (e.g. driller jars or sealable sampling bags) and analyzing the headspace with a photoionization detector for the presence of volatile compounds. It is not expected that soil samples will be collected for laboratory analysis during the monitoring well installation program. The possible selection of subsurface soil materials for laboratory analysis will be made in consultation with the DEC field representative and will be based on:

1) Subsurface soil materials that show visual signs of contamination; or
2) Subsurface soil materials that cause a sustained response above the measured background response on a calibrated flame or photo ionization screening instrument; or
3) The need to characterize site specific areas (e.g., the PCE handling areas, underground utility area, filter cleaning area, etc.); or
4) A combination of these situations.

6.2 Bedrock Groundwater Monitoring Wells

The drilling program will include the installation of four (4) shallow bedrock groundwater monitoring wells. As shown on Figure 3, three (3) of the wells will be located on-site and one (1) of the bedrock monitoring wells will be installed off-site. The shallow bedrock wells will be approximately 22-feet deep and screened entirely within the shallow bedrock zone. For the installation of the shallow bedrock groundwater monitoring wells, the overburden will be drilled to bedrock using 6-1/4 inch inside diameter (I.D.) hollow-stem augers. Since the bedrock monitoring wells will be installed adjacent to overburden monitoring wells where soil samples will have been previously characterized, soil samples will not need to be collected during the installation of the four (4) bedrock monitoring wells. Once bedrock is encountered, the bedrock will be drilled with a roller bit, or with a comparable technique, to a depth of approximately 22-feet below grade and the monitoring well will be constructed as described below.

Monitoring wells will be constructed with two-inch ID threaded schedule 40 PVC flush-joint casing with a ten-foot machine slotted 0.010-inch well screen. The annulus around the well screen will be backfilled with No. 1 Morie sand. The sand pack will extend one to two feet above the well screen. The top of the sand pack will be approximately one (1) foot beneath the top of the bedrock surface. A bentonite seal will be placed above the sand pack to form a minimum two foot seal. Cement/bentonite grout will be placed to within three feet of the ground surface. Each well will have a vented cap and there will be a locking cover. A cement pad will be installed to channel surface water away from the well. A weep hole will be drilled in the protective casing to allow any water between the inner and outer casing to drain.

The monitoring wells will be developed no sooner than 24-hours following installation by surging and pumping techniques. Well development will be considered complete when temperature, conductivity, and pH have stabilized and a turbidity of less than 50 NTUs has been achieved. At locations where well couplets were installed, water levels in the corresponding shallow well should be observed during development to evaluate vertical hydraulic connection.

7.0 GROUNDWATER SAMPLING PROGRAM

The consultant will not be exclusively responsible for the collection of groundwater samples. Groundwater samples will be collected during two separate sampling events by Department staff with support by the consultant. Groundwater samples will be collected during two separate sampling events from a total of 17 wells that includes the four (4) existing monitoring wells and the 13 monitoring wells installed as part of this Remedial Investigation. Groundwater samples will be collected using passive diffusion bags (PDBs) with confirmation conventional sampling techniques being employed at select sampling locations.

In addition to the collection of groundwater samples, a total of three (3) surface water samples will be collected from the surface water stream located east-northeast of the site.

Groundwater and surface water samples will be analyzed for VOCs by EPA Method 8260B and in accordance with the NYSDEC ASP during both sampling events. Prior to the start of both groundwater sampling events, water levels will be collected from the entire monitoring well network to prepare a groundwater contour map and evaluate groundwater flow patterns. During the first round groundwater sampling event, groundwater samples will be collected for a full TCL/TAL analysis from a total of three (3) locations. Conventional sampling techniques will be used to collect the three (3) samples for the full TCL/TAL analysis.

8.0 VAPOR INTRUSION SAMPLING PROGRAM

Vapor intrusion sampling will be completed as part of the Ace Cleaners RI to evaluate the potential for migration of vapors into on-site and off-site buildings. The indoor air sampling program will be completed in accordance with the NYSDOH Indoor Air Sampling and Guidance document. It is estimated that vapor intrusion samples will be collected at a total of 12 locations (Figure 3 and Table 2 below). The overall goal of the vapor intrusion sampling program is to evaluate potential human exposure to VOCs known to occur in site soil and on-site and off-site groundwater.

Table 2 – Proposed Vapor Intrusion Sampling Locations

Number	Owner Name	Address
1	**Bruce Ribble**	**4626 Lake Road, Brockport, NY 14420**
2	**Bardahl of Western NY, Inc.**	**4634 Lake Road, Brockport, NY 14420**
3	**Debra Galan**	**6 Sweden Lane, Brockport, NY 14420**
4	**Patriot Management, LLC**	**1, 3, 5, & 7 Sweden Lane, Brockport, NY 14420**
5	**Dudley Grierson**	**9 Sweden Lane, Brockport, NY 14420**
6	**Timothy Brusseau**	**10 Sweden Lane, Brockport, NY 14420**
7	Aaron Green	72 Hollybrook Road, Brockport, NY 14420
8	**Eugenia Gerber**	**79 Hollybrook Road, Brockport, NY 14420**
9	Keith Merrill	82 Hollybrook Road, Brockport, NY 14420
10	Eugene Shortt	92 Hollybrook Road, Brockport, NY 14420
11	**Zachary Delany**	**95 Hollybrook Road, Brockport, NY 14420**
12	Robert Berry	102 Hollybrook Road, Brockport, NY 14420

Air samples will be collected from two locations per sampling point including the basement and the subslab environment. An active approach utilizing laboratory certified canisters will be used to evaluate the subslab soil vapor conditions. Subslab vapor samples will be collected for laboratory analysis utilizing the TO15 methodology. A passive approach using diffusive samplers will be used to collect the basement air samples. The basement air samples will be collected for laboratory analysis utilizing the TO17 methodology. The VI samples will be setup during an initial visit, allowed to collect the air samples during a 24 hour period, and then collected at the conclusion of the 24 hour period. Upon collection, the samples will be sent to the laboratory for analysis. Appendix A includes the list of analytes along with the minimum reporting limits for both the TO15 and the TO17 laboratory analyses.

Prior to initiating the air sampling, the property owners will be contacted through a telephone call and then through a ten-day written notice consistent with NYSDEC TAGM 4053. The Department Project Manager will contact the property owners, discuss the sampling program, and schedule the sampling. The Department Project Manager will provide the consultant with a copy of the correspondence and indoor air sampling schedule. The vapor intrusion sampling program will be completed during two separate phases. During the first phase, a total of eight (8) property owners (identified with bold text and Numbers 1, 2, 3, 4, 5, 6, 8, and 11 in Table 2) will be contacted for participation in the VI sampling program. Based on the results of the first phase, it is expected that an additional four (4) property owners (Numbers 7, 9, 10, and 12 in Table 2) will be contacted for participation in the VI sampling program.

During the VI sampling program, outdoor ambient air samples will be collected. The ambient air samples will be collected at the same time as the indoor air samples and from an evenly spaced location that is representative of outdoor air conditions for the entire sampling area. Quality assurance/quality control samples including duplicates and MS/MSD samples will also be collected during the VI monitoring program.

9.0 FLOOR DRAIN AND UNDERGROUND UTILITY SURVEY

A sewer survey will be conducted as part of the RI to verify the connections of the floor drain piping and roof drain cleanouts to the municipal sewers. The sewer survey will utilize a camera system and possibly a dye tracer. If possible, a beacon on the camera system will be used to determine the approximate location of the underground utility/utilities on the floor and ground surface.

10.0 SITE SURVEY AND BASE MAP PREPARATION

As part of Task 10, a site survey will be completed by a licensed surveyor. The site survey will include monitoring wells installed by the Department as part of both the RI and the previously completed Site Characterization.

A detailed topographic base map of the site and immediate vicinity will be developed. All relevant features of the site and adjacent areas will be plotted. The site map should include all area important features associated with the investigation (i.e., surface water drainage, above and underground storage tanks, buildings, drywells, cesspools). The base map will be used to accurately plot subsequent sampling locations including soil borings, monitoring wells, and all other sample locations. The tax maps will be reviewed and the property lines of the parcels will be plotted on the base map. The location and elevation of each monitoring well must be surveyed by a New York State licensed surveyor. The elevations of all monitoring well casings should be established to within 0.01 feet based on the NGVD. A permanent reference point should be placed in all interior PVC casings to provide a point to collect future groundwater elevation measurements.

With respect to the site survey and base map preparation, the following assumptions have been made:

- The estimated survey area should include the whole site boundary. All elevations will be referenced to the NAVD 88. All horizontal locations will be referenced to the NAD 83.

- The site map must be provided in ArcMap™ 9.3.

11.0 DATA VALIDATION/DETERMINATION OF USABILITY

The collection and reporting of reliable data is a primary focus of the sampling and analytical activities. Laboratory and field data will be reviewed to determine the limitations, if any, of the data and to assure that the procedures are effective and that the data generated provides sufficient information to achieve the project objectives. The laboratory analytical data will be submitted to a third party data validator for review. The contractor will evaluate the analytical data according to NYSDEC DER Data Usability Summary Report (DUSR) guidelines.

12.0 HEALTH EXPOSURE ASSESSMENT

A "qualitative" health exposure assessment will be performed as part of the RI. The assessment will be designed to identify potential exposure pathways of site contaminants to the general public.

13.0 FISH & WILDLIFE IMPACT ANALYSIS

Assistance with the completion of a Fish and Wildlife Impact Analysis through step II-B is to be provided by the Callout Contractor. The, Fish and Wildlife Impact Analysis will completed in accordance with the NYSDEC Division of Fish and Wildlife guidance memorandum entitled "Fish and Wildlife Impact Analysis" dated 10/94.

TABLE 1

Table 1
Ace Cleaners Remedial Investigation
Sample Summary Table

	Media	VOCs EPA Method 8260	SVOCs EPA Method 8270	Pesticides EPA Method 8081	PCBs EPA Method 8082	TAL Metals EPA Method 6010	VOCs using 6L Canisters TO-15	VOCs using Axial Diffusive Samplers TO-17	MS/MSD	Duplicate	Equipment Blank*	Sample ID
Task 1 - Test Pit/Test Trench Program	Soil	10	3	3	3	3	X	X	1	1	1	828133-TP-XXX-XX
Task 2 - Subslab Soil Sampling Program	Soil	8	X	X	X	X	X	X	1	1	1	828133-SB-XXX-XX
Task 3 - Well Drilling Program	Soil	X	X	X	X	X	X	X	X	X	X	N/A
Task 4 - Groundwater Sampling Program	Groundwater	34	3	3	3	3	X	X	1	1	X	828133-MW-XXX-(PDB or CON)^
	Surface Water	3	X	X	X	X	X	X	X	X	X	828133-SW-XXX
Task 5 - Vapor Intrusion Sampling Program	Subslab Vapor#	X	X	X	X	X	12	X	1	1	X	828133-SS-XXX-XX
	Indoor Air$	X	X	X	X	X	X	14	X	X	2	828133-IA-XXX-XX
	Outdoor Air$	X	X	X	X	X	X	4	X	X	X	828133-OA-XXX-XX

NOTES:

* Equipment blank is submitted as a liquid sample to the analytical laboratory for VOC analysis.

^ Use "PDB" suffix for Passive Diffusion Bag samples and "CON" for samples collected conventionally (low flow or bailers).

Subslab vapor samples collected using 6 liter canisters.

$ Indoor and Outdoor air samples collected using passive sorbent media.

"XXX" Denotes sample location and/or sample numbers

FIGURES

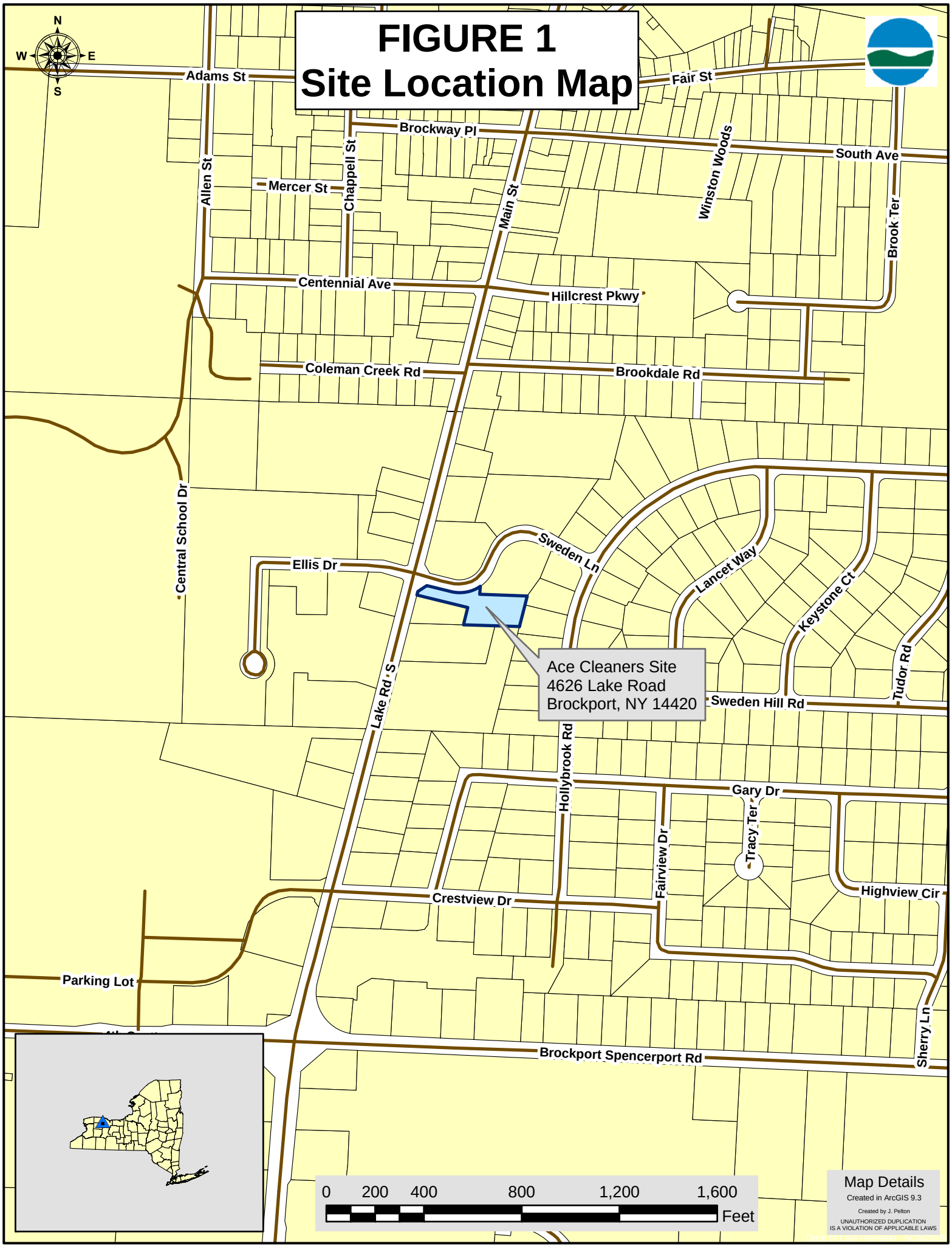
FIGURE 1
Site Location Map
N
W
E
S
Adams St
Fair St
Brockway Pl
South Ave
Allen St
Mercer St
Chappell St
Main St
Winston Woods
Brook Ter
Centennial Ave
Hillcrest Pkwy
Coleman Creek Rd
Brookdale Rd
Central School Dr
Sweden Ln
Ellis Dr
Lancet Way
Keystone Ct
Tudor Rd
Ace Cleaners Site
4626 Lake Road
Brockport, NY 14420
Lake Rd S
Sweden Hill Rd
Hollybrook Rd
Gary Dr
Tracy Ter
Fairview Dr
Highview Cir
Crestview Dr
Parking Lot
Brockport Spencerport Rd
Sherry Ln
0 200 400 800 1,200 1,600
Feet
Map Details
Created in ArcGIS 9.3
Created by J. Pelton
UNAUTHORIZED DUPLICATION
IS A VIOLATION OF APPLICABLE LAWS


FIGURE 2
Site Map with Proposed Test Pit/Test Trench Area
N
W
E
S
Lake Rd S
Sweden Ln
GW-12
SW-2
GW-6
GV-3
GW-11
GW-2
GW-14
GW-3
GV-4
GW-1
GW-15
GW-4
GW-16
GW-5
GV-1
GW-7
GV-2
Proposed Test Pit/Trench Area
GW-10
GW-9
GW-8
SW-1
Legend
Proposed Test Pit Area
Site Boundary
Local Streets
Site Characterization Sampling Locations
Sample Type
Geoprobe
Microwell
Soil_gas
Surface_water
0 25 50 100 150 200
Feet
Map Details
Created in ArcGIS 9.3
Created by J. Pelton
UNAUTHORIZED DUPLICATION IS A VIOLATION OF APPLICABLE LAWS
Date of Last Revision: 5/28/2009


FIGURE 3
Proposed Monitoring Well &
Vapor Intrusion Sampling Map
N
W
E
S
Main St
Coleman Creek Rd
Brookdale Rd
Lake Rd S
Lancet Way
General Area for Vapor Intrusion Sampling
Sweden Ln
GW-2
Sweden Hill Rd
Hollybrook Rd
Gary Dr
Legend
Site Boundary
Local Streets
Existing Overburden Wells
Proposed RI Wells
Well Type
Bedrock Well
Overburden Well
0 75 150 300 450 600
Feet
Map Details
Created in ArcGIS 9.3
Created by J. Pelton
UNAUTHORIZED DUPLICATION
IS A VIOLATION OF APPLICABLE LAWS
Date of Last Revision: 5/18/2009

APPENDIX A

VaporTrail Analytics
Web: www.vaportrailanalytics.com
E-Mail: info@vaportrailanalytics.com
Stratospheric Performance
179 Lake Avenue, Rochester, New York 14608 Phone (585) 727-2825

Volatile Organic Compounds by ASTM D6196-03 Passive Sorbent Tube Sampling With Modified EPA Method TO-17 Analysis: Analytes Including PCE and TCE - List & Reporting Limits

As of 17 November 2010

(Micrograms per cubic meter, $\mu g \cdot m^{-3}$)

Analyte	**Reporting Limit**
1,1,1-Trichloroethane	0.18
1,1-Dichloroethene	0.16
1,2-Dichloroethane	0.15
Benzene	1.7
Carbon Tetrachloride	0.16
Chloroform	0.15
cis-1,2-Dichloroethene	0.85
Cyclohexane	0.17
Ethylbenzene	1.8
Isopropylbenzene	0.16
Methyl acetate	1.3
Methylcyclohexane	0.16
m,p-Xylenes	3.2
o-Xylene	0.16
Styrene	1.5
Tetrachloroethene	0.16
Toluene	1.5
Trichloroethene	0.16
Vinyl Chloride	0.16

Stated reporting limits are for a 24-hour sampling interval.

TestAmerica Knoxville
NYSDEC - TO-15
Vapor Intrusion Sub-Slab Analysis

Compound	RL(ug/m3)
Benzene	0.26
Benzyl chloride	0.83
Bromodichloromethane	0.54
Bromoform	0.83
Bromomethane	0.31
2-Butanone (MEK)	0.94
tert-Butyl alcohol	0.97
Carbon tetrachloride	0.50
Chlorobenzene	0.37
Dibromochloromethane	0.68
Chloroethane	0.21
Chloroform	0.39
Chloromethane	0.41
Cyclohexane	0.69
1,2-Dibromoethane (EDB)	0.62
1,2-Dichlorobenzene	0.48
1,3-Dichlorobenzene	0.48
1,4-Dichlorobenzene	0.48
Dichlorodifluoromethane	0.40
1,1-Dichloroethane	0.32
1,2-Dichloroethane	0.32
1,1-Dichloroethene	0.32
cis-1,2-Dichloroethene	0.32
trans-1,2-Dichloroethene	0.32
1,2-Dichloropropane	0.37
cis-1,3-Dichloropropene	0.36
trans-1,3-Dichloropropene	0.36
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.56
1,4-Dioxane	0.72
Ethanol	1.5
Ethylbenzene	0.35
Hexachlorobutadiene	0.85
n-Hexane	0.71
Methylene chloride	0.70
4-Methyl-2-pentanone (MIBK)	0.82
Methyl tert-butyl ether	0.58
Styrene	0.34
1,1,2,2-Tetrachloroethane	0.55
Tetrachloroethene	0.54
Toluene	0.30
1,2,4-Trichlorobenzene	0.59
1,1,1-Trichloroethane	0.44
1,1,2-Trichloroethane	0.44
Trichloroethene	0.22
Trichlorofluoromethane	0.45
1,1,2-Trichlorotrifluoroethane	0.61
1,2,4-Trimethylbenzene	0.39
1,3,5-Trimethylbenzene	0.39
2,2,4-Trimethylpentane	0.93
Vinyl chloride	0.20
m-Xylene & p-Xylene	0.35
o-Xylene	0.35