SITE CHARACTERIZATION REPORT
CRYSTAL CLEANERS SITE
Site Number: 3-60-053

Work Assignment No. D004436-19

Prepared for:

SUPERFUND STANDBY PROGRAM
New York State
Department of Environmental Conservation
625 Broadway
Albany, New York 12233

January 2009

Prepared by:

Earth Tech Northeast, Inc.
300 Broadacres Drive
Bloomfield, NJ 07003-3153

TABLE OF CONTENTS

Figures

Tables

Appendices

1.0 INTRODUCTION

Earth Tech Northeast, Inc. (Earth Tech | AECOM) has been issued an Immediate Activation Work Assignment (IAWA) D004436-19 under the New York State Department of Environmental Conservation (NYSDEC) State Superfund Standby Program. The site under this work assignment is Crystal Cleaners, Site # 3-60-053. The location of the site is shown on Figure 1.

This site is currently listed as a "P" or Potential Registry Site. A "P" site is a potential candidate for inclusion on the Registry of Inactive Hazardous Disposal Site (Registry), but requires additional investigation to determine if it meets the criteria for listing in 6NYCRR Part 375. In order to be listed on the Registry, the investigation that will be performed under this work assignment must first confirm that a consequential amount of hazardous waste disposal has occurred and then determine if the hazardous waste present presents a significant threat to the public health or the environment.

A waste material may be regulated as a hazardous waste if it is a material included in Federal or NYSDEC lists of hazardous waste. If a material is regulated because it is included on a federal or state list, it is commonly referred to as a "listed hazardous waste."

Regulations 6 NYCRR Part 375, set forth several definitions of significant threat to the environment and to the public health. The mere presence of hazardous waste at a site or in the environment is not a sufficient basis for finding that hazardous waste disposed at a site constitutes a significant threat to public health or the environment. Significant threat is evaluated by comparing groundwater analytical results to NYS Class GA Groundwater Quality Standards set forth under 6 NYCRR Parts 700-705, comparing soil gas analytical results to the guidelines developed by the New York State Department of Health (NYSDOH) (Guidance for Evaluating Soil Vapor Intrusion in the State of New York, NYSDOH, October 2006) and also, the Division of Environmental Remediation TAGM 4046 "Determination of Soil Cleanup Objectives and Cleanup Levels" and NY Soil Cleanup Criteria (NYSCC) are used as a guide in determining whether soils contain contamination which may contribute to the degradation of groundwater quality.

The outcome of the investigation will reclassify this P site into a class 2, class 3 or class N site. These classifications are defined as:

Class 2 – A site at which the disposal of hazardous waste has been confirmed and this hazardous waste or its components or breakdown products present a significant threat to the public health or the environment;

Class 3 - A site at which the disposal of hazardous waste has been confirmed and this hazardous waste or its components or breakdown products do not constitute a significant threat to the public health or the environment;

Class N – No Further Action Anticipated at this Time – Used for State Superfund sites where a determination has been made (based upon investigation) that the degree of contamination does not qualify the site for placement on the Registry and that additional remedial work is not anticipated at this time.

The specific objective of this investigation was to perform a Site Characterization to gather information to determine whether the site should be included in the Registry of Inactive Hazardous Waste Disposal Sites in accordance with the New York State Environmental Conservation Law (ECL; section 27-1305.4.a). The work was performed in accordance with NYSDEC Division of Environmental Remediation Draft DER-10 Technical Guidance for Site Investigation and Remediation, December 2002 and the Project Work Plan (Earth Tech, 2008). As specified in the work assignment, Earth Tech assisted the NYSDEC project management team in the preparation and implementation of the field investigation program.

1.1 Site Description

Information on the location, previous investigations, and site geology are provided in the subsections below.

1.1.1 General/Location

The Crystal Cleaners site (herein identified as the "site") is located at 113 Wolfs Lane in the Village of Pelham, Westchester County, New York (Figure 1). The surrounding area is urban with commercial establishments as well as residences nearby. The Crystal Cleaners site is a single-story building containing several businesses adjacent to the eastern boundary of property owned by the Village of Pelham, Department of Public Works. The site is located near the former Pelham Residence Voluntary Cleanup Program (VCP) site (V00258-3) which is located at 195 Wolfs Lane. The VCP site work was never completed. Crystal Cleaners, an active dry cleaning business, is one of several businesses located in the single-story building.

1.1.2 Previous Investigations and Remedial Actions

A site investigation of the Pelham Residence VCP site (V00258-3) was conducted from 1997 to 2000 and included the removal of USTs, installation of monitoring wells, and the sampling of the wells. Groundwater data obtained as part of this investigation indicated high concentrations of tetracholoroethene (PCE) (1300 µg/L), trichloroethene (TCE) (22 µg/L), and dichloroethene (DCE; isomer not specified) (36 µg/L). Based on the direction of groundwater flow and the upgradient location of the site, Crystal Cleaners was identified as a possible source of the contamination. On September 11, 2000, the Pelham Residence site withdrew from the VCP. Crystal Cleaners is also listed as a large quantity generator (LQG) of hazardous waste, and utilizes solvents (typically chlorinated hydrocarbons). Crystal Cleaners was classified as a "P" site on April 21, 2000 subsequent to the site investigation at the Pelham Residence site.

Nine underground storage tanks (USTs) were removed from a property at 101 Wolfs Lane in 1998; all contained petroleum products (six gasoline tanks, plus one each with used oil, hydraulic fluid, and fuel oil). About 135 tons of petroleum-contaminated soils were removed concurrently with the removal of the USTs.

A Phase I Environmental Site Assessment (ESA) was performed by Environmental Liability Management, Inc. (ELM; June 1999) for the property located at Block 202, Lots 13 and 26 in Pelham. Based on NYSDEC (2000), this is the property located at 195 Sparks Avenue. Crystal Cleaners is located near the eastern property boundary of the subject site. The ELM Phase I ESA indicates that a groundwater investigation was also conducted in the area in response to an UST removal (Case #96-11862) during which contaminated soil was removed and monitoring wells were sampled (MW 1A, 2A, 3A, 9, and 10; see Figure 2). NYSDEC (2000) also indicates that there were four above-ground storage tanks (ASTs) on this property (as of January 2000). There are 12 monitoring wells on the property (although one – MW-2 – could not be located). TCE and PCE were detected in three monitoring wells, as noted above for the Pelham Residence VCP (V000258-3).

No data were located indicating that any of the monitoring wells have been sampled since the above-cited reports and investigations were completed.

Crystal Cleaners was added to the NY Registry of Inactive Hazardous Waste Sites in 2000, subsequent to the Site Investigation at the Pelham Residence Site.

1.1.3 EDR Report

An Environmental Data Resources Report (EDR) for the site is provided in Appendix A. The EDR was prepared in 2008 for Earth Tech. The report identifies the following within a 0.25-mile radius of Crystal Cleaners: 70 leaking storage tanks ; 10 underground storage tanks; and 5 aboveground storage tanks containing leaded and unleaded gasoline, diesel and fuel oil were recorded. Five spills have been reported in the vicinity of the site. Carol Cleaners and Tailors Inc., is the only drycleaners facility reported within a 1/8-mile radius.

1.1.3.1 Site Geology and Hydrogeology

No information specific to Crystal Cleaners was located. However, a NYSDEC summary of information for each property of the Pelham Residence VCP Site (NYSDEC, January 2000; memo from Keith Browne to Ram Pergadia) has information on a nearby property (101 Wolfs Lane). This information indicates that bedrock was encountered at 12 to 14 feet below ground surface (ft bgs), and that the soil is generally a mixture of gravel, sand, silt, and clay. Groundwater was encountered at 9.5 to 11.5 ft bgs and is believed to flow to the west, toward the Hutchinson River located about 1000 ft away.

2.0 FIELD INVESTIGATION

Field investigation was conducted to determine the existence of contamination at the site and to identify the nature of the contamination. The field investigation consisted of installing two monitoring wells and collecting soil vapor samples, soil samples and groundwater samples. Boring locations and monitoring well locations were surveyed using ground-penetrating radar (GPR) for utility clearance by a subcontracted NYS licensed surveyor (AGS). Borings points were advanced by Aztech Technologies, Inc. (Aztech), a subcontractor to Earth Tech. Personnel from Earth Tech's consultant, YEC Inc., collected samples and oversaw the drilling. Sample locations are shown on Figure 2. The field investigation was conducted between May and July 2008.

2.1 Soil Vapor Investigation

A subsurface soil vapor investigation was conducted on May 14, 2008, throughout the project area to try to determine hot spots or a potential contaminant source, and to determine if subsurface vapor migration is a potential threat to the businesses and other establishments in the site vicinity. YEC collected six soil vapor samples (SV-1 through SV-6) and ambient air sample in the vicinity of the site, as shown in Figure 2. Air sampling equipment (summa canisters and regulators) was provided by an analytical laboratory, Chemtech, a NYSDOH ELAP certified lab (ELAP ID 11376; certification includes air and emissions).

Soil gas probes were installed to a depth of approximately 8 ft bgs by Aztech. The boreholes were backfilled with glass beads and bentonite slurry was placed above the glass beads to the ground surface. Sufficient time was provided for the bentonite to set up prior to purging and sampling. A leak test was performed on each of the sampling trains and fittings to confirm that air leakage was not occurring.

The tubing was purged approximately two to three probe volumes at a flow rate less than 0.2 liters per minute. PID readings were recorded during pumping. The air sampling pump was disconnected and the end of the tubing was connected directly to the summa canister intake valve. Each summa canister was checked to verify that the initial vacuum is 28 inches of mercury (28" Hg), ±2" Hg, before sampling.

Samples were collected in laboratory-provided batch-certified 1.4 L summa canisters with regulators calibrated to collect a sample for a 2-hour period. Soil gas samples were analyzed for volatile organics compounds (VOCs) by EPA method TO-15 and results are summarized in Table 2.

2.2 Soil Investigation

Soil sampling was conducted during the monitoring well installation. One soil sample was collected on May 13, 2008 using a MacroCore at MW-C2 from the depth of 13-15 ft bgs. The soil sample was collected using dedicated acetate liner. The acetate liner was cut open to retrieve the soil sample. The soil retained in the sampler was visually evaluated and was also screened with a PID. A soil sample was collected advancing Geoprobe to the depth of 13-15 ft. The soil samples for VOC analysis were collected from the acetate liner using EnCore® samplers, a pre-cleaned, pre-packaged sampling tool provided by the laboratory (Chemtech, Mountainside, NJ). Boring logs describing the type of soil, total depth of the boring and sample intervals are provided in Appendix B. Soil samples were collected and shipped to Chemtech for VOC analysis. No soil sampling was conducted during installation of the upgradient bedrock well, MW-C1. Soil VOC data are presented in Table 3.

2.3 Groundwater Investigation

Two permanent monitoring wells (MW-C1 and MW-C2) were installed at the site. MW-C1 was installed at the upgradient direction while MW-C2 was installed in the vicinity of the suspected source location (Crystal Cleaners facility).

Installation of wells MW-C1 and MW-C2 was conducted on May, 5 2008 using Geoprobe. Geoprobe encountered refusal at 8 ft bgs at the location of MW-C1. Therefore, a bedrock well was installed at the location of MW-C1 using a truck-mounted rig equipped with hollow-stem auger (HSA) on July 2, 2008 to the depth of 26 ft bgs. The well was constructed of 2-inch inside diameter flush threaded schedule 40 polyvinyl chloride (PVC) well screen (10 ft screen length) and well casing. The PVC screen/pipe was inserted into the HSAs to the desired depth and a sand pack was tremied into the HSA. The HSA was lifted incrementally as the sand was tremied into the auger until the sand pack extended two feet above the top of the screen. The remainder of the annular space was grouted with cement-bentonite grout which was tremied into the HSA casing. The screen sections are flush-jointed and internally threaded.

MW-C2 was installed on May 5, 2008 advancing the Geoprobe to the depth of 18 ft bgs. A 1.25-inch inner diameter Geoprobe pre-pack screen was installed. The well was constructed with 10 ft of screen straddling the water table with sufficient riser to extend to grade. Bentonite was added from the top of the pre-pack filter to immediately below grade.

Both wells were completed with a flush-mounted cover and a locking gripper plug. No couplings, chemicals, glues or solvents were used during monitoring well installations.

Well construction logs are provided in Appendix B.

Following the installation of the monitoring wells, YEC developed the two newly-installed monitoring wells using a pump and surge development method. A one-way valve was used for well development of MW-C2, and a peristaltic pump was used for MW-C1. Water quality parameters (pH, specific conductivity, temperature, dissolved oxygen [DO], and turbidity) were measured by YEC during the well

development. Water generated during the monitoring well development was containerized in 55-gallon drums. Copies of well development logs are included in Appendix B.

On July 17 and 18, 2008, Earth Tech collected groundwater samples from the 13 monitoring wells (MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-9, MW-10, MW-1A, MW-2A, MW-3A, MW-C1, and MW-C2). Prior to sample collection, YEC measured the groundwater elevation in the wells. The groundwater samples were collected using a low-flow method. Water quality parameters (pH, DO, specific conductivity, temperature and turbidity) were measured and documented using a flow-through cell. A water level indictor was used to measure depth to water during purging. The wells were purged at rate between 290 to 530 mL/min. A minimum of one well volume was purged until the water quality parameters were stabilized prior to sample collection. Copies of well sampling logs are included in Appendix B. The groundwater elevation data are included in Table 5. The groundwater contour map for the synoptic water level measurements taken on July 17, 2008 is shown on Figure 3.

Water samples were collected in pre-preserved (HCl) bottles provided by the laboratory and shipped on ice under chain-of-custody (COC) to ET's laboratory (Chemtech) for VOC analysis. Groundwater VOC data are presented in Table 4.

2.4 Investigation-Derived Waste Management

Water and soil collected from the field activities, such as equipment decontamination, monitoring well development, and purged groundwater and drill cuttings generated was containerized in two 55-gallon drums. One sample (IDW-01) was collected for Toxicity Characteristic Leaching Procedure (TCLP) analysis for waste characterization. The drums were collected for disposal by Cycle Chem on September 18, 2008. The bill of lading is included in Appendix B.

3.0 LABORATORY ANALYTICAL RESULTS

3.1 Soil Gas Sampling

Six soil vapor samples and one ambient air sample were collected at the locations shown on Figure 2. The samples were analyzed for VOCs by USEPA method TO-15. Analytical results are summarized on Table 2. NYSDOH has not established criteria or guidance values for VOCs in soil gas. Concentrations of VOCs observed in soil vapor samples and ambient air sample in the vicinity of the site (see Figure 4 and Figure 5) include:

- TCE (32 µg/m^3) and PCE (4,156 µg/m^3) were detected in SV-1, located immediate downgradient of the Crystal Cleaners facility. N-heptane (4.9 µg/m^3), carbon disulfide (12 µg/m^3), carbon tetrachloride (4.4 µg/m^3) and xylene (m&p) (4.3 µg/m^3) were also detected in SV-1.
- Several VOCs compounds were detected in sample SV-2 including: TCE (1,793 µg/m^3), PCE (159,877 µg/m^3), methylene tert-butyl ether (MTBE) (58 µg/m^3), 1, 2-dichloroethene (trans) (36 µg/m^3), 1, 2-dichloroethene (cis) (371 µg/m^3), 2,2,4-trimethylpentane (69 µg/m^3), benzene (37 µg/m^3).
- TCE (114 µg/m^3) and PCE (10,000 µg/m^3) were detected at elevated concentrations near the site at SV-3.
- PCE was detected from the soil vapor samples SV-4 (248 µg/m^3), SV-5(392 µg/m^3) and SV-6 (298 µg/m^3). 1,1,1-trichlroethane (9.8 µg/m^3) was observed in SV-3 and cyclohexane (12 µg/m^3) was observed in SV-6.

- Several VOCs were observed in the ambient air sample which including: dichlorofluoromethane (2.2 µg/m^3), chloromethane (1.6 µg/m^3), trichlorofluoromethane (1.4 µg/m^3), methylene chloride (1.8 µg/m^3), 2,2,4-trimethylpentane (0.47 µg/m^3), benzene (0.61 µg/m^3), toluene (3.9 µg/m^3), PCE (5.5 µg/m^3), xylene (m&p) (0.96 µg/m^3) and 1,2,4-trimethylbenzene (2.6 µg/m^3).

The detected concentrations of TCE and PCE in the soil vapor samples were compared with the Decision Matrices found in NYSDOH (2006) assuming the soil vapor concentrations are analogous to sub-slab concentrations. Table 5 lists the recommended course of action (as identified in NYSDOH, 2006) for each sample point that would vary depending on the concentration detected in indoor air. For SV-2, the recommended action for matrix 1 (TCE) would be to mitigate. For SV-3, the recommended action would be monitor or mitigate. For all other points, the recommended course of action for matrix 1 (TCE) would be no further action or take reasonable and practical actions to identify sources and reduce exposures. For soil vapor point from SV-1 through SV-3, the recommended action for matrix 2 (PCE) would be mitigate and for all other point it would be to monitor to mitigate.

3.2 Soil Sampling

One soil sample was collected from the MacroCore of MW-C2 from the vicinity of the source area and submitted to Chemtech for VOC analysis by USEPA method 8260. The results are compared with NY Soil Cleanup Objectives (NY SCO) and presented in Table 3, Figure 6 and Figure 7. Methylene chloride was detected at 4.4 µg/m^3, which is below the NY SCC objective. No other VOCs were detected in MW-C2 (13-15).

3.3 Groundwater Sampling

A total of 14 groundwater samples, including one field duplicate sample, were collected and submitted for VOC analysis utilizing USEPA SW-846 Method 8260. The groundwater results are compared to NY Class GA Groundwater Criteria and are presented in Table 4. Class GA criteria were exceeded for a number of chlorinated solvents and other VOCs as summarized below.

- TCE concentrations exceeded the criteria in two of 14 samples, with concentrations of 5.1 µg/L (MW-3A) and 54 µg/L (MW-9).
- PCE concentrations exceeded the criteria in 11 of 14 samples, with concentrations of 7.2 µg/L (MW-1A), 14 µg/L (MW-2A), 29 µg/L (MW-C2), 5.6 µg/L (MW-3), 6.3 µg/L (MW-3A), 5.4 µg/L (MW-4), 8.8 µg/L (MW-5), 5.2 µg/L (MW-7), 790 µg/L (MW-9) and 15 µg/L (MW-10).
- The concentration of isopropylbenzene exceeded the criterion for MW-1 (10 µg/L).
- cis-1,2-Dichloroethene concentrations exceeded the criterion for two of the 14 samples, with concentrations of 36 µg/L (MW-3A) and 81 µg/L (MW-9).
- Vinyl chloride was detected above the criterion at MW-3A with a concentration of 2.3 µg/L.

All other VOCs were either not detected or were present at concentrations below the applicable criterion. The concentrations of TCE and PCE for each sample location are shown in Figure 6 and Figure 7, respectively. Historical groundwater sample results for TCE and PCE are shown on Figure 8. TCE levels were consistent between the 1997 and 2008 groundwater sampling events at MW-6 and MW-3A. PCE levels were consistent between the 1997 and 2008 groundwater sampling events at MW-6. For MW-3A, the PCE levels dropped from a maximum concentration of 1,300 µg/L measured in 1997 to 6.3 µg/L in 2008.

4.0 DATA VALIDATION

Data validation for the this round of sampling (soil vapor, soil and groundwater) was provided by Environmental Data Services, Inc. (EDS) of Williamsburg, VA, an independent chemist under subcontract to Earth Tech. Data Usability Summary Reports (DUSRs) for each sample delivery group (SDG) are included in Appendix C. Complete copies of the laboratory analytical data reports are also included in Appendix C.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on this round of investigation, Earth Tech concludes that:

- The topography of the surrounding area indicates the groundwater flow would be predominantly to the west. However, based on the groundwater elevation available, the groundwater flow direction is to the southwest.

- TCE and PCE were detected in soil gas samples at concentrations that indicate mitigation at three locations and monitoring or mitigation at three locations would be recommended when compared to NYSDOH Decision Matrices. These recommendations are based on assumptions that these soil gas concentrations are analogous to sub-slab vapor. PCE was detected at higher concentrations ranging from 248 µg/m^3 to 159,877 µg/m^3 for the samples collected downgradient of the site. Elevated concentrations of TCE were detected at three of the six locations, SV-1 through SV-3, ranging from 32 µg/m^3 to 1,793 µg/m^3. TCE was not detected in the other three soil gas samples. The highest concentration of PCE and TCE was observed in SV-2. Elevated concentrations of several chlorinated organic and non-chlorinated organic compounds were observed in the soil gas samples and ambient air sample collected from the vicinity of the site.

- Methylene chloride was detected below the NY SCO in the soil sample collected at MW-C2 which is located immediate behind the Crystal Cleaner facility. All other VOCs are either not detected or below the NY SCO.

- The decline in PCE levels at MW-3A between the 1997 and 2008 sampling events may indicate that the groundwater plume is dispersing.

- Elevated concentrations of several chlorinated organic and non-chlorinated organic compounds were detected from the groundwater samples collected from the downgradient monitoring wells. PCE was detected above the groundwater class GA criterion for 11 of 14 groundwater samples (ranging from 5.2 to 790 µg/L). TCE concentrations exceeded the class GA groundwater criterion for the samples collected from the downgradient monitoring wells, 5.1 µg/L for MW-3A and 54 µg/L for MW-9. The sample collected from MW-3A and MW-9 contained elevated levels of chlorinated solvents:

    - MW-3A - 2.3 µg/L vinyl chloride, 6.3 µg/L PCE, 5.1 µg/L TCE, and 36 µg/L cis-1,2-dichloroethene
    - MW-9 - 790 µg/L PCE, 54 µg/L TCE, and 81 µg/L cis-1,2-dichloroethene.

It is recommended that the site be reclassified as Class 2. Contamination present at the site is a significant threat to the public health and the environment based on exceedence of class GA groundwater criteria. Soil vapor concentrations were elevated compared to the NYSDOH guidance (2006) and indicate a potential threat to human health. The source appears to be Crystal Cleaners site since the elevated levels of TCE and PCE were detected downgradient of the site and no other potential sources of TCE and PCE contamination were identified in the vicinity of the site.

6.0 REFERENCES

Environmental Data Resources, Inc., 2008. Crystal Cleaners, 113 Wolfs Lane, Pelham, NY 10803. Inquiry Number 2130665.9s. January 29, 2008.

New York State Department of Health (NYSDOH), 2006. Guidance for Evaluating Soil Vapor Intrusion in the State of New York. October.

New York State Department of Environmental Conservation (NYSDEC), 2002. NYSDEC Division of Environmental Remediation Draft DER-10 Technical Guidance for Site Investigation and Remediation. December.

TABLE 1
CRYSTAL CLEANERS SITE
GROUNDWATER ELEVATIONS

Well#	PVCL	July 2008	
		Depth to GW	GW Elevation
	feet	feet	feet
MW-1		2.8	
MW-1A	21.29	9.9	11.39
MW-C1	46.11	10.55	35.56
MW-2A	21.68	10.59	11.09
MW-C2	30.85	11.44	19.41
MW-3		7.05	
MW-3A	23.79	12.75	11.04
MW-4		7.81	
MW-5	21.82	9.89	11.93
MW-6	21.06	9.46	11.60
MW-7	20.76	9.16	11.60
MW-9	33.94	23.19	10.75
MW-10	24.44	13.55	10.89

Note:
Vertical Datum: NAVD 88

TABLE 2
CRYSTAL CLEANERS SITE
VOCs IN SOIL VAPOR

Sample ID	AMBIENT-1	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6
Lab Sample Number	Z2740-01	Z2740-03	Z2740-06	Z2740-02	Z2740-05	Z2740-07	Z2740-04
Sampling Date	05/14/08	05/14/08	05/14/08	05/14/08	05/14/08	05/14/08	05/14/08
Units	µg/M3	µg/M3	µg/M3	µg/M3	µg/M3	µg/M3	µg/M3
Compounds	**Result Q**	**Result Q**	**Result Q**	**Result Q**	**Result Q**	**Result Q**	**Result Q**
Dichlorodifluoromethane	2.18	ND	ND	ND	ND	ND	ND
tert-butyl Alcohol	ND	ND	ND	ND	ND	ND	ND
Chloromethane	1.57	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND
Bromoethene	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	1.40	ND	ND	ND	ND	ND	ND
1,2-Dichlorotetrafluoroethane	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-trifluoroethane	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND
n-Heptane	ND	4.92	4.92	ND	ND	ND	3.11
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	11.83	ND	ND	ND	ND	ND
Methyl tert-butyl ether	ND	ND	58.05	ND	ND	ND	ND
Methylene chloride	1.77	ND	ND	ND	ND	ND	ND
3-Chloropropene	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (trans)	ND	ND	36.08	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND	ND	12.25
2-Butanone	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	4.40	ND	ND	ND	ND	ND
1,2-Dichloroethene (cis)	ND	ND	370.71	26.17	ND	ND	ND
Chloroform	ND	ND	15.14	5.37	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	9.82	ND	8.73
Tetrahydrofuran	ND	ND	ND	ND	ND	ND	5.54
2,2,4-Trimethylpentane	0.47 J	ND	68.66	ND	ND	ND	ND
Benzene	0.61	ND	37.06	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	ND	32.25	1793	113.93	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	ND	ND
Toluene	3.88	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (PCE)	5.49	4156	159877	10000	248.19	391.95	298.37
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	5.21	ND	ND	ND	ND
Xylenes (m&p)	0.96	ND	ND	ND	ND	ND	ND

TABLE 2
CRYSTAL CLEANERS SITE
VOCs IN SOIL VAPOR

Sample ID	AMBIENT-1	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6
Lab Sample Number	Z2740-01	Z2740-03	Z2740-06	Z2740-02	Z2740-05	Z2740-07	Z2740-04
Sampling Date	05/14/08	05/14/08	05/14/08	05/14/08	05/14/08	05/14/08	05/14/08
Units	µg/M3	µg/M3	µg/M3	µg/M3	µg/M3	µg/M3	µg/M3
Compounds	**Result Q**	**Result Q**	**Result Q**	**Result Q**	**Result Q**	**Result Q**	**Result Q**
Xylenes (o)	ND	4.34 J	25.63	ND	ND	ND	ND
Styrene	ND	ND	18.31	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	28.02	ND	ND	ND	ND
1,2,4-Trimethylbenzene	2.61	ND	ND	ND	ND	ND	ND
4-Ethyltoluene	ND	ND	4.92 J	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND
1,3-Butadiene	ND	ND	ND	ND	ND	ND	ND
n-Hexane	ND	ND	ND	ND	ND	ND	ND
Methyl methacrylate	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND

Note:

Laboratory - Chemtech EAP Cert#11376

Q - Qualifiers

J - Estimated value

ND - Not detected

TABLE 3
CRYSTAL CLEANERS SITE
VOCs IN SOIL

Sample ID Sampling Date Matrix Units	NY Soil TAGM - Criteria Soil µg/kg	NY SCO Criteria Soil µg/kg	MW-C2(13-15) 5/13/2008 Soil µg/kg
Compounds			**Result Q**
Dichlorodifluoromethane	NC	NC	ND
Chloromethane	NC	NC	ND
Vinyl Chloride	200	20	ND
Bromomethane	NC	NC	ND
Chloroethane	1900	NC	ND
Trichlorofluoromethane	NC	NC	ND
1,1,2-Trichlorotrifluoroethane	6000	NC	ND
1,1-Dichloroethene	400	330	ND
Acetone	200	50	ND
Carbon Disulfide	2700	NC	ND
Methyl tert-butyl Ether	NC	930	ND
Methyl Acetate	NC	NC	ND
Methylene Chloride	100	50	4.4 J
trans-1,2-Dichloroethene	300	190	ND
1,1-Dichloroethane	200	270	ND
Cyclohexane	NC	NC	ND
2-Butanone	300	120	ND
Carbon Tetrachloride	600	760	ND
cis-1,2-Dichloroethene	NC	250	ND
Chloroform	300	370	ND
1,1,1-Trichloroethane	800	680	ND
Methylcyclohexane	NC	NC	ND
Benzene	60	60	ND
1,2-Dichloroethane	NC	NC	ND
Trichloroethene	700	470	ND
1,2-Dichloropropane	NC	NC	ND
Bromodichloromethane	NC	NC	ND
4-Methyl-2-Pentanone	1000	NC	ND
Toluene	1500	700	ND
t-1,3-Dichloropropene	NC	NC	ND
cis-1,3-Dichloropropene	NC	NC	ND
1,1,2-Trichloroethane	NC	NC	ND
2-Hexanone	NC	NC	ND
Dibromochloromethane	NC	NC	ND
1,2-Dibromoethane	NC	NC	ND
Tetrachloroethene	1400	1300	ND
Chlorobenzene	1700	1100	ND
Ethyl Benzene	5500	1000	ND
m/p-Xylenes	1200	260	ND
o-Xylene	1200	260	ND
Styrene	NC	NC	ND
Bromoform	NC	NC	ND
Isopropylbenzene	NC	NC	ND
1,1,2,2-Tetrachloroethane	600	NC	ND
1,3-Dichlorobenzene	1600	2400	ND
1,4-Dichlorobenzene	8500	1800	ND
1,2-Dichlorobenzene	7900	1100	ND
1,2-Dibromo-3-Chloropropane	NC	NC	ND
1,2,4-Trichlorobenzene	3400	NC	ND

Notes

NY_TAGM - Values based upon TAGM 4046, on 1/24/94

NY_SCO - Based upon NYSDEC 6 NYCRR Subpart 375-6 Remedial Program Soil Clean-up Objectives, December 14, 2006

Q - Qualifiers

J - Estimated Value

ND - Not detected

NC - No criteria available

TABLE 4
CRYSTAL CLEANERS SITE
VOCs IN GROUNDWATER

Sample ID	NY Class GA	MW-1	MW-1A	MW-C1	MW-2A	MW-C2	MW-3	MW-3A	MW-4	MW-5
Lab ID	Groundwater	Z3776-02	Z3776-16	Z3776-07	Z3776-10	Z3776-13	Z3776-06	Z3776-14	Z3776-05	Z3776-04
Sampling Date	Criteria	7/18/2008	7/18/2008	7/18/2008	7/18/2008	7/18/2008	7/17/2008	7/18/2008	7/17/2008	7/17/2008
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compounds		Results Q	Results Q	Results Q	Results Q	Results Q	Results Q	Results Q	Results Q	Results Q
Dichlorodifluoromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND	ND	ND	**2.3 J**	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichlorotrifluoroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	60	ND	ND	ND	ND	ND	ND	2.3 J	ND	ND
Methyl tert-butyl Ether	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Acetate	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	4.8	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	NC	36	ND	ND	ND	ND	ND	3.8	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	**36**	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	NC	12	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	5	ND	ND	ND	ND	ND	ND	**5.1**	ND	ND
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	0.64 J	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 4
CRYSTAL CLEANERS SITE
VOCs IN GROUNDWATER

Sample ID	NY Class GA	MW-1	MW-1A	MW-C1	MW-2A	MW-C2	MW-3	MW-3A	MW-4	MW-5
Lab ID	Groundwater	Z3776-02	Z3776-16	Z3776-07	Z3776-10	Z3776-13	Z3776-06	Z3776-14	Z3776-05	Z3776-04
Sampling Date	Criteria	7/18/2008	7/18/2008	7/18/2008	7/18/2008	7/18/2008	7/17/2008	7/18/2008	7/17/2008	7/17/2008
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
cis-1,3-Dichloropropene	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (PCE)	5	ND	**7.2**	ND	**14**	**29**	**5.6**	**6.3**	**5.4**	**8.8**
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
m/p-Xylenes	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	**10**	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

BOLD - concentration exceeds criterion.

Q - Qualifier

J - Estimated value

NC - No criterian available

ND - Not detected

TABLE 4
CRYSTAL CLEANERS SITE
VOCs IN GROUNDWATER

Sample ID	NY Class GA	MW-6	MW-7	MW-9	MW-10
Lab ID	Groundwater	Z3776-03	Z3776-01	Z3776-12	Z3776-15
Sampling Date	Criteria	7/17/2008	7/18/2008	7/18/2008	7/18/2008
Matrix	Water	Water	Water	Water	Water
Units	µg/L	µg/L	µg/L	µg/L	µg/L
Compounds		**Results Q**	**Results Q**	**Results Q**	**Results Q**
Dichlorodifluoromethane	5	ND	ND	ND	ND
Chloromethane	5	ND	ND	ND	ND
Vinyl Chloride	2	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND
Trichlorofluoromethane	5	ND	ND	ND	ND
1,1,2-Trichlorotrifluoroethane	5	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND
Carbon Disulfide	60	ND	ND	ND	ND
Methyl tert-butyl Ether	10	ND	ND	4.4	ND
Methyl Acetate	NC	ND	ND	ND	ND
Methylene Chloride	5	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND
Cyclohexane	NC	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	ND	**81**	1
Chloroform	7	ND	ND	0.95 J	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND
Methylcyclohexane	NC	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND
Trichloroethene (TCE)	5	ND	ND	**54**	ND
1,2-Dichloropropane	1	ND	ND	ND	ND
Bromodichloromethane	NC	ND	ND	ND	ND
4-Methyl-2-Pentanone	NC	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND
trans-1,3-Dichloropropene	NC	ND	ND	ND	ND

TABLE 4
CRYSTAL CLEANERS SITE
VOCs IN GROUNDWATER

Sample ID	NY Class GA	MW-6	MW-7	MW-9	MW-10
Lab ID	Groundwater	Z3776-03	Z3776-01	Z3776-12	Z3776-15
Sampling Date	Criteria	7/17/2008	7/18/2008	7/18/2008	7/18/2008
Matrix	Water	Water	Water	Water	Water
Units	µg/L	µg/L	µg/L	µg/L	µg/L
cis-1,3-Dichloropropene	NC	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND
1,2-Dibromoethane	NC	ND	ND	ND	ND
Tetrachloroethene (PCE)	5	3.7	**5.2**	**790**	**15**
Chlorobenzene	5	ND	ND	ND	ND
Ethyl Benzene	5	ND	ND	ND	ND
m/p-Xylenes	5	ND	ND	ND	ND
o-Xylene	5	ND	ND	ND	ND
Styrene	5	ND	ND	ND	ND
Bromoform	NC	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND
1,3-Dichlorobenzene	3	ND	ND	ND	ND
1,4-Dichlorobenzene	3	ND	ND	ND	ND
1,2-Dichlorobenzene	3	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	NC	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NC	ND	ND	ND	ND

Notes:

BOLD - concentration exceeds criterion.

Q - Qualifier

J - Estimated value

NC - No criterian available

ND - Not detected

TABLE 5
CRYSTAL CLEANERS SITE
SOIL VAPOR CONCENTRATIONS COMPARED TO NYSDEC (2006) MATRICIES

Sample ID	Soil Vapor			Possible Recommended Actions Depending on the Indoor Air Concentration^
		µg/m3	Matrix *	
SV-1	TCE	32.25	matrix 1	No further action or Take reasonable and practical actions to identify sources and reduce exposures
	PCE	4156	matrix 2	Mitigate
SV-2	TCE	1793	matrix 1	Mitigate
	PCE	159877	matrix 2	Mitigate
SV-3	TCE	113.93	matrix 1	Monitor or Mitigate
	PCE	10000	matrix 2	Mitigate
SV-4	TCE	ND	matrix 1	No further action or Take reasonable and practical actions to identify sources and reduce exposures
	PCE	248.19	matrix 2	Monitor or Mitigate
SV-5	TCE	ND	matrix 1	No further action or Take reasonable and practical actions to identify sources and reduce exposures
	PCE	391.95	matrix 2	Monitor or Mitigate
SV-6	TCE	ND	matrix 1	No further action or Take reasonable and practical actions to identify sources and reduce exposures
	PCE	298.37	matrix 2	Monitor or Mitigate

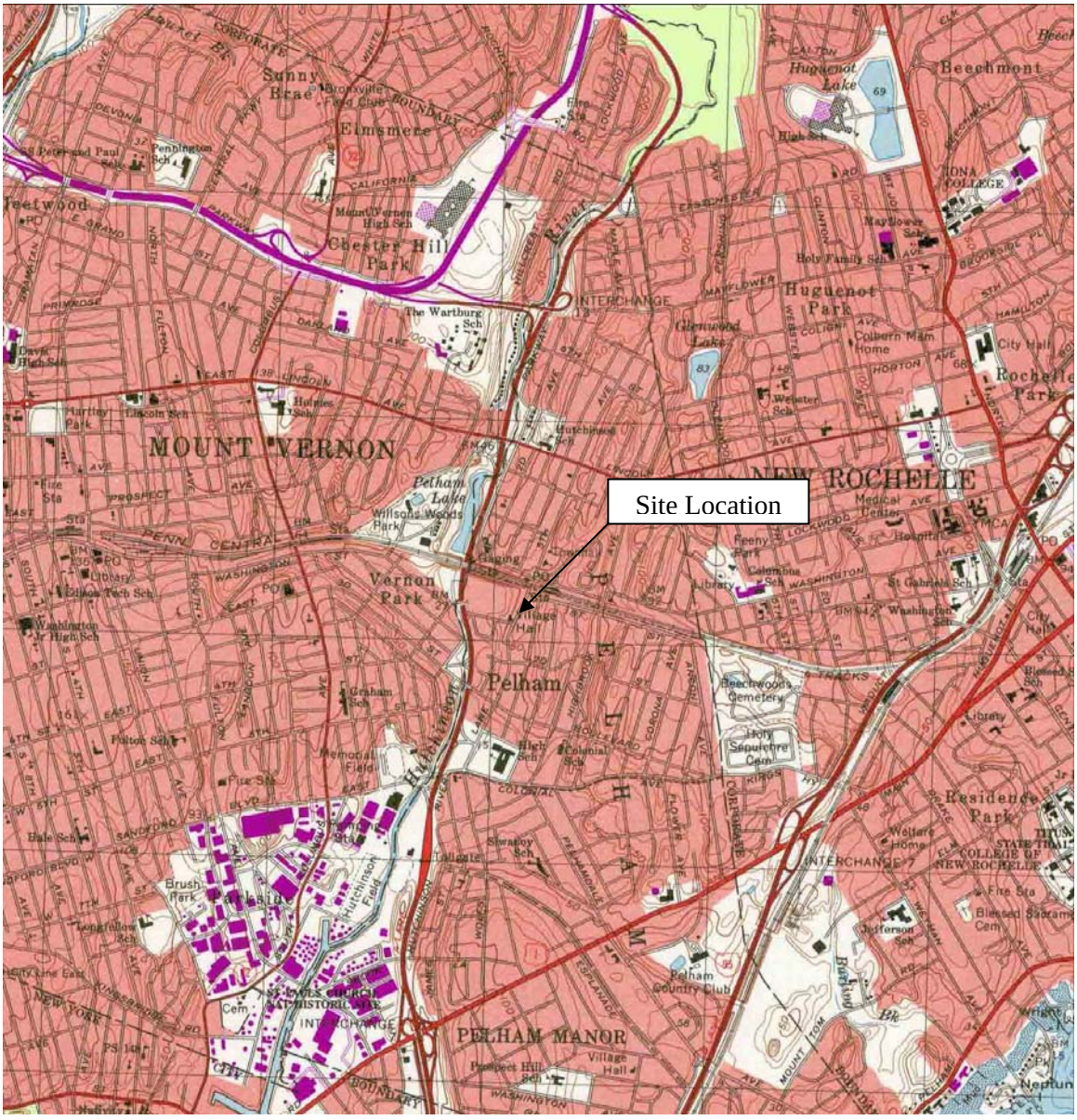
* Soil/Vapor Matrix as shown in NYSDOH (2006); recommended action and numbering taken from corresponding matrix.

^ Assumes the soil vapor concentrations are analogous to sub-slab vapor concentrations.

ND = Not Detected

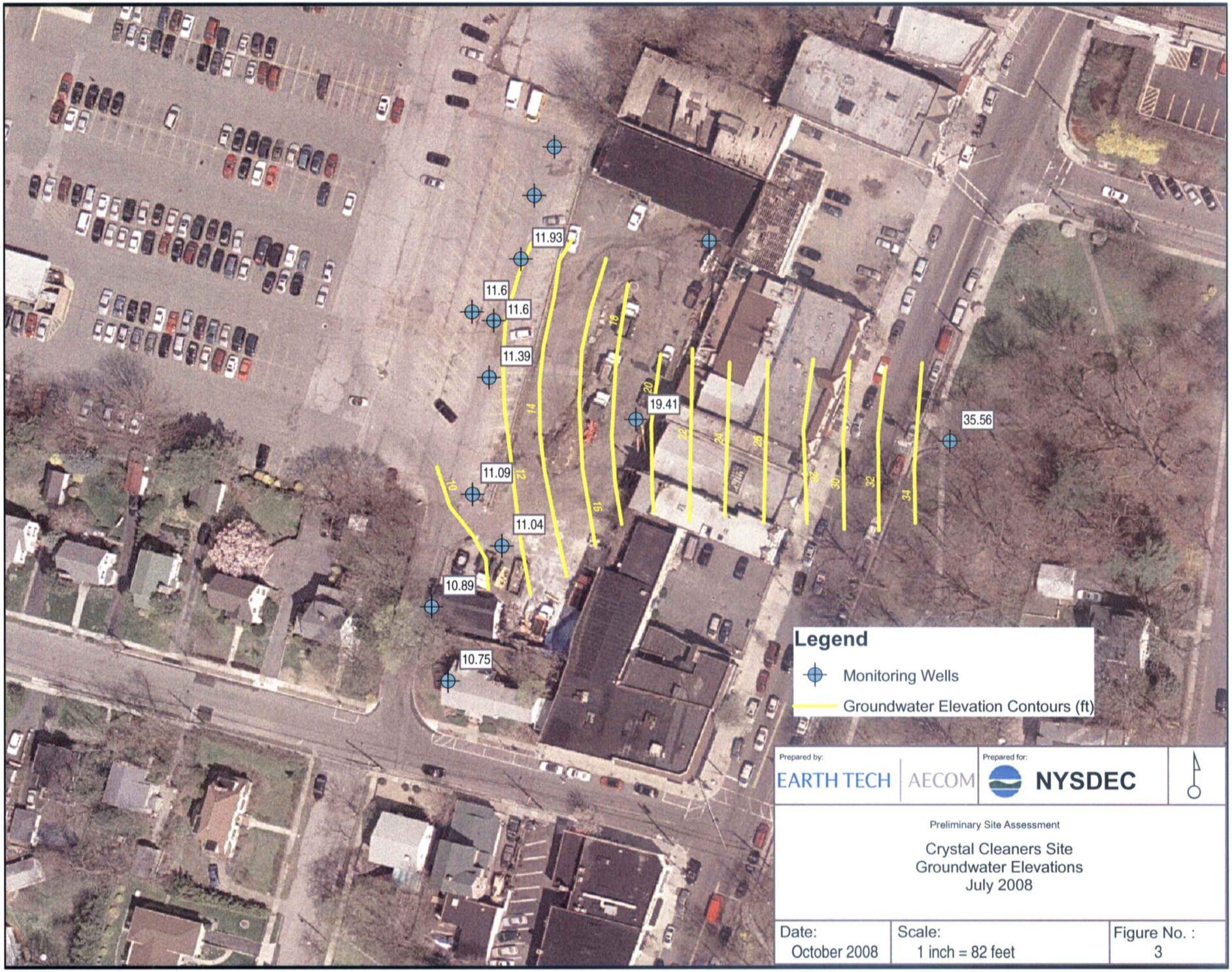
TCE - Trichloroethene

PCE - Tetrachloroethene



EARTH TECH	Project: Crystal Cleaners 113 Wolfs Lane Pelham, NY 10803	Figure 1 – Site Location

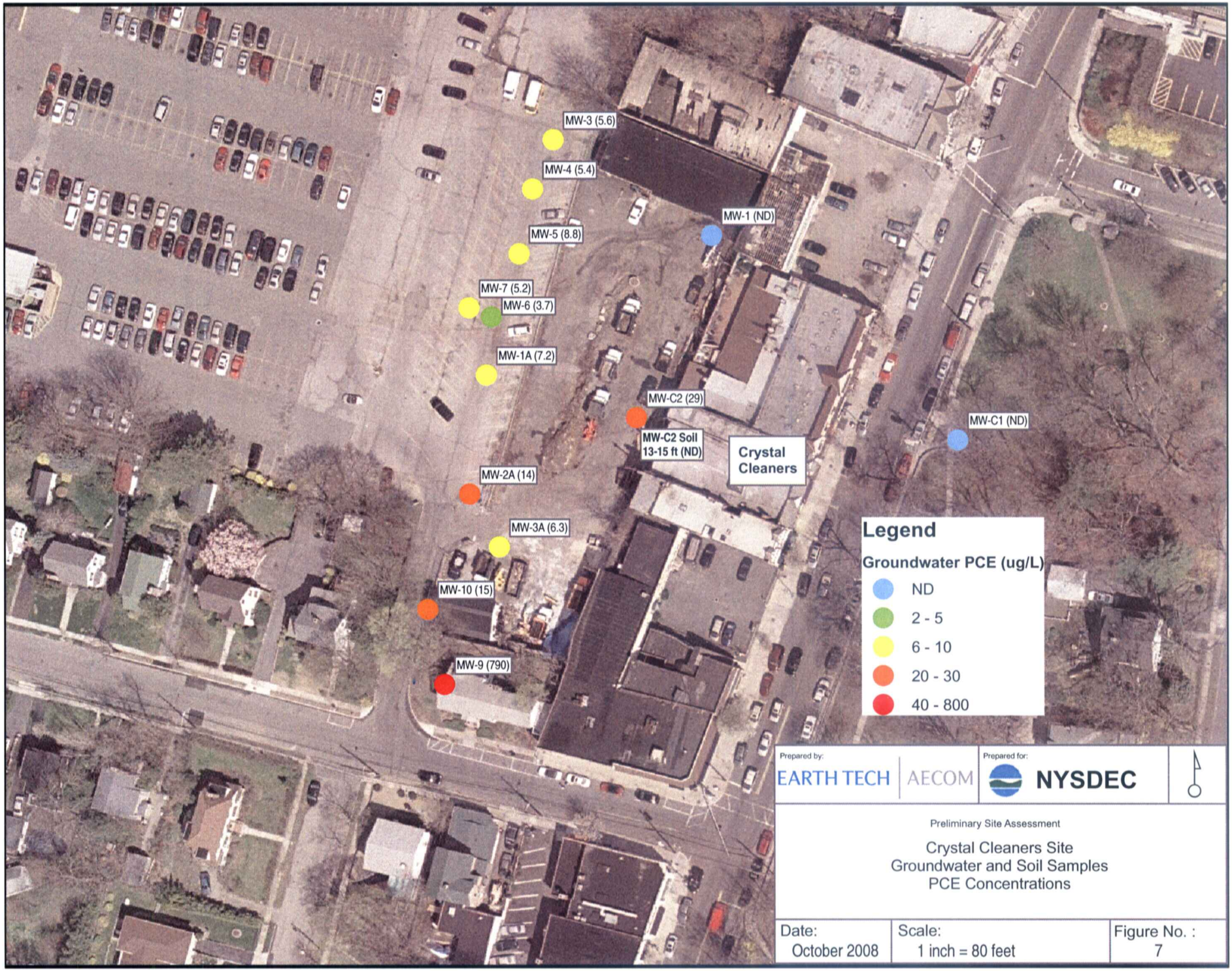

MW-3
MW-4
MW-5
MW-7
MW-6
MW-1A
MW-1
MW-C2 Soil
13-15 ft
MW-C2
SV-1
MW-C1
Crystal
Cleaners
MW-2A
MW-3A
SV-2
MW-10
MW-9
SV-6
SV-5
SV-4
SV-3
Legend
Soil Gas Sample Locations
Monitoring Wells
Prepared by:
EARTH TECH | AECOM
Prepared for:
NYSDEC
Preliminary Site Assessment
Crystal Cleaners Site
Sample Locations
Date:
October 2008
Scale:
1 inch = 80 feet
Figure No. :
2

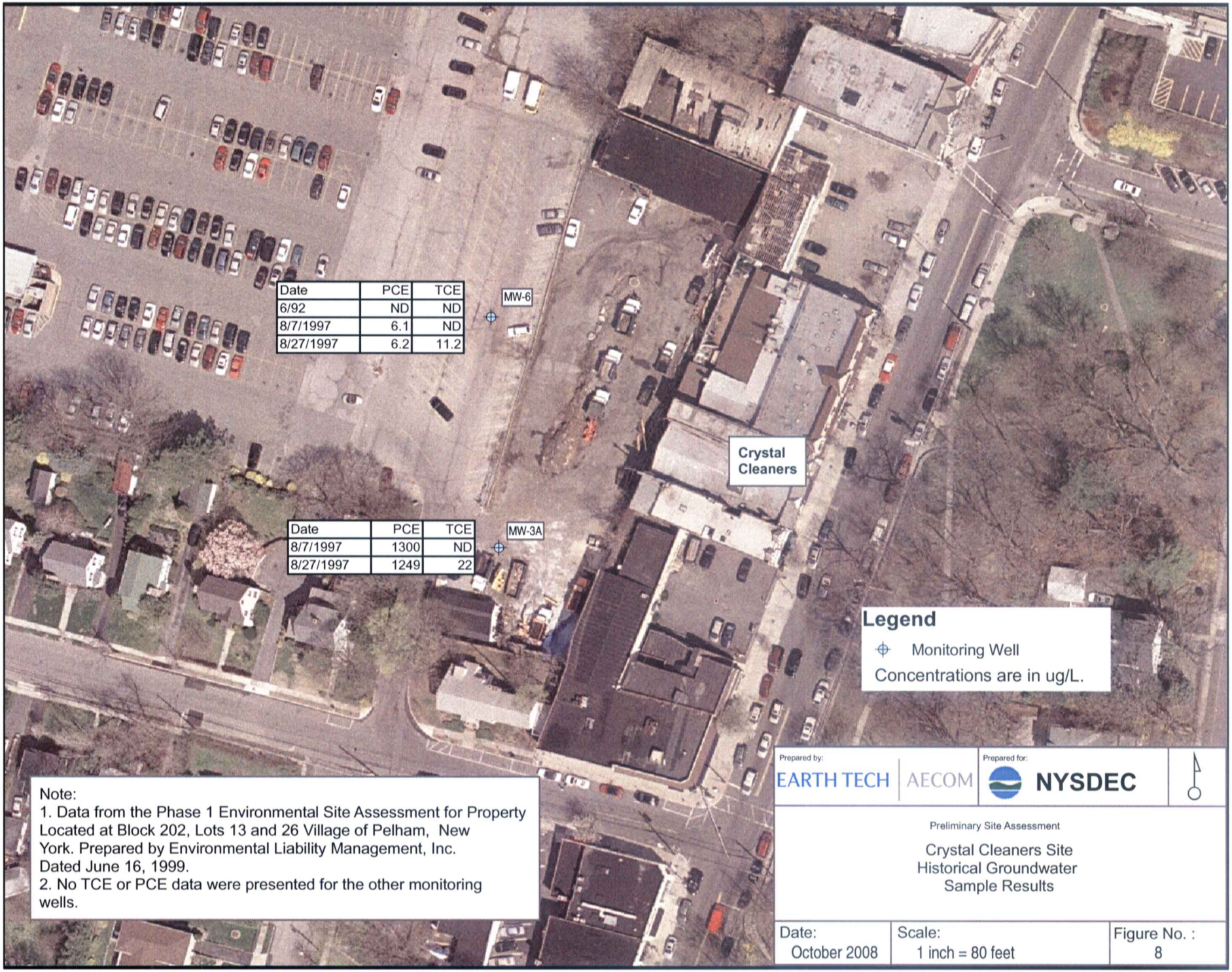

11.93
11.6
11.6
11.39
11.09
11.04
10.89
10.75
19.41
35.56
10
12
14
16
18
20
22
24
26
28
30
32
34
Legend
Monitoring Wells
Groundwater Elevation Contours (ft)
Prepared by:
EARTH TECH
AECOM
Prepared for:
NYSDEC
Preliminary Site Assessment
Crystal Cleaners Site
Groundwater Elevations
July 2008
Date:
October 2008
Scale:
1 inch = 82 feet
Figure No. :
3


SV-1 (32)
Crystal Cleaners
SV-2 (1,794)
SV-6 (ND)
SV-5 (ND)
SV-4 (ND)
SV-3 (114)
Legend
Soil Vapor (ug/M3)
ND
3 - 32
33 - 114
115 - 1793
Prepared by:
EARTH TECH | AECOM
Prepared for:
NYSDEC
Preliminary Site Assessment
Crystal Cleaners Site
Soil Vapor Samples
TCE Concentrations
Date:
October 2008
Scale:
1 inch = 80 feet
Figure No. :
4


SV-1 (4,143)
Crystal Cleaners
SV-2 (159,357)
SV-6 (298)
SV-5 (392)
SV-4 (248)
SV-3 (9,968)
Legend
Soil Vapor (ug/M3)
248 - 400
401 - 4,500
4,501 - 10,000
10,001 - 159,494
Prepared by:
EARTH TECH | AECOM
Prepared for:
NYSDEC
Preliminary Site Assessment
Crystal Cleaners Site
Soil Vapor Samples
PCE Concentrations
Date:
October 2008
Scale:
1 inch = 80 feet
Figure No. :
5


MW-3 (ND)
MW-4 (ND)
MW-5 (ND)
MW-7 (ND)
MW-6 (ND)
MW-1A (ND)
MW-2A (ND)
MW-3A (5.1)
MW-10 (ND)
MW-9 (54)
MW-1 (ND)
MW-C2 (ND)
MW-C2 Soil 13-15 ft (ND)
MW-C1 (ND)
Crystal Cleaners
Legend
Groundwater TCE (ug/L)
ND
5.1
54
Prepared by:
EARTH TECH | AECOM
Prepared for:
NYSDEC
Preliminary Site Assessment
Crystal Cleaners Site
Groundwater and Soil Samples
TCE Concentrations
Date:
October 2008
Scale:
1 inch = 80 feet
Figure No. :
6


MW-3 (5.6)
MW-4 (5.4)
MW-1 (ND)
MW-5 (8.8)
MW-7 (5.2)
MW-6 (3.7)
MW-1A (7.2)
MW-C2 (29)
MW-C2 Soil
13-15 ft (ND)
Crystal
Cleaners
MW-C1 (ND)
MW-2A (14)
MW-3A (6.3)
MW-10 (15)
MW-9 (790)
Legend
Groundwater PCE (ug/L)
ND
2 - 5
6 - 10
20 - 30
40 - 800
Prepared by:
EARTH TECH | AECOM
Prepared for:
NYSDEC
Preliminary Site Assessment
Crystal Cleaners Site
Groundwater and Soil Samples
PCE Concentrations
Date:
October 2008
Scale:
1 inch = 80 feet
Figure No. :
7


Date | PCE | TCE
6/92 | ND | ND
8/7/1997 | 6.1 | ND
8/27/1997 | 6.2 | 11.2
MW-6
Crystal Cleaners
Date | PCE | TCE
8/7/1997 | 1300 | ND
8/27/1997 | 1249 | 22
MW-3A
Legend
Monitoring Well
Concentrations are in ug/L.
Note:
1. Data from the Phase 1 Environmental Site Assessment for Property Located at Block 202, Lots 13 and 26 Village of Pelham, New York. Prepared by Environmental Liability Management, Inc. Dated June 16, 1999.
2. No TCE or PCE data were presented for the other monitoring wells.
Prepared by:
EARTH TECH | AECOM
Prepared for:
NYSDEC
Preliminary Site Assessment
Crystal Cleaners Site
Historical Groundwater
Sample Results
Date:
October 2008
Scale:
1 inch = 80 feet
Figure No. :
8

APPENDIX A

EDR Report on CD

APPENDIX B

Field Forms

EARTH TECH | AECOM

ROCK CORING LOG **Boring No.: MW-C1**

PROJECT: Crystal Cleaner			CONTRACTOR: Aztech				PAGE 1 OF 2	
PROJECT No.: 103517			LOCATION: Pelham, NY				DATE: 7/2/08	
SURFACE ELEVATION:			DATUM:		DRILLER: Marty Harrington		ET REP.: Dan Simpson	
WATER LEVELS			DRILLING AND SAMPLING					
DATE	TIME	DEPTH	Core Barrel		SAMPLER	CORE	TUBE	
			TYPE	Steel				
			I.D.	NX (2-inch)				
			WT./Fall	--				

Depth (ft)	Run & Box No. (Time)	% REC	RQD (%)	PID Readings (ppm)	Core Sketch	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						Start of coring
13	C-1	74%	26%	0.0		Granttic Gneiss; inc.: Quartz, biotite, k-spar K-Spar 12'6"-14'6"
14						
15	C-1	74%	26%	0.0		Rust colored staining at 15'-15'6", 21'
16						
17	C-2	40%	0%	0.0		Biotite rich at 21'
18						▼
19	C-2	40%	0%	0.0		Wet at 18'
20						

EARTH TECH | AECOM

CORING LOG

Boring No.: MW-C1

PROJECT: Crystal Cleaner

PROJECT No.: 103517

Depth (ft)	Run & Box No. (Time)	% REC	RQD (%)	PID Readings (ppm)	Core Sketch	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
20	C-2	40%	0%	0.0		
21						
22	C-3	94%	50%	0.0		
23						
24						
25						
26						End of core
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

EARTH TECH | AECOM **DIRECT PUSH BORING LOG** **Boring No.:MW-C1**

PROJECT: Crystal Cleaner						PAGE 1 OF 1
PROJECT No.: 103517			CONTRACTOR: Aztech			DATE: 5/12/08
LOCATION:			DRILLERS NAME:Bob Gannan			ET REP.: Dan Simpson
WATER LEVELS			DESIGNATION OF DRILL RIG:Direct Push Geoprobe			
DATE	TIME	DEPTH	SIZE AND TYPE OF EQUIPMENT:			
			REFERENCE ELEVATION: DEPTH OF BOREHOLE:8 ft			
LABORATORY ANALYSES:						

Depth (ft)	Sample Number & Time	Rec. (feet)	PID (ppm)	SYM	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
	S-1	4/4	0.0	SM	Organic material 3"
1					Blk (mf) sand, and silt 1'
2				SP	Blk (mf) sand, some (mf) angular to sub-rounded gravel
3					3'
4				SW	Brown (f) sand 4'
	S-2	4/3	0.0	SP	Brown (mf) sand, some (mf) sub-angular to sub-rounded gravel
5					
6					
7					
8					8'
					Refusal at 8', End of boring
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

EARTH TECH | AECOM **DIRECT PUSH BORING LOG** **Boring No.:MW-C2**

PROJECT: Crystal Cleaner					PAGE 1 OF 1
PROJECT No.: 103517			CONTRACTOR: Aztech		DATE: 5/13/08
LOCATION:			DRILLERS NAME:Marty		ET REP.: Dan Simpson
WATER LEVELS			DESIGNATION OF DRILL RIG:Direct Push Geoprobe		
DATE	TIME	DEPTH	SIZE AND TYPE OF EQUIPMENT:		
			REFERENCE ELEVATION:	DEPTH OF BOREHOLE:18 ft	
LABORATORY ANALYSES:					

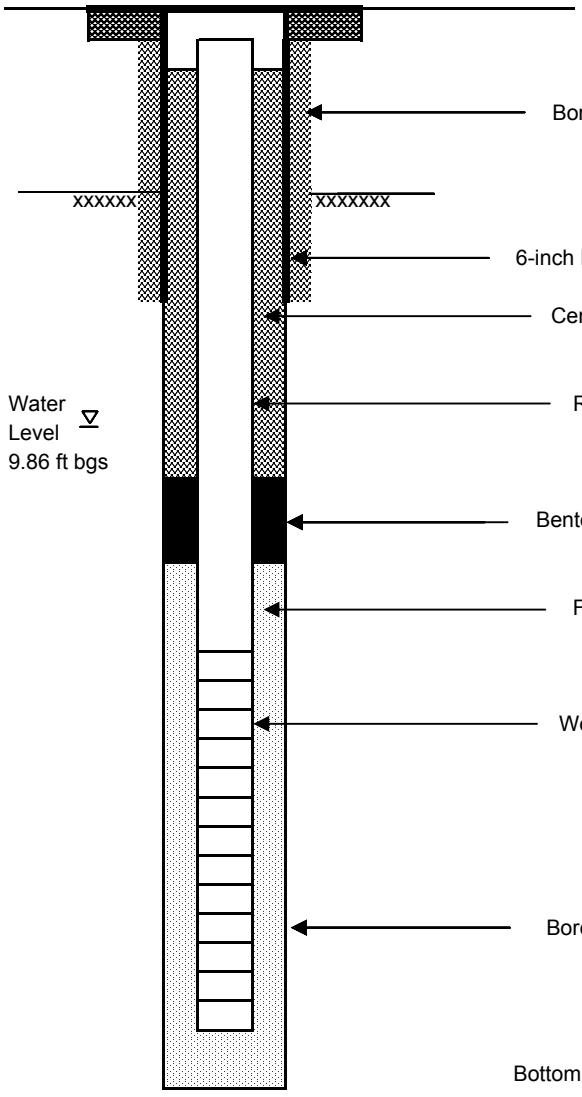
Depth (ft)	Sample Number & Time	Rec. (feet)	PID (ppm)	SYM	SAMPLE DESCRIPTION, REMARKS, AND STRATUM CHANGES
1	S-1	3/2	0.0	SP	Asphalt 1'
2					Brown sand and gravel
3					
4	S-2	2/0	No recovery	SP	
5					5'
6	S-3	2/1	0.0	SP	Brown (mf) sand, some (mf) angulaer gravel
7					
8	S-4	2/1	0.0	SP	
9					
10	S-5	2/8	0.0	SP	
11					
12	S-6	2/1	0.0	SP	
13					▼ 13'
14	S-7	2/1.8	0.0	SP	Ξ
15					14'6" Dark brown (f) sand, some rounded gravel
16	S-8	2/0.5	0.0	SP	
17					17'
18	S-9	1/0.3	0.0	GP	Gray gravel 18'
19					Refusal at 18', End of boring
20					

EARTH TECH | AECOM

MONITORING WELL DIAGRAM
DOUBLE-CASED
FLUSH MOUNT COMPLETION

Well No. MW-C1

Project: Crystal Cleaner	Location: Pelham, NY	Page 1 of 1		
Earth Tech Project No.:	Subcontractor: Aztech	Water Levels		
Surface Elevation: 46.54 ft	Driller: Marty Harrington	Date	Time	Depth
	Well Permit No.:			
	Earth Tech Rep.: Dan Simpson			
Datum: NGVD 1988	Date of Completion: 7/2/08			



Locking protective flushmount with concrete pad

Ground Surface 0.0 ft

Well casing 12.0 ft bgs

Borehole diameter 8 inches

Top of Rock 8.0 ft bgs

6-inch ID steel casing 1.0 ft to 0.0 ft

Cement-bentonite grout from 2.0 ft to 1.0 ft

Riser Pipe from 16.0 ft to 0.0 ft

Bentonite seal from 14.0 ft to 2.0 ft

Filter pack from 26.0 ft to 14.0 ft

Sand Size 0

Well screen from 26.0 ft to 16.0 ft

Diameter 2 inches
Slot size 0.01 inches
Type PVC

Borehole diameter 4 inches

Bottom Cap at 26.0 ft

Bottom of Borehole at 26.0 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

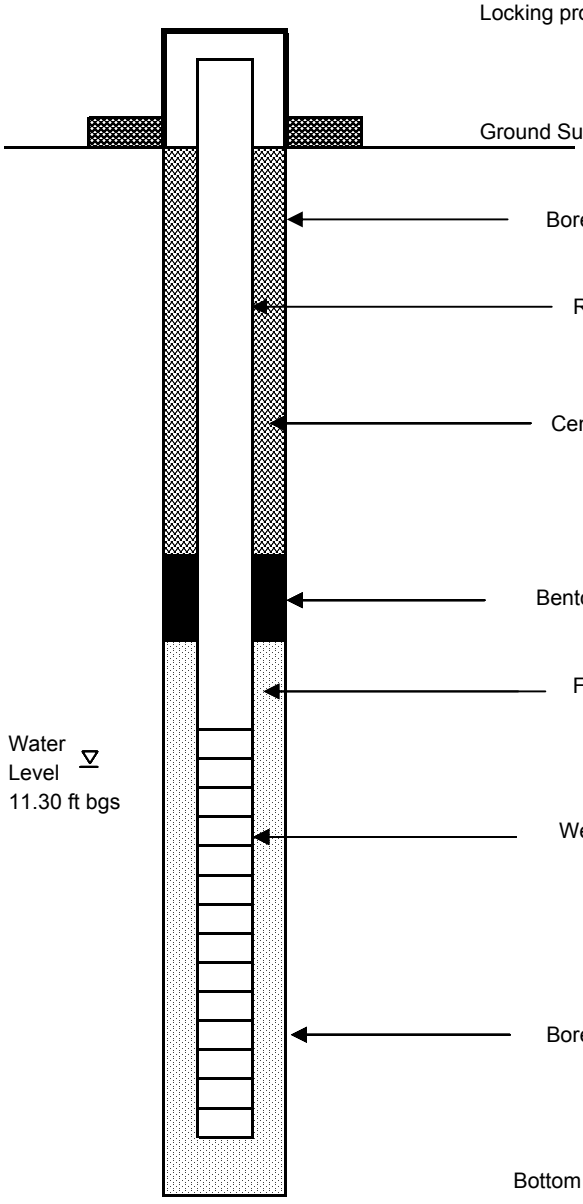
(NOT TO SCALE)

EARTH TECH | AECOM

MONITORING WELL DIAGRAM
SINGLE-CASED
FLUSH MOUNT COMPLETION

Well No. MW-C2

Project: Crystal Cleaner	Location: Pehlham, NY	Page 1 of 1		
Earth Tech Project No.: 103517	Subcontractor: Aztech	Water Levels		
Surface Elevation: 31.05 ft	Driller: Marty Harrington	Date	Time	Depth
	Well Permit No.:			
	Earth Tech Rep.:Dan Simpson (YEC)			
Datum: NGVD 1988	Date of Completion: 5/13/08			



Borehole diameter 4.25 inches

Riser Pipe from 8.0 ft to 0.0 ft

Cement-bentonite grout from 1.0 ft to 0.0 ft

Bentonite seal from 6.0 ft to 2.0 ft 6 inch

Filter pack from 18.0 ft to 6.0 ft

Sand Size 0

Well screen from 18.0 ft to 8.0 ft

Diameter 1 inches
Slot size 0.01 inches
Type PVC

Borehole diameter 4.25 inches

Bottom Cap at 18.0 ft

Bottom of Borehole at 18.0 ft

Note: All measurements based on ground surface at 0.0 feet. (+) above grade. (-) below grade.

(NOT TO SCALE)

Earth Tech | AECOM

WELL NO. MW- C1

WELL DEVELOPMENT FORM	PROJECT: Crystal Cleaners	SHEET 1 OF 1 SHEETS
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: July 3, 2008	5. DATE WELL COMPLETED: July 3, 2008
2. COMPANY: YEC Inc.	6. NAME OF INSPECTOR: Dan Simpson	
3. DRILLING COMPANY: Aztech	7. SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME: 2.6 gals WELL TD: 25.21 ft PUMP INTAKE:

Volume (gallons)	Depth to Water (ft)	Purge Rate (gpm)	FIELD MEASUREMENTS: Temp. (C)	Conduct. (ms/cm)	pH	Turbidity (ntu)	REMARKS
V0	9.86	0.7	15.7	0.91	11.01	999	Gray
V1	13.02	0.7	14.3	0.568	10.58	999	Gray
V2	12.84	0.7	14	0.46	7.44	999	Gray
V3	12.70	0.7	13.9	0.453	7.06	900	Clear
V4	12.72	0.7	13.6	0.454	7.03	390	Clear
V5	12.51	0.7	13.4	0.451	7.34	306	Clear
V6	12.45	0.7	13.3	0.467	7.57	266	Clear
V7	12.50	0.7	13.4	0.468	6.65	295	Clear
V8	12.19	0.7	13.5	0.464	5.93	238	Clear
V9	12.15	0.7	13.4	0.466	6.34	225	Clear
V10	12.21	0.7	13.4	0.465	6.18	207	Clear

Volume in gallon

V0	0	gal
V1	2.6	gal
V2	5.2	gal
V3	7.8	gal
V4	10.4	gal
V5	13	gal
V6	15.6	gal
V7	18.2	gal
V8	20.8	gal
V9	23.4	gal
V10	26	gal

Pump Type: Perstaltic pump

Earth Tech | AECOM

WELL NO. MW- C2

WELL DEVELOPMENT FORM	PROJECT: Crystal Cleaners	SHEET 1 OF 1 SHEETS
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: May 15, 2008	5. DATE WELL COMPLETED: May 15, 2008
2. COMPANY: YEC Inc.	6. NAME OF INSPECTOR: Chris Burke	
3. DRILLING COMPANY: Aztech	7. SIGNATURE OF INSPECTOR:	

ONE WELL VOLUME: 0.46 gals WELL TD: 18.00 ft PUMP INTAKE:

Volume (gallons)	Depth to Water (ft)	Purge Rate (gpm)	FIELD MEASUREMENTS: Temp. (C)	Conduct. (ms/cm)	pH	Turbidity (ntu)	REMARKS
V0	11.3	0.5	15.4	0.527	5.25	999	
V1	14.26	0.5	15.6	0.524	5.24	999	
V2	14.76	0.5	15.4	0.514	3.2	999	
V3	15.25	0.5	13.1	0.523	3.01	999	
V4	16.00	0.5	13.1	0.473	2.8	999	
V5	16.10	0.5	13.1	0.474	2.71	999	
V6	16.43	0.5	14.2	0.465	2.75	999	
V7	16.27	0.5	13.7	0.449	3.69	999	
V8	16.37	0.5	13.1	0.416	2.92	999	
V9	16.43	0.5	12.9	0.416	2.87	999	
V10	16.50	0.5	12.9	0.43	2.77	999	
V11	16.47	0.5	13.1	0.439	2.65	999	
							Volume in gallon
							V0 0 gal
							V1 0.46 gal
							V2 0.92 gal
							V3 1.38 gal
							V4 1.84 gal
							V5 2.3 gal
							V6 2.76 gal
							V7 3.22 gal
							V8 3.68 gal
							V9 4.14 gal
							V10 4.6 gal
							V11 5.06 gal

Pump Type: Hand Pump

EARTH TECH | AECOM

WELL NO. MW-1

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/18/2008	5. DATE WELL COMPLETED: 7/18/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY:			

ONE WELL VOLUME : 3.4 gals WELL TD: 7.9 ft PUMP IN TAKE DEPTH: 6 ft

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
14:20	2.8	310	23.83	1.26	0.1	9.62	218	Clear
14:25	3.43	310	24.92	1.09	0.13	9.59	64	Clear
14:30	3.45	310	24.98	1.03	0.33	9.81	48.0	Clear
14:35	3.48	310	24.83	1.00	0.47	9.93	48.0	Clear
								Sample collected MW-1 at 14:45

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-3

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/17/2008	5. DATE WELL COMPLETED: 7/17/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			

ONE WELL VOLUME : 10.21 gals WELL TD: 22.65 ft PUMP IN TAKE DEPTH: 19.0 ft

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
11:25	7.05	454	18.71	1.41	4.5	4.95	999	Brown
11:30	7.19	454	16.15	1.42	2.02	4.27	999	Clear
11:35	7.18	454	16.19	1.41	1.90	4.11	869	Clear
11:40	7.17	454	16.25	1.42	1.89	4.08	575	Clear
11:45	7.16	454	16.21	1.410	1.91	4.08	525	Clear
								Sample collected MW-3 at 12:00

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-4

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/17/2008	5. DATE WELL COMPLETED: 7/17/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			

ONE WELL VOLUME : 7.90 gals WELL TD: 19.79 ft PUMP IN TAKE DEPTH: 17.0 ft

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
12:20	7.81	485	19.49	1.43	2.29	3.84	106	Clear
12:25	7.9	485	16.7	1.38	2.24	3.81	14.2	Clear
12:30	7.90	485	17.30	1.38	2.40	3.69	20.1	Clear
								Sample collected MW-4 at 12:45

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-5

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/17/2008	5. DATE WELL COMPLETED: 7/17/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			

ONE WELL VOLUME : 6.14 gal WELL TD: 19.12 ft PUMP IN TAKE DEPTH: 16.50 ft

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
15:10	9.89	530	0.71	21.16	4.45	5.29	999	Brown
15:15	9.95	530	0.65	18.52	2.08	5.06	999	Clear
15:20	9.92	300	0.31	18.27	2.11	4.56	999	Clear
15:25	9.92	300	0.31	18.07	2.00	4.35	999	Clear
								Sample collected MW-5 at 15:30

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-6

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/17/2008	5. DATE WELL COMPLETED: 7/17/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			
ONE WELL VOLUME :	WELL TD: 25.32 ft	PUMP IN TAKE DEPTH: 22.00 ft	

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
13:50	9.46	325	22.22	1.60	3.5	4.61	999	Brown
13:55	9.54	325	18.74	1.56	1.15	4.15	999	Clear
14:00	9.54	325	18.30	1.57	1.05	4.11	786	Clear
14:05	9.55	325	17.89	1.58	1.00	4.10	821	Clear
								Sample collected MW-6 at 14:14

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-7

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/18/2008	5. DATE WELL COMPLETED: 7/18/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			

ONE WELL VOLUME : 5.05 gal WELL TD: 17.50 ft PUMP IN TAKE DEPTH: 15.20 ft

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
10:20	9.16	530	19.51	1.84	2.06	4.56	83	Clear
10:25	9.19	475	19.52	1.83	2.04	4.37	32.6	Clear
10:30	9.19	475	19.58	1.82	2.12	4.33	29.3	Clear
10:35	9.19	475	19.64	1.82	2.22	4.27	25.5	Clear
								Sample collected MW-7 at 10:45

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-9

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/18/2008	5. DATE WELL COMPLETED: 7/18/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			

ONE WELL VOLUME : 7.27 gal WELL TD: 34.21 ft PUMP IN TAKE DEPTH: 32.00 ft

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
14:50	23.19	290	23.52	13.80	7.17	6.19	356	Clear
14:55	23.19	290	21.79	13.80	7.48	4.64	376	Clear
15:00	23.19	290	20.77	13.80	7.00	4.02	388	Clear
15:05	23.19	290	19.96	13.70	6.79	3.56	365	Clear
15:10	23.19	290	18.93	13.60	6.78	3.12	413	Clear
								Sample collected MW-9 at 15:15

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-10

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/18/2008	5. DATE WELL COMPLETED: 7/18/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			

ONE WELL VOLUME : 8.28 gal WELL TD: 26.10 ft PUMP IN TAKE DEPTH: 24.00 ft

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
12:05	13.55	310	17.94	2.79	3.73	3.61	122	Clear
12:10	13.62	310	17.11	2.72	0.99	3.7	60.7	Clear
12:15	13.62	310	18.26	2.75	1.81	3.75	66	Clear
12:20	13.62	310	18.21	2.76	1.90	3.74	48.7	Clear
								Sample collected MW-10 at 12:25

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-1A

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/18/2008	5. DATE WELL COMPLETED: 7/18/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			

ONE WELL VOLUME : 5.78 gal WELL TD: 18.66 ft PUMP IN TAKE DEPTH: 17.00 ft

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
10:55	9.9	570	18.11	1.76	1.81	7.25	238	Clear
11:00	9.9	300	18.71	1.84	1.93	6.82	79.1	Clear
11:05	9.9	300	18.56	1.83	1.84	6.55	65.4	Clear
11:10	9.9	300	18.90	1.73	1.81	6.36	50	Clear
								Sample collected MW-1A at 11:11

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-2A

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/18/2008	5. DATE WELL COMPLETED: 7/18/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			
ONE WELL VOLUME :	WELL TD: 18.04 ft	PUMP IN TAKE DEPTH: 16.00 ft	

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
11:20	10.59	310	16.3	2.78	0.00	4.44	405	Clear
11:25	10.62	310	16.28	2.72	1.02	4.41	174	Clear
11:30	10.62	310	16.39	2.72	1.55	4.40	136	Clear
11:35	10.62	310	16.47	2.69	1.51	4.35	88	Clear
11:40	10.62	310	16.49	2.68	1.27	4.29	76	Clear
								Sample collected MW-2A at 11:45
								duplicate: X-1

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-3A

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/18/2008	5. DATE WELL COMPLETED: 7/18/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			

ONE WELL VOLUME : 4.47 gal WELL TD: 19.52 ft PUMP IN TAKE DEPTH: 16.70 ft

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
13:30	12.75	318	19.2	4.70	0.14	8.47	315	Clear
13:35	12.77	318	18.89	4.74	0.16	8.66	306	Clear
13:40	12.78	318	19.05	4.80	0.23	8.74	281	Clear
								Sample collected MW-3A at 13:45

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-C1

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/18/2008	5. DATE WELL COMPLETED: 7/18/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			

ONE WELL VOLUME : 2.5 gals WELL TD: 25.21 ft PUMP IN TAKE DEPTH: 23.00 ft

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
15:20	10.55	340	23.14	0.90	5.66	5.22	102	Clear
15:25	10.89	340	16.89	0.90	3.91	4.83	170	Clear
15:30	10.89	340	16.89	0.90	3.50	4.85	137	Clear
15:35	10.89	340	16.91	0.90	3.24	4.87	89	Clear
15:40	10.89	340	16.64	0.90	3.16	4.53	55	Clear
								Sample collected MW-C1 at 15:45

Analytical Parameters: VOCs

EARTH TECH | AECOM

WELL NO. MW-C2

WELL SAMPLING FORM	PROJECT: Crystal Cleaners	PROJECT No.: 103517	SHEET: 1 OF SHEETS: 1
1. LOCATION: Pelham, NY	4. DATE WELL STARTED: 7/18/2008	5. DATE WELL COMPLETED: 7/18/2008	
2. CLIENT: NYSDEC	6. NAME OF INSPECTOR: Dan Simpson, Jonathan Chen		
3. DRILLING COMPANY			

ONE WELL VOLUME : 0.165 gal WELL TD: 15.55 ft PUMP IN TAKE DEPTH: 13.0 ft

Time	Depth to Water (ft)	Purge Rate (ml/min)	FIELD MEASUREMENTS					REMARKS
			Temp. (C)	Conduct. (ms/cm)	DO (mg/L)	pH	Turbidity (ntu)	
13:50	11.44	360	21.92	0.70	4.00	5.34	999	Clear
13:55	11.44	360	19.96	0.92	2.48	5.06	474	Clear
14:00	11.44	360	19.64	0.60	2.15	4.97	328	Clear
14:05	11.44	360	19.79	0.59	2.08	4.94	279	Clear
14:10	11.44	360	19.83	0.55	2.06	4.91	283	Clear
								Sample collected MW-C2 at 14:15

Analytical Parameters: VOCs

APPENDIX C

Laboratory Data and DUSR Report on CD