



**INTERIM REMEDIAL MEASURE  
WORK PLAN**

**FORMER CHEZ VALET DRY CLEANERS  
1-3 Manorhaven Boulevard  
Port Washington, New York**

**NYSDEC Site No. 1-03-169  
ACT File No. 5621-PWNY**

**January 20, 2009**

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## **1.0 INTRODUCTION**

The premises located at 1-3 Manorhaven Boulevard, Port Washington, New York (“the Site”) is the subject of an Order On Consent (Index No. W1-0500-07-03) executed with the New York State Department of Environmental Conservation (NYSDEC) on August 15, 2008. This Interim Remedial Measure Work Plan (Work Plan) is being submitted pursuant to Section II(B)(1) of the Order On Consent. It is intended to summarize historical investigations performed at the Site and its vicinity; identify additional sampling that will be necessary to properly design the Interim Remedial Measure (IRM) and provide a schedule for its implementation. Following the performance of this Work Plan, an IRM Report will be submitted which contains a conceptual design for the installation, operation, maintenance and monitoring of the IRM.

The goals of the proposed work plan are the following:

- gather sufficient information about the Site to design an effective remedy to mitigate potential risks to building occupants and the public;
- design and install a vapor system for the area under the building that will be protective of public health and the environment;
- permit the onsite building that formerly housed a dry-cleaning establish to be fully renovated and developed as a commercial establishment.

In order to achieve these goals, the following tasks will be completed at the site:

- collect and analyze soil, soil vapor and ground water samples within the former dry-cleaning establishment in order to supplement the existing information;
- perform a pilot vacuum test to determine the feasibility of operating a vapor system beneath the onsite building;
- prepare specifications for a conceptual design for the installation and operation of a vapor system;

- prepare a formal report documenting completion of the above tasks in accordance with DER-10, Section 5.8.

The objective of this Work Plan is to ensure that all tasks are defined and completed adequately and safely. The work will be conducted in accordance with applicable State and Federal regulations, rules and guidance.

### **1.1 Site Vicinity**

A diagram depicting the Site and its immediate vicinity is provided as Figure 1. The Site is located along the north side of Manorhaven Boulevard and the west side of Sands Point Road in a residential and commercial area in the northwest portion of Nassau County, New York.

Residential properties are located to the north of the Site along Sands Point Road. A Sunoco Service Station is located to the south and a commercial building, Gold Coast Dental, is located to the east. A vacant lot owned by the Village of Manorhaven is located to the west. An elementary school is located approximately 500 feet to the northeast.

The topography of the area is generally level. The ground surface in the vicinity of the Site is covered with asphalt and concrete pavement and landscaped lawns. An unnamed tributary to Manhasset Bay is located approximately 750 feet to the south. The Long Island Sound is located approximately 1.5 miles to the north.

## **1.2 Site Description**

Current and former features of the Site are presented in Figure 2. The Site consists of two adjoining one-story commercial buildings with a combined footprint of 6,560 square feet in area on five lots totaling 13,100 square feet in area.

The northern building, 1 Manorhaven Boulevard, is 4,431 square feet in area and housed Chez Valet Dry Cleaners until 2006 when it was purchased by the current owner. It has recently been completely gutted in anticipation of its planned renovation. The building currently contains a concrete slab floor in the front followed by a dirt crawlspace, a wood-covered partial basement and a concrete slab in the back. The walls and roof consist of exposed wood studs and ceiling joists.

The basement measures 5 feet 8 inches in height, 10 feet 8 inches in width and 28 feet in length. Access is through a stairway and door along the building's northern wall. A former entrance along the basement's southern wall was backfilled several years ago. The basement is covered by a concrete slab floor except for a sump in the southwest and a former above-ground storage tank location in the northeast. The sump consists of a 22 inch diameter pre-cast concrete collar with a dirt bottom 15 inches below the concrete floor.

A utility room containing an out of service oil-fired furnace and a former bathroom are located in the western portion of the northern building. An attached garage which also contains an out of service furnace is located adjacent to the northern building.

A storage room accessed through the garage is located along the northern property boundary.

The southern building, 3 Manorhaven Boulevard, is 2,129 square feet in area and currently houses Evergreen Hair Stylists, a hair and nail salon. It formerly contained the Breakfast Room, Ltd, a kitchen and bath showroom. Interior surfaces are covered with ceramic tile flooring, sheetrock walls and a suspended tile ceiling. The southern building is constructed on a concrete slab.

The exteriors of both buildings consist of concrete walls and tar and shingle roofs. Main entrances to both buildings are located along their eastern exterior walls. A roll-up door in the northwest portion of the Site provides an additional entrance to the northern building through the attached garage. An exterior door leading to an alley in the southern portion of the Site provides additional access to the hair and nail salon. The northern and eastern portions of the Site are covered with asphalt pavement followed by concrete sidewalks along Sands Point Road and Manorhaven Boulevard. The southwest portion of the Site abuts a vacant lot owned by the Village of Manorhaven, while the northwest portion abuts a residential garage.

### **1.3 Geology and Hydrogeology**

The Site is estimated to lie at an elevation of 15 feet above mean seal level in the northwestern portion of the Manhasset Neck peninsula.<sup>1</sup> The topography of the area is

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<sup>1</sup>7.5 Minute Series USGS Topographic Map of Sea Cliff, New York Quadrangle

generally level with a slight downward slope towards the south. The ground surface in the vicinity of the Site is covered with asphalt roadways and parking lots, concrete sidewalks and landscaped lawns. The Site itself is covered with buildings, asphalt pavement and a small dirt-covered alley.

The subsurface geology beneath the Site consists of unconsolidated Pleistocene and Late Cretaceous deposits from ground surface to approximately 300 feet below ground surface (bgs) where crystalline metamorphic bedrock of the Hartland Formation is located.<sup>2</sup> The general soil components of the subject property and its vicinity are classified as Urban Land (Ug) and Urban land-Montauk complex, 3 to 8 percent slopes (UnB), respectively.<sup>3</sup> During recent investigations, soil samples collected from borings installed within 8 feet of ground surface were generally described as unconsolidated fine to medium-grained sands with traces of pebbles, gravel and silt.

The major aquifer systems beneath the Site are the Pleistocene-age Upper Glacial and North Shore aquifers.<sup>4</sup> The Upper Glacial aquifer generally consists of fine to coarse-grained stratified sand and gravel, unstratified boulders, clay and till encountered at an approximate depth of 15 feet to 0 feet msl. The North Shore aquifer consists of moderately sorted stratified drift and outwash deposits located between -150 feet and

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<sup>2</sup>Smolensky, D.A., Buxton, H.T., and Shernoff, P.K. (1989). Hydrogeologic Framework of Long Island.

<sup>3</sup>Soil Survey of Nassau County, New York (U.S. Department of Agriculture, U.S. Soil Conservation Service)

<sup>4</sup>Hydrogeology and Extent of Saltwater Intrusion on Manhasset Neck, Nassau County, NY, USGS 2002.



-300 feet msl. The North Shore Confining Unit, consisting of a sequence of Pleistocene-age clay and silt deposits, separates the Upper Glacial and North Shore aquifers between 0 feet and -150 feet msl.

The regional direction of groundwater flow is estimated to be to the south towards Manhasset Bay. During recent investigations, shallow ground water beneath the site was determined to flow in a southerly direction.<sup>5</sup> Ground water in on and offsite monitoring wells has been found between 8 and 10 feet bgs.

#### **1.4 Previous Investigations**

Several investigations have been performed that document environmental conditions beneath the Site and the adjacent lot to its west. The following summary of the principal findings from these investigations is intended to identify areas where additional information is necessary. A diagram of pertinent sampling locations utilized during these investigations is contained in Figure 3. Ground water, soil and soil vapor quality determined by these investigations are depicted in Figure 4 through Figure 6, respectively.

On November 29, 2004 Severn Trent Laboratories, (STL) produced a report containing the results of soil and soil vapor testing performed on the adjacent vacant lot to the west. The STL report described the collection of 3 soil and soil vapor samples from the eastern property boundary and 1 soil and soil vapor sample from the center of

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<sup>5</sup>Soil Gas and Groundwater Investigation, Berninger Environmental, Inc., January 27, 2006.

the vacant lot. All of the samples were analyzed for volatile organic compounds (VOCs). No VOCs were detected in any of the soil samples. However, several VOCs, including Tetrachloroethene (PCE), were detected in the four soil vapor samples. The highest concentration of PCE (200 ug/m<sup>3</sup>) was found in soil vapor sample B-3 located in the eastern portion of the vacant lot adjacent to the western boundary of the Site. There are no specific soil vapor guidance values for PCE in the absence of indoor air quality data. (*Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, New York State Department of Health, October 2006*).

A January 27, 2006 report by Berninger Environmental, Inc. (BEI) documented the collection and analysis of 3 soil vapor samples and 7 ground water samples from the adjacent lot. The BEI report described the presence of 594 ug/m<sup>3</sup> of PCE in soil vapor sample SG-2 located in the center of the eastern boundary of the adjacent lot bordering the Site. The BEI report also documented the presence of 75 ug/l of PCE in ground water sample GW-2 located adjacent soil vapor sample SG-2. The standard for PCE in ground water is 5 ug/l (*Ambient Water Quality Standards, NYSDEC TOGS 1.1.1, June 1996*). Water levels gauged from three piezometers installed on the adjacent lot were used to estimate shallow ground water flow in a southerly direction towards Manhasset Bay.

On October 30, 2006 Advanced Cleanup Technologies, Inc. (ACT) installed and sampled five temporary ground water monitoring wells around exterior portions of the Site. The two existing piezometers on the adjacent lot (PZ-1 and PZ-2) were also sampled. The ground water samples were found to contain concentrations of PCE

ranging from 7.1 ug/l in PZ-1 to 21 ug/l in TW-05 which was collected from a temporary well installed in a sump in the partial basement. Concentrations of PCE were below detection limits in four of the seven temporary wells sampled.

On January 9, 2007 ACT completed a supplemental subsurface investigation, including the collection of soil vapor and ground water samples from four locations within the former dry cleaner. Two ambient air samples were also collected inside the front and central portions of the northern building which was occupied by the dry cleaner at the time. The ground water samples were found to contain slightly elevated concentrations of PCE, with the highest concentration (20 ug/l) found in temporary well TW-08 located along the southwest wall of the building. Soil vapor samples ranged from 15,000 ug/m<sup>3</sup> to 39,800 ug/m<sup>3</sup> of PCE, with minor concentrations of Trichloroethene and Chloroform also found. The highest concentration of PCE in soil vapor was found in sampling location SV-04 located adjacent to the former dry cleaning machine. Concentrations of PCE in ambient air ranged from 190 ug/m<sup>3</sup> (AS-02) to 353 ug/m<sup>3</sup> (AS-01). The guidance value for PCE in ambient air with elevated sub-slab vapor concentrations is 3 ug/m<sup>3</sup> (*Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, New York State Department of Health, October 2006*).

On November 21, 2007, ACT installed four soil borings through the concrete floor in the immediate vicinity of the former dry cleaning machine. These soil borings were continuously sampled and screened in the field with a Photoionization Detector (PID) from ground surface to the water table, which was located approximately 9 feet

below ground surface. Soil samples consisted of fine to medium sand with some silt, pebbles and organic material. In-field screening produced PID readings up to 8.2 ppm in SB-01 at 4 to 5 feet below ground surface. The highest concentration of PCE in soil was 34 ug/kg found in SB-02. The Unrestricted Use Soil Cleanup Objective for PCE in soil is 1,300 ug/kg (6 NYCRR Part 375, December 14, 2006). Ground water samples collected from the water table surface ranged from 2 ug/l of PCE in TW-13 to 130 ug/l of PCE in TW-11, which was installed near the west wall of the building and downgradient of the former dry cleaning machine.

### **1.5 Review of Existing Data**

Of the 22 shallow ground water samples collected during previous subsurface investigations (thirteen onsite and nine offsite), 15 samples exceeded water quality standards. The highest concentration of PCE in ground water (130 ug/l in TW-11) was found inside the northern building less than twenty feet south of the former dry cleaning machine. Ground water sampling conducted during previous investigations was limited to the water table surface, which ranged from 7.8 to 9.4 feet below ground surface.

Four onsite and four offsite soil borings were previously installed, with PCE being found in two of the four onsite borings at concentrations well below regulatory criteria. Although soil samples have been collected beneath the area of the former dry cleaning equipment, there are other areas where soil sampling will be performed to identify any potential impacts from the former dry cleaner's operations. These areas include the first floor sump adjacent to the former dry cleaning equipment, the sump and

former above-ground storage tank location in the basement, an interior chemical storage location and the garage area where the former 275 gallon above ground PCE storage tank was located.

PCE was detected in all eleven soil vapor samples collected during previous investigations, with the highest concentration (39,800 ug/m<sup>3</sup> in SV-04) found within 10 feet of the former dry cleaning machine. The extent of PCE in soil vapor beneath the northern building and the adjacent lot appears to have been adequately determined. A soil vapor sample will also be collected beneath the southern building during the IRM. Soil vapor samples beneath exterior portions of the Site will be undertaken following implementation of interim remedial measures.

## **2.0 SUPPLEMENTAL INVESTIGATION**

### **2.1 Introduction**

In order to better define the extent of PCE contamination associated with the former dry cleaner, additional soil, soil vapor and ground water samples will be collected from inside the former dry cleaning building footprint. Pursuant to Section 1.9 of DER-10, all field work associated with this IRM Work Plan will be performed in accordance with an approved Community Air Monitoring Plan which will be submitted separately.

A soil permeability and vapor extraction test will also be performed to determine the effective radius of influence of a sub-slab depressurization system and/or soil vapor extraction system that may be necessary to prevent contaminants from entering the air

space within the buildings or migrating offsite. Results from the supplemental sampling will be incorporated into an IRM Report which will provide conceptual design plans including criteria that will enable the design of a fully operational soil vapor control/containment system to be installed beneath the buildings during their renovation. It is anticipated that this soil vapor control/containment system will be installed under the footprint both buildings during renovation activities. All cracks and voids will be sealed to improve performance of the IRM. Once renovations are completed and the vapor control/containment system is activated, it is expected that the building interiors will be rendered safe for commercial use.

## **2.2 Soil and Ground Water Quality**

### **2.2.1 Soil Boring Installation and Sampling**

Approximately 7 soil borings will be installed inside the northern building to address areas previously not explored. Additional laboratory-issued sampling containers will be available during field activities to obtain surficial soil samples where signs of contamination are observed as well as to evaluate contact exposures to workers.

As indicated in Figure 7, the borings will be located in the vicinity of the first floor sump (SB-05), the basement sump (SB-06), the rear storage room (SB-07), the garage (SB-08), the former dry cleaning machine (SB-09), the former basement tank (SB-10) and the former chemical storage area (SB-11). Each soil boring will be installed utilizing portable geoprobe-style hydraulic percussion equipment in combination with

four-foot solid drive rods and four-foot macro-core soil samplers containing dedicated acetate liners.

Soil will be continuously sampled in each soil boring from just below the concrete floor or ground surface and the water table estimated to be approximately 8 feet in depth. All soil samples will be visually examined for soil lithology and screened in the field for the presence of contamination utilizing a Photovac 2020 PID calibrated to an isobutylene standard.

One soil sample from each boring will be selected for laboratory analysis based upon the highest PID reading and/or olfactory evidence of contamination. In the event no PID readings or other evidence of contamination is present, the selection will consist of one soil sample from the terminus of the boring. A log of each soil boring will be maintained describing the subsurface lithology at each location. Following the completion of sampling, the soil boring will be backfilled with native soil.

All soil samples will be packed tightly to eliminate air voids into appropriate laboratory-issued containers and refrigerated prior to transport to an ELAP-certified laboratory for VOC analysis in accordance with EPA Method 8260. One or more representative soil samples will also be collected for the analysis of grain size, bulk density and total organic carbon. Based upon in-field observations, one soil sample will also be analyzed for semi-volatile organic compounds via EPA Method 8270, pesticides

via EPA Method 8081, PCBs via EPA Method 8082 and priority pollutant metals via EPA Method 6010 and mercury via EPA Method 7470.

### 2.2.2 Temporary Well Installation and Sampling

Temporary well TW-14 will be installed to a depth of 35 to 40 feet inside the southern portion of the former dry cleaning building at the approximate location indicated in Figure 7. Temporary well TW-15 will be installed in a similar manner to intersect the water table in the vicinity of former temporary well TW-11. The temporary wells will be installed utilizing portable geoprobe-style hydraulic percussion equipment in combination with four-foot solid drive rods and a decontaminated 2-foot slotted well screen (i.e. slotted rods). The depth to water and depth to bottom of the well screen will be measured to an accuracy of 0.01 feet utilizing a Solinst oil/water interface probe.

The temporary wells will be purged of development water utilizing a Solinst peristaltic pump and dedicated polyethylene tubing in accordance with the United States Environmental Protection Agency's (USEPA) low flow sampling procedures (March 16, 1998). Turbidity, conductivity, pH, dissolved oxygen, ORP and salinity will be continuously monitored with a Horiba multimeter equipped with a flow-through cell. Purging will continue until water chemistry has stabilized.

Ground water samples from TW-14 and TW-15 will be analyzed for volatile organic compounds in accordance with EPA Method 8260. A ground water sample from TW-15 will also be analyzed for volatile organic compounds in accordance with EPA



Method 8260, semi-volatile organic compounds via EPA Method 8270, pesticides via EPA Method 8081, PCBs via EPA Method 8082 and filtered and unfiltered priority pollutant metals and mercury via EPA Method 6010/7470. A sample of ground water from one location will also be analyzed for total and dissolved iron and manganese, sulfate, nitrate, chemical oxygen demand and biochemical oxygen demand.

### 2.2.3 Conventional Well Installation and Sampling

To further evaluate ground water flow and quality beneath the Site, three conventional monitoring wells will be installed. One monitoring well (MW-03) will be installed in the northern parking lot to evaluate upgradient ground water quality. Two additional monitoring wells (MW-04 and MW-05) will be installed in the sidewalk on the south side of Manorhaven Boulevard to evaluate downgradient and cross-gradient ground water quality.

Each monitoring well will be installed utilizing a geoprobe-style drill rig and consist of five feet of one-inch diameter well screen beneath solid riser pipe. Each monitoring well will be backfilled with coarse sand to the top of the well screen. A bentonite seal will be placed one foot above the well screen. Native soil will be used to backfill the remainder of the annular space to within six inches of ground surface. A flush-mounted manhole cover will be cemented into the asphalt pavement or concrete sidewalk over each newly constructed monitoring well.

The top of casing elevations of all existing and new monitoring wells will be surveyed to an accuracy of approximately 0.01 ft. by a licensed land surveyor and tied into the most updated survey for the property. The distance between the top of casing and the water table surface will be measured in each monitoring well utilizing a Solinst oil/water interface probe. A water table contour map will be prepared by subtracting the depth to water from the surveyed casing elevation in each monitoring well.

Each monitoring well will be allowed to equilibrate for approximately one week prior to sampling. The monitoring wells will be purged of development water and sampled utilizing a Solinst peristaltic pump and dedicated polyethylene tubing in accordance with the United States Environmental Protection Agency's (USEPA) low flow sampling procedures (March 16, 1998). Turbidity, conductivity, pH, dissolved oxygen, ORP and salinity will be continuously monitored with a Horiba multimeter equipped with a flow-through cell. Purging will continue until water chemistry has stabilized. The samples will be placed into appropriate laboratory-issued containers and refrigerated prior to transport to an ELAP-certified laboratory for analysis of VOCs in accordance with EPA Method 8260.

### **2.3 Equipment Decontamination**

All equipment will be properly decontaminated after the completion of each soil boring and temporary monitoring well. Care will be taken to store and transport equipment away from cleaning solvents and gasoline. Sampling equipment will be cleaned between sampling events to prevent sample cross-contamination. Cleaned

equipment will be handled as little as possible prior to use and disposable gloves will be worn during handling.

Sampling equipment will be field decontaminated according to the following steps:

- wash with solution of non-phosphate detergent in tap water;
- rinse with tap water;
- rinse with distilled/de-ionized water;
- rinse with methanol;
- rinse with distilled/de-ionized water;
- air dry.

A decontamination area will be set up in a non-contaminated area of the Site, away from the work area. A polyethylene tarp will be placed on the ground and the cleaning/rinsing solutions will be stored in laboratory wash bottles to reduce waste generation. Scrub brushes will be used to remove residue from equipment. All rinse solutions will be collected and disposed of properly.

## **2.4 In-Field Pilot Testing**

The applicability of sub-slab depressurization (SSD) and/or soil vapor extraction (SVE) to a specific site must be determined by a site evaluation. Not all sites are suitable to application of these technologies. For example, barriers within the soil, such as high silt content and clay lenses, may prevent efficient vacuums from being attained. Generally, the permeability of the soil will determine the radius of influence of SSD and SVE systems.

The influence of a SSD system is estimated as the distance where an effective vacuum is produced by an extraction well. In accordance with NYSDOH guidelines, the influence of the SSD system beneath the Site will be determined as the area where a minimum vacuum of 0.025 inches of water can be maintained by an extraction well. The specific design of the IRM will be based on site-specific vacuums gathered during in-field pilot testing. The proposed locations of the pilot vacuum well and vacuum probes are provided as Figure 7.

A radius of influence of at least 15 feet is anticipated at this Site given the sandy composition of unsaturated subsurface soil. The location of the pilot vacuum well has been selected to maximize the amount of vacuum attainable beneath the existing concrete slab without boundary interference such as the partial basement or exterior footings. To the extent that water is not drawn into the pilot system, stepped vacuums will be applied and the resulting influences recorded at distances of 10 feet (VP-01), 20 feet (VP-02) and 30 feet (VP-03). A vacuum probe (VP-04) will also be located in the southern building to obtain soil and air permeability data beneath the southern building prior to its renovation and re-occupancy.

The pilot vacuum well will be constructed with 4 feet of 2-inch diameter schedule 40 PVC well screen installed within the vadose zone between 2 and 6 feet below the concrete floor. Flush-threaded 2-inch riser pipe will extend the pilot vacuum well above the concrete floor. The annulus around the well screen will be backfilled with No. 2 sand. A bentonite cement grout will be installed from the top of the well screen to the

concrete floor. The riser pipe will be sealed to the concrete floor with a fast-drying non-VOC concrete mix.

Shallow and deep vacuum probes will be installed at each vacuum probe location. The shallow vacuum probes will be permanent monitoring locations. Each will consist of a 6-inch stainless steel or brass tube inserted within three-eighth inch cores drilled through the concrete floor, sealed to it with hydraulic cement and covered with a protective flush-mounted cover.

Deep vacuum probes will consist of temporary one-quarter inch polyethylene tubing installed between five and six feet below the concrete floor. The bottom six inches of annulus around the polyethylene tubing will be backfilled with coarse sand followed by a bentonite grout. The polyethylene tubing will be sealed to the floor with a non-VOC putty.

The shallow vacuum probes will be purged for approximately five minutes utilizing a personal sampling pump at a flow rate of approximately 100 ml/min. Soil vapor samples will then be collected from the shallow vacuum probes over a twenty-four hour period utilizing six liter Summa canisters with low-flow regulators in accordance with NYSDOH sampling procedures. Each shallow soil vapor sample will be analyzed for volatile organic compounds via EPA Method TO-15.

A trailer-mounted SVE system consisting of a 5.5 Hp regenerative blower, air filter and moisture separator will be utilized to perform the pilot test. The vacuum and flow rate at the vacuum well will be measured during each stage of the pilot test. An air velocity meter with a minimum sensitivity of 0.001 in. w.c. will be utilized to measure vacuum at each vacuum of the shallow and deep vacuum probes.

Two 170 lb vapor phase granular activated carbon canisters in series will be utilized to filter air exiting the SVE system during the pilot test, which should not exceed 4 hours of actual run time. Air exiting the SVE system will be continuously monitored before, in-between and after each carbon canister. The pilot SVE system will be shut down if the air exiting the second granular activated carbon canister exceeds 10 ppm of total volatile organic compounds measured by a PID meter calibrated to 100 ppm of an isobutylene standard.

## **2.5 Quality Assurance Procedures**

To assure the reliability of the information obtained from the IRM Work Plan, quality assurance procedures will be performed as described in Sections 2.2 and 2.3 of DER-10. One trip blank will be obtained for each day of sample collection. Duplicate samples will be collected from each matrix sampled. Category B deliverables will be obtained from the ELAP-certified laboratory, including the provision of Matrix Spikes and Matrix Spike Duplicates. A Data Usability Summary Report will be prepared and submitted as part of the IRM Report.

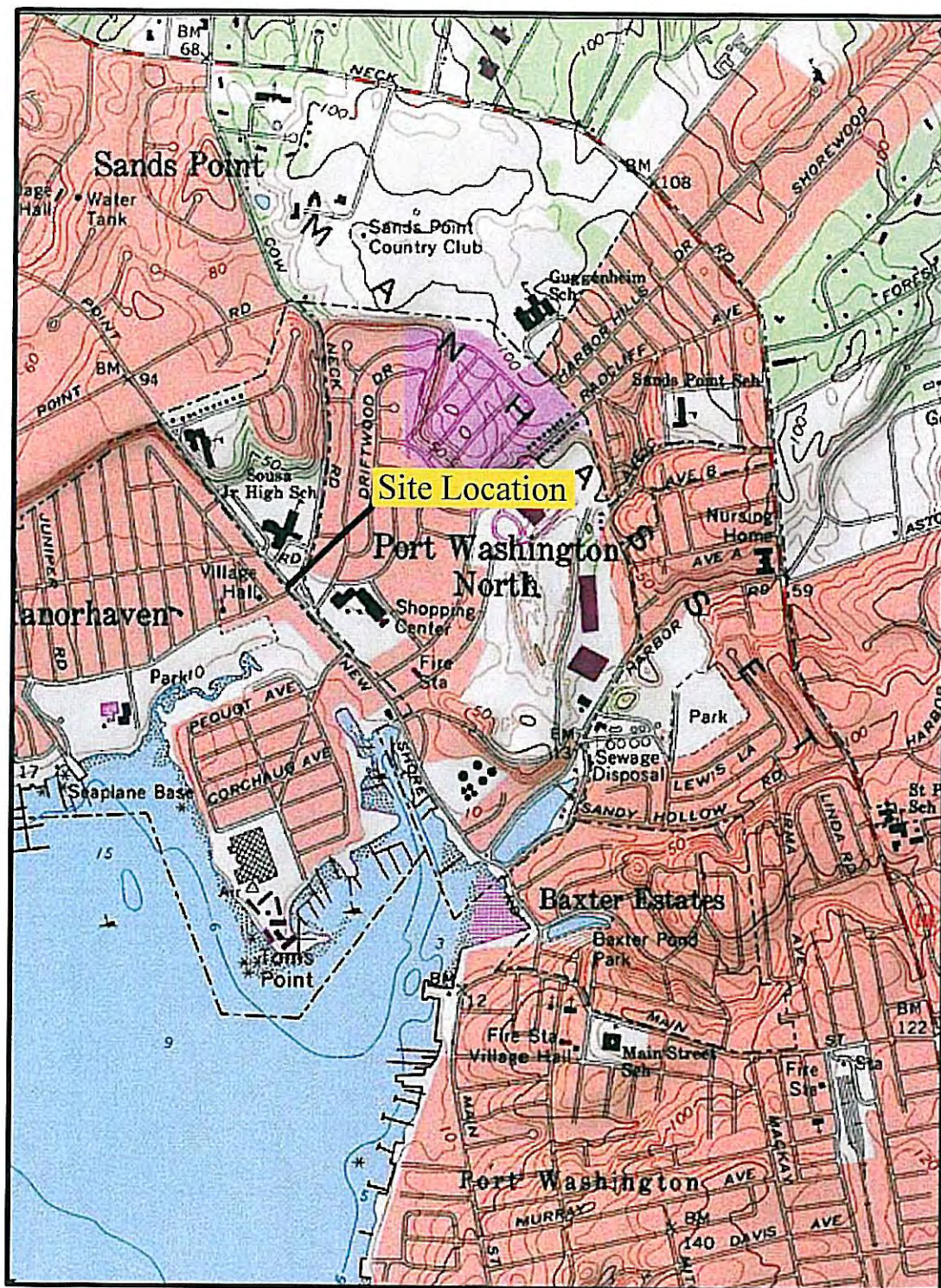
### **3.0 PROJECT SCHEDULE**

The property owner intends to relocate its hair and nail salon to the northern building and to rent out the southern building. The planned renovation includes the complete interior renovation of the northern building and minor interior renovations of the southern building.

A Ghant Chart containing the estimated project schedule for implementation of this Work Plan is provided in Figure 8. The project schedule includes milestones for completion of the major tasks. As-built plans for the IRM will be submitted once start up of the IRM has occurred.

## FIGURES





From USGS 7.5 Minute Topographic Map Of  
Sea Cliff, New York Quadrangle

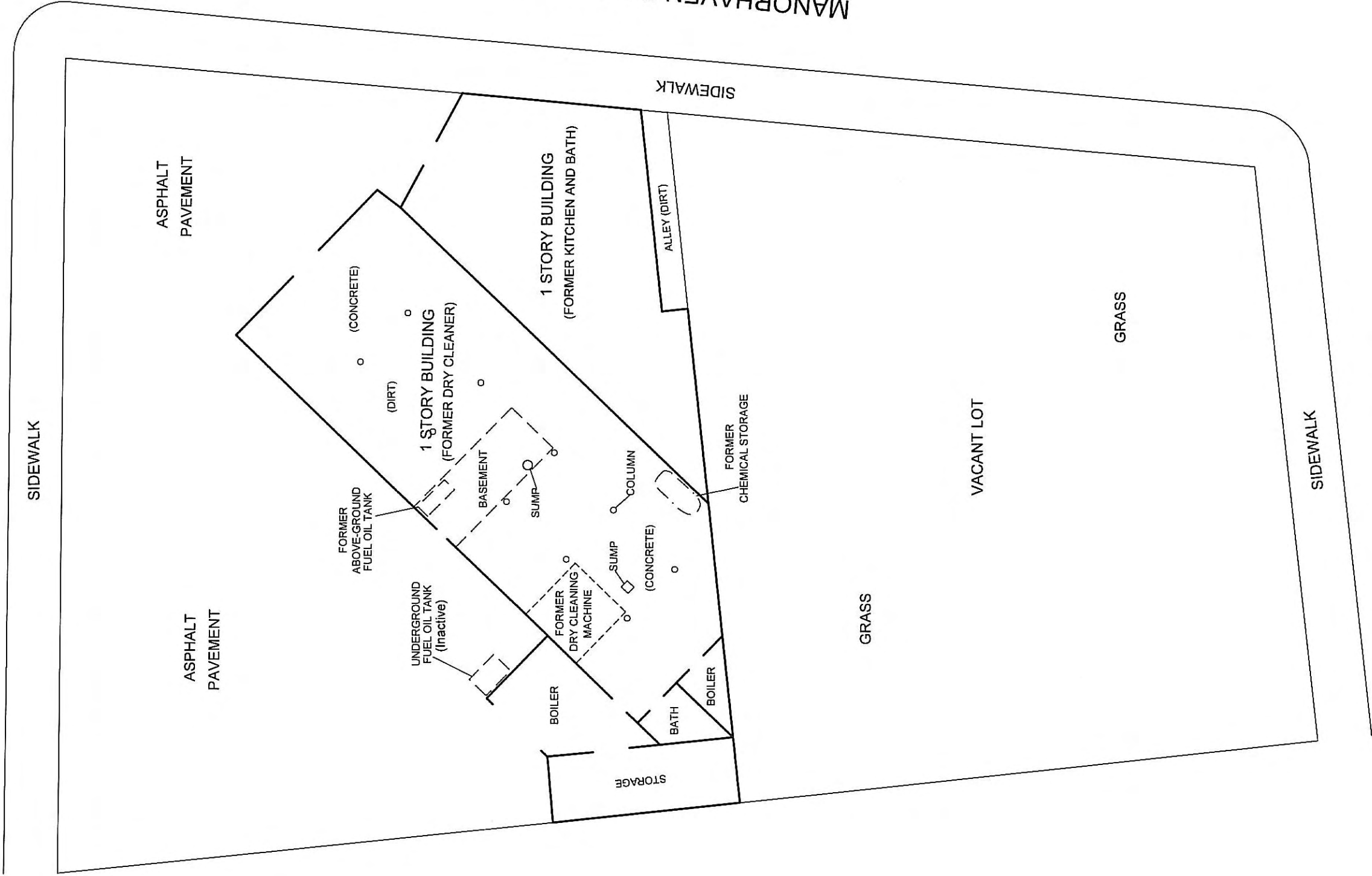
Advanced Cleanup Technologies, Inc.  
ENVIRONMENTAL CONSULTANTS

## LOCATIONAL DIAGRAM

JOB No.: 5621-BKNY	DATE: 09/30/08
FIGURE NO.: 1	SCALE: 1in. =2,000 ft. (Approx.)
DRAWN BY: William Sisco	APPR. BY: Paul Stewart



SANDS POINT ROAD



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SITE PLAN

JOB NO.:	5621-PWNY	DATE:	1/20/09
FIGURE NO.:	2	SCALE:	1in. = 20 ft. (Approx.)
DRAWN BY:	WILLIAM SISCO	APPR. BY:	PAUL STEWART

SANDS POINT ROAD



SIDEWALK

MANORHAVEN BOULEVARD

SIDEWALK

SIDEWALK

ASHWOOD ROAD

LEGEND

- B-1 Soil and Soil Vapor Sample, STL New York (11/29/04)
- SG-1 Soil Vapor Sample, Berninger (1/27/06)
- ⊕ GW-1 Ground Water Sample, Berninger (1/27/06)
- ⊕ PZ-1 Ground Water Sample, Berninger (1/27/06)
- TW-01 Ground Water Sample, ACT (10/20/06)
- ⊕ SV-01 TW-06 Soil Vapor and Ground Water Sample, ACT (1/9/07)
- + AS-01 Ambient Air Sample, ACT (1/9/07)
- SB-10 TW-10 Soil and Ground Water Sample, ACT (11/21/07)

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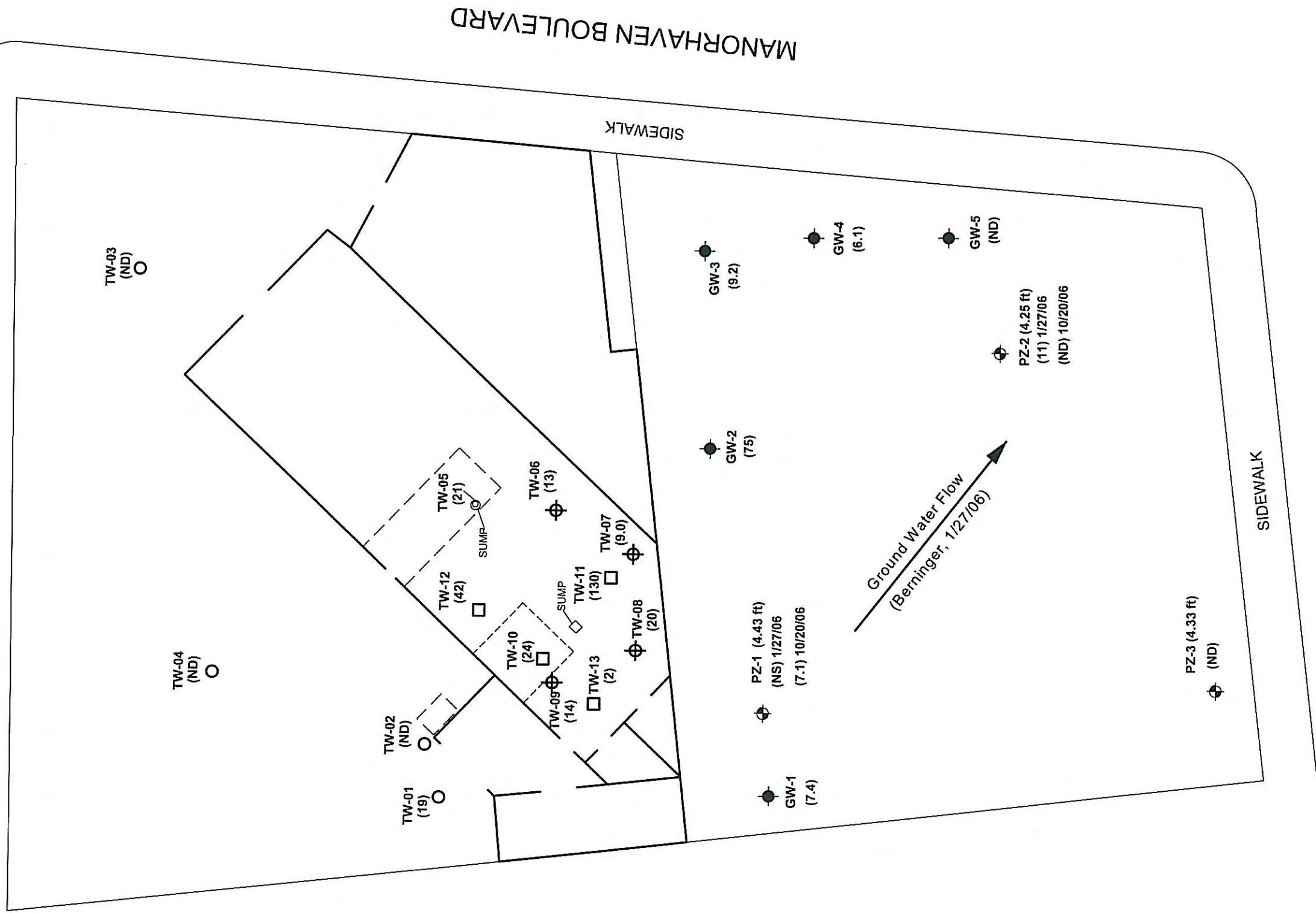
SAMPLING LOCATIONS

JOB NO:	5621-PWNY	DATE:	1/20/09
FIGURE NO:	3	SCALE:	1 in. = 20 ft. (Approx.)
DRAWN BY:	WILLIAM SISCO	APPR. BY:	PAUL STEWART

SANDS POINT ROAD



SIDEWALK



### LEGEND

GW-1	Ground Water Sample, Berninger (1/27/06)	(4.43 ft.) Relative Water Table
PZ-1	Ground Water Sample, Berninger (1/27/06)	(7.4) Tetrachloroethene (ug/l)
TW-01	Ground Water Sample, ACT (10/20/06)	NS Not Sampled
TW-06	Ground Water Sample, ACT (1/9/07)	ND Not Detected
TW-10	Ground Water Sample, ACT (11/21/07)	

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### GROUND WATER QUALITY

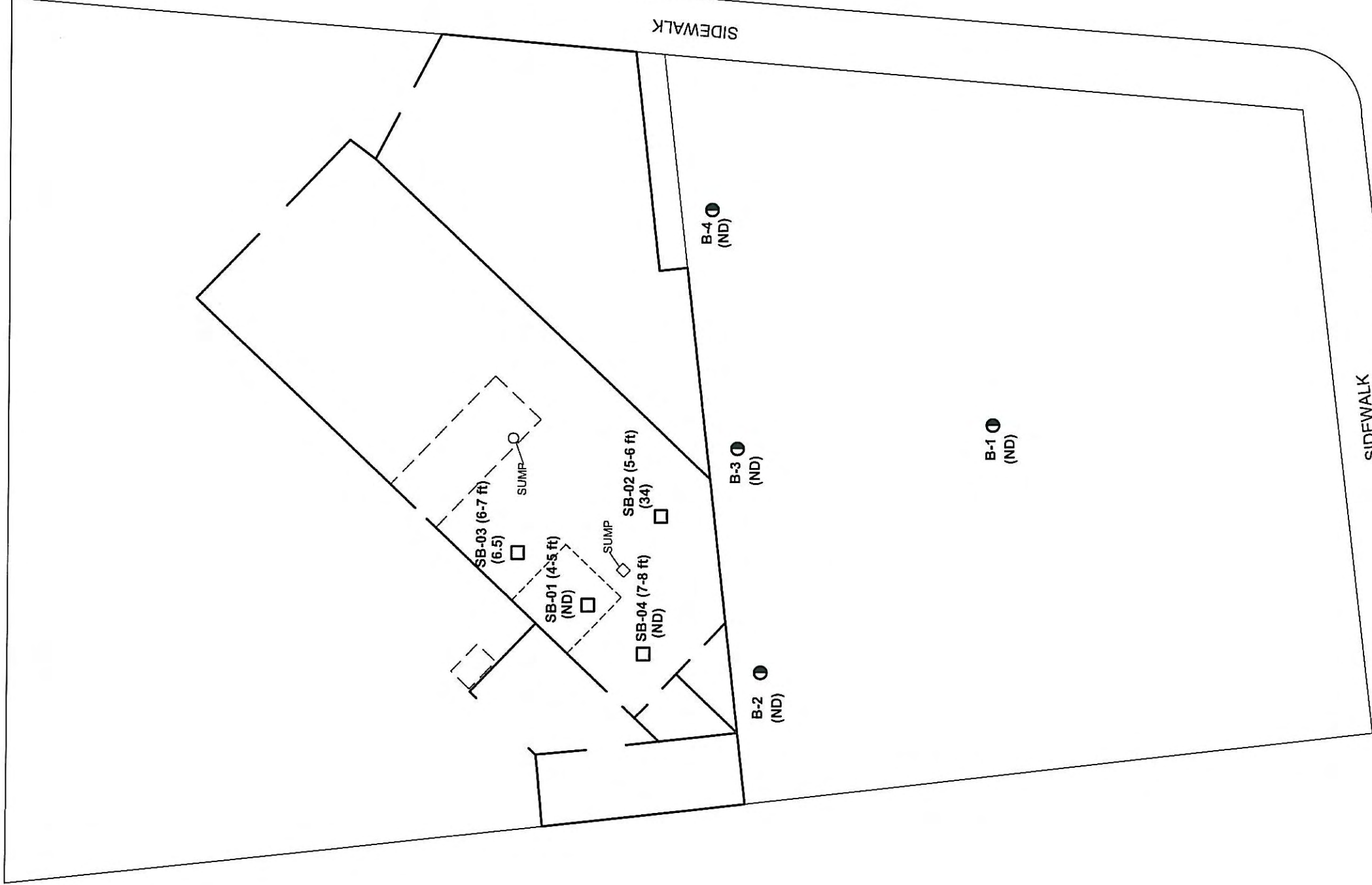
JOB NO: 5621-PWNY	DATE: 1/20/09
FIGURE NO: 4	SCALE: 1in. = 20 ft. (Approx.)
DRAWN BY: WILLIAM SISCO	APPR BY: PAUL STEWART



SANDS POINT ROAD



SIDEWALK



MANORHAVEN BOULEVARD

SIDEWALK

SIDEWALK

ASHWOOD ROAD

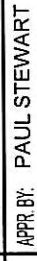
LEGEND

- B-1 Soil Sample, STL New York (11/29/04)
- SB-01 Soil Sample, ACT (11/21/07)
- (34) Tetrachloroethene (ug/kg)
- ND Not Detected

Advanced Cleanup Technologies, Inc.  
ENVIRONMENTAL CONSULTANTS

SOIL QUALITY

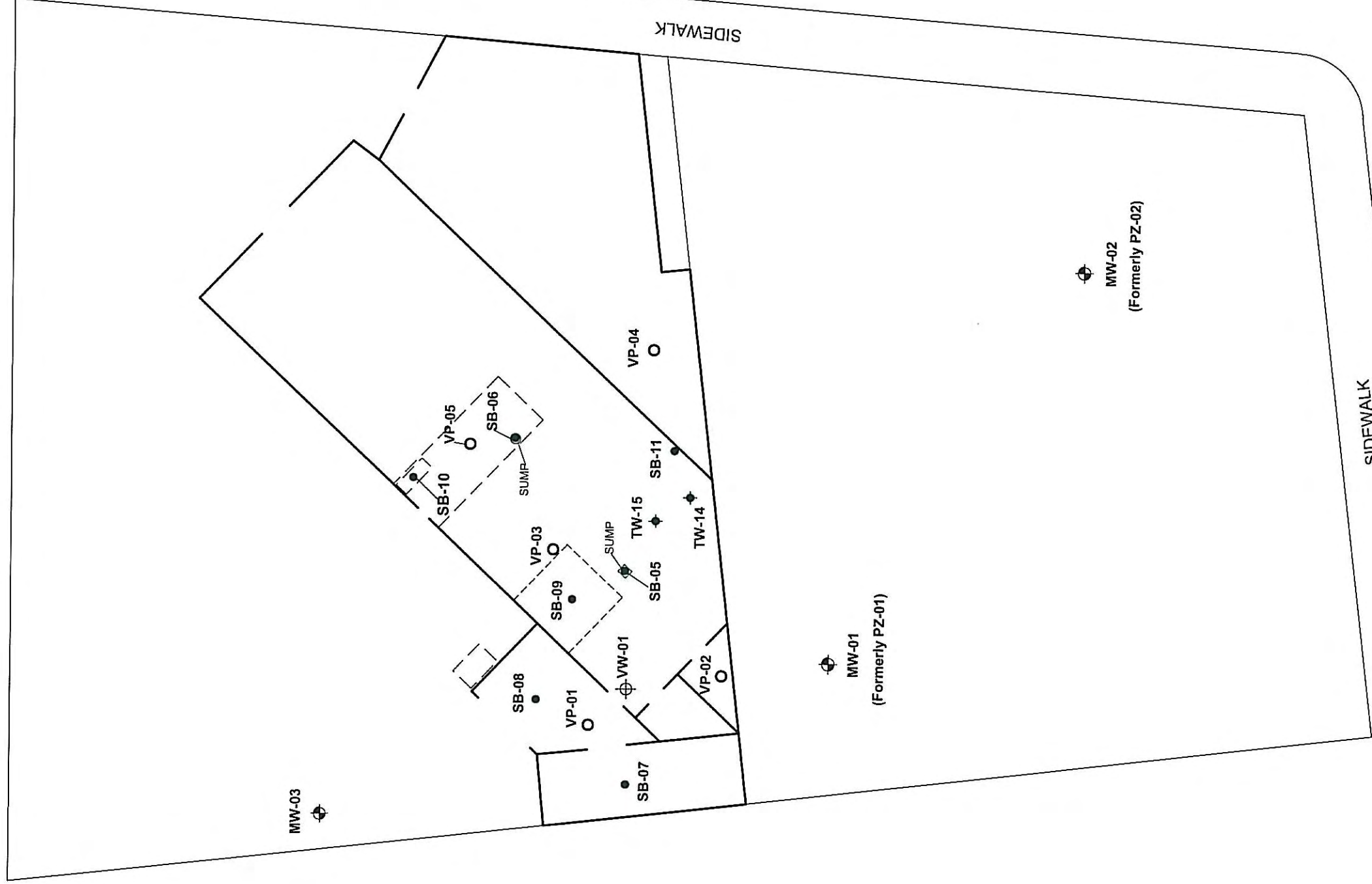
JOB NO:	5621-PWNY	DATE	1/20/09
FIGURE NO:	5	SCALE	1in. = 20 ft. (Approx.)
DRAWN BY:	WILLIAM SISCO	APPR. BY:	PAUL STEWART



SANDS POINT ROAD



SIDEWALK



MANORHAVEN BOULEVARD

ASHWOOD ROAD

SIDEWALK

**LEGEND**

- SB-05 Proposed Soil Boring
- ◆ TW-14 Proposed Ground Water Sample
- ⊕ VW-01 Proposed Pilot Vacuum Well
- VP-01 Proposed Vacuum Probe
- ⊕ MW-01 Proposed Monitoring Well

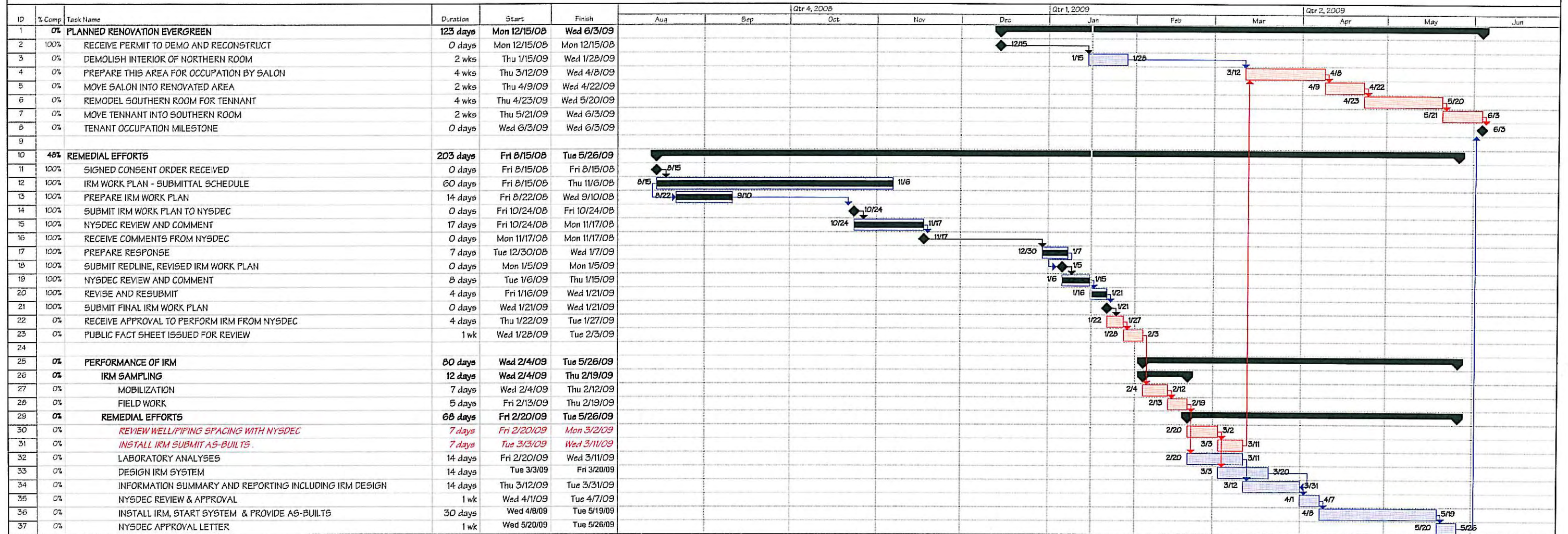
Advanced Cleanup Technologies, Inc.  
ENVIRONMENTAL CONSULTANTS

**IRM SAMPLING LOCATIONS**

JOB NO:	5621-PWNY	DATE:	1/20/09
FIGURE NO:	7	SCALE:	1 in. = 20 ft. (Approx.)
DRAWN BY:	WILLIAM SISCO	APPR. BY:	PAUL STEWART



FIGURE 8  
DRAFT SCHEDULE  
1-3 MANORHAVEN BOULEVARD  
PORT WASHINGTON, NEW YORK 11050



Project:  
Date: Fri 1/16/09

Task  
Critical Task

Progress  
Milestone

Summary  
Rollo Up Task

Summary  
Rollo Up Task

Summary  
Rollo Up Task

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Summary  
Rollo Up Task



## TABLES

Table 1

**SAMPLE SUMMARY TABLE**

**IRM WORK PLAN  
FORMER CHEZ VALET DRY CLEANERS  
1-3 Manorhaven Boulevard  
Port Washington, New York**

Sample	Matrix	Laboratory Analysis <sup>1</sup>
SB-05	Soil	Volatiles by EPA 8260
SB-06	Soil	Volatiles by EPA 8260
SB-07	Soil	Volatiles by EPA 8260
SB-08	Soil	Volatiles by EPA 8260
SB-09	Soil	Volatiles by EPA 8260
SB-10	Soil	Volatiles by EPA 8260
SB-11	Soil	Volatiles by EPA 8260
TW-14	Water	Volatiles by EPA 8260
TW-15 <sup>2,3</sup>	Water	Volatiles by EPA 8260 Semi-Volatiles by EPA 8270 Pesticides by EPA 8081 PCBs by EPA 8082 Metals by EPA 6010 Mercury by EPA 7470
MW-01	Water	Volatiles by EPA 8260
MW-02	Water	Volatiles by EPA 8260
MW-03	Water	Volatiles by EPA 8260
MW-04	Water	Volatiles by EPA 8260
MW-05	Water	Volatiles by EPA 8260
VP-01 <sup>4</sup>	Soil Vapor	Volatiles by TO-15
VP-02	Soil Vapor	Volatiles by TO-15
VP-03	Soil Vapor	Volatiles by TO-15
VP-04	Soil Vapor	Volatiles by TO-15

<sup>1</sup> The laboratory's method reporting limits are attached

<sup>2</sup> Metals analysis will include a sample of filtered and unfiltered ground water

<sup>3</sup> One soil sample will also be analyzed for the full list of target compounds

<sup>4</sup> Samples collected using a 100 ml/min flow rate over a 24 hour duration

# EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

SOIL - LABORATORY REPORTING LIMITS (LRL) for NYSDEC TAGM/TAL Metals, PG 1 OF 1.

PERCENT SOLIDS = 90%.

MATRIX:Solid

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Aluminum as Al	mg/Kg	2000		01/28/	1.086	EPA6010B
Antimony as Sb	mg/Kg	< 1.1		01/28/	1.086	EPA6010B
Arsenic as As	mg/Kg	1.4		01/28/	1.086	EPA6010B
Barium as Ba	mg/Kg	6.0		01/28/	0.543	EPA6010B
Beryllium as Be	mg/Kg	0.13		01/28/	0.108	EPA6010B
Cadmium as Cd	mg/Kg	< 0.54		01/28/	0.543	EPA6010B
Calcium as Ca	mg/Kg	720		01/28/	21.73	EPA6010B
Chromium as Cr	mg/Kg	3.7		01/28/	0.543	EPA6010B
Cobalt as Co	mg/Kg	0.96		01/28/	0.543	EPA6010B
Copper as Cu	mg/Kg	2.2		01/28/	1.086	EPA6010B
Iron as Fe	mg/Kg	2900		01/28/	1.086	EPA6010B
Lead as Pb	mg/Kg	3.5		01/28/	0.543	EPA6010B
Magnesium as Mg	mg/Kg	120		01/28/	0.543	EPA6010B
Manganese as Mn	mg/Kg	35		01/28/	1.086	EPA6010B
Mercury as Hg	mg/Kg	< 0.0054		01/29/	0.005	EPA7470A
Nickel as Ni	mg/Kg	< 1.1		01/28/	1.086	EPA6010B
Potassium as K	mg/Kg	170		01/28/	108.6	EPA6010B
Selenium as Se	mg/Kg	< 1.1		01/28/	1.086	EPA6010B
Silver as Ag	mg/Kg	< 0.54		01/28/	0.543	EPA6010B
Sodium as Na	mg/Kg	< 110		01/28/	108.6	EPA6010B
Thallium as Tl	mg/Kg	< 1.1		01/28/	1.086	EPA6010B
Vanadium as V	mg/Kg	7.9		01/28/	0.543	EPA6010B
Zinc as Zn	mg/Kg	4.8		01/28/	1.086	EPA6010B
Cyanide as CN	mg/Kg	< 2.2		01/31/	2.173	EPA335.4

cc:

LRL=laboratory Reporting Limit

# EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

SOIL - LABORATORY REPORTING LIMITS (LRL) for NYSDEC TAGM VOLATILE ORGANIC COMPOUND, PG 1 OF 2.

PERCENT SOLIDS = 90%.

MATRIX: Soil

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Chlorobenzene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
1,3-Dichloropropane	ug/Kg	< 5.6		05/22/	5.555	EPA8260
Vinyl Chloride	ug/Kg	< 5.6		05/22/	5.555	EPA8260
Chloroethane	ug/Kg	< 5.6		05/22/	5.555	EPA8260
Methylene Chloride	ug/Kg	< 5.6	*	05/22/	5.555	EPA8260
Acetone	ug/Kg	< 56		05/22/	55.55	EPA8260
Carbon disulfide	ug/Kg	< 5.6		05/22/	5.555	EPA8260
1,1 Dichloroethene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
1,1 Dichloroethane	ug/Kg	< 5.6		05/22/	5.555	EPA8260
1,2 Dichloroethene	ug/Kg	< 11		05/22/	11.11	EPA8260
Chloroform	ug/Kg	< 5.6	*	05/22/	5.555	EPA8260
1,2 Dichloroethane	ug/Kg	< 5.6		05/22/	5.555	EPA8260
2-Butanone	ug/Kg	< 56		05/22/	55.55	EPA8260
111 Trichloroethane	ug/Kg	< 5.6		05/22/	5.555	EPA8260
Carbon Tetrachloride	ug/Kg	< 5.6		05/22/	5.555	EPA8260
Freon 113	ug/Kg	< 5.6		05/22/	5.555	EPA8260
123-Trichloropropane	ug/Kg	< 5.6		05/22/	5.555	EPA8260
Trichloroethene	ug/Kg	29		05/22/	5.555	EPA8260
Chlorodibromomethane	ug/Kg	< 5.6		05/22/	5.555	EPA8260
124-Trichlorobenzene (v)	ug/Kg	< 5.6		05/22/	5.555	EPA8260
Benzene	ug/Kg	< 5.6		05/22/	3.888	EPA8260
1,2 Dichlorobenzene (v)	ug/Kg	< 5.6		05/22/	5.555	EPA8260
1,3 Dichlorobenzene (v)	ug/Kg	< 5.6		05/22/	5.555	EPA8260
1,4 Dichlorobenzene (v)	ug/Kg	< 5.6		05/22/	5.555	EPA8260
4-Methyl-2-Pentanone	ug/Kg	< 56		05/22/	55.55	EPA8260

cc:

LRL=laboratory Reporting Limit

# EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

SOIL - LABORATORY REPORTING LIMITS (LRL) for NYSDEC TAGM VOLATILE ORGANIC COMPOUND, PG 2 OF 2

PERCENT SOLIDS = 90%.

MATRIX: Soil

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Tetrachloroethene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
Toluene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
1122Tetrachloroethane	ug/Kg	< 5.6		05/22/	5.555	EPA8260
Ethyl Benzene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
n-Butylbenzene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
sec-Butylbenzene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
Isopropylbenzene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
p-Isopropyltoluene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
ter. ButylMethylEther	ug/Kg	< 5.6		05/22/	5.555	EPA8260
n-Propylbenzene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
124-Trimethylbenzene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
135-Trimethylbenzene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
o Xylene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
m + p Xylene	ug/Kg	< 11		05/22/	11.11	EPA8260
Xylene	ug/Kg	< 17		05/22/	16.66	EPA8260
tert-Butylbenzene	ug/Kg	< 5.6		05/22/	5.555	EPA8260
% Solids		90		05/22/	0.1	SM182540

cc:

LRL=laboratory Reporting Limit

## EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

SOIL - LABORATORY REPORTING LIMITS (LRL) for NYSDEC TAGM PESTICIDES &amp; PCBS, PG 1 OF 1.

MATRIX:Solid

ANALYTICAL PARAMETERS	UNITS	RESULT	Results reported on a dry weight basis			ANALYTICAL METHOD
			DATE	TIME	LRL	
Lindane	ug/Kg	< 2		01/29/	2	EPA8081
Heptachlor	ug/Kg	< 2		01/29/	2	EPA8081
Aldrin	ug/Kg	< 2		01/29/	2	EPA8081
Heptachlor Epoxide	ug/Kg	< 2		01/29/	2	EPA8081
p,p-DDE	ug/Kg	< 2		01/29/	2	EPA8081
Dieldrin	ug/Kg	< 2		01/29/	2	EPA8081
Endrin	ug/Kg	< 2	\$	01/29/	2	EPA8081
p,p-DDD	ug/Kg	< 2		01/29/	2	EPA8081
p,p-DDT	ug/Kg	< 4		01/29/	4	EPA8081
Chlordane	ug/Kg	< 8		01/29/	8	EPA8081
Toxaphene	ug/Kg	< 40		01/29/	40	EPA8081
Endrin Ketone	ug/Kg	< 4		01/29/	4	EPA8081
a BHC	ug/Kg	< 2		01/29/	2	EPA8081
b BHC	ug/Kg	< 2		01/29/	2	EPA8081
d BHC	ug/Kg	< 2		01/29/	2	EPA8081
Endosulfan 1	ug/Kg	< 4		01/29/	4	EPA8081

PERCENT SOLIDS = 90%.

cc:

LRL=laboratory Reporting Limit

MATRIX:Solid

ANALYTICAL PARAMETERS	UNITS	RESULT	Results reported on a dry weight basis			ANALYTICAL METHOD
			DATE	TIME	LRL	
Endosulfan 2	ug/Kg	< 4		01/29/	4	EPA8081
Endosulfan Sulfate	ug/Kg	< 12		01/29/	12	EPA8081
Methoxychlor	ug/Kg	< 4		01/29/	4	EPA8081
Endrin Aldehyde	ug/Kg	< 12		01/29/	12	EPA8081
Aroclor 1016	ug/Kg	< 40		01/29/	40	EPA8082
Aroclor 1221	ug/Kg	< 40		01/29/	40	EPA8082
Aroclor 1232	ug/Kg	< 40		01/29/	40	EPA8082
Aroclor 1242	ug/Kg	< 40		01/29/	40	EPA8082
Aroclor 1248	ug/Kg	< 40		01/29/	40	EPA8082
Aroclor 1254	ug/Kg	< 40		01/29/	40	EPA8082
Aroclor 1260	ug/Kg	< 40		01/29/	40	EPA8082

# EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

SOIL - LABORATORY REPORTING LIMITS (LRL) for NYSDEC TAGM BASE/NEUTRAL-SVOC COMPOUNDS, PG 1 OF 2

PERCENT SOLIDS = 90%.

MATRIX: Soil

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Nitrobenzene	ug/Kg	< 33		05/24/	33.33	EPA8270
Isophorone	ug/Kg	< 33		05/24/	33.33	EPA8270
Naphthalene(sv)	ug/Kg	88		05/24/	33.33	EPA8270
4-Chloroaniline	ug/Kg	< 33		05/24/	33.33	EPA8270
2-Methylnaphthalene	ug/Kg	84		05/24/	33.33	EPA8270
2-Nitroaniline	ug/Kg	< 33		05/24/	33.33	EPA8270
Dimethyl Phthalate	ug/Kg	< 33		05/24/	33.33	EPA8270
Acenaphthylene	ug/Kg	< 33		05/24/	33.33	EPA8270
2,6-Dinitrotoluene	ug/Kg	< 33		05/24/	33.33	EPA8270
3-Nitroaniline	ug/Kg	< 33		05/24/	33.33	EPA8270
Acenaphthene	ug/Kg	< 33		05/24/	33.33	EPA8270
Dibenzofuran	ug/Kg	39		05/24/	33.33	EPA8270
Diethyl Phthalate	ug/Kg	< 33		05/24/	33.33	EPA8270
Fluorene	ug/Kg	39		05/24/	33.33	EPA8270
Hexachlorobenzene	ug/Kg	< 33		05/24/	33.33	EPA8270
Phenanthrene	ug/Kg	270		05/24/	33.33	EPA8270
Anthracene	ug/Kg	60		05/24/	33.33	EPA8270
Di-n-Butyl Phthalate	ug/Kg	< 33		05/24/	33.33	EPA8270
Fluoranthene	ug/Kg	340		05/24/	33.33	EPA8270
Pyrene	ug/Kg	610	@	05/24/	33.33	EPA8270
BenzylButylPhthalate	ug/Kg	< 33	@	05/24/	33.33	EPA8270
3,3'-Dichlorobenzidine	ug/Kg	< 330	\$	05/24/	333.3	EPA8270
Benzo(a)anthracene	ug/Kg	220	@	05/24/	33.33	EPA8270
Chrysene	ug/Kg	240	@	05/24/	33.33	EPA8270
Bis(2-ethylhexyl)phthalate	ug/Kg	< 33	@	05/24/	33.33	EPA8270

cc:

LRL=laboratory Reporting Limit

# EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

SOIL - LABORATORY REPORTING LIMITS (LRL) for NYSDEC TAGM BASE/NEUTRAL-SVOC COMPOUNDS, PG 2 OF 2

PERCENT SOLIDS = 90%.

MATRIX: Soil

Results reported on a dry weight basis

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICAL METHOD
Di-n-octyl Phthalate	ug/Kg	< 33	\$	05/24/	33.33	EPA8270
Benzo(b)fluoranthene	ug/Kg	230	\$#	05/24/	33.33	EPA8270
Benzo(k)fluoranthene	ug/Kg	320	\$#	05/24/	33.33	EPA8270
Benzo(a)pyrene	ug/Kg	230	\$	05/24/	33.33	EPA8270
Indeno(1,2,3-cd)pyrene	ug/Kg	66	\$	05/24/	33.33	EPA8270
Dibenzo(a,h)anthracene	ug/Kg	< 33	\$	05/24/	33.33	EPA8270
Benzo(ghi)perylene	ug/Kg	80	\$	05/24/	33.33	EPA8270
Aniline	ug/Kg	< 330		05/24/	333.3	EPA8270

cc:

LRL=laboratory Reporting Limit



# EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

SOIL - LABORATORY REPORTING LIMITS (LRL) for NYSDC TAGM ACID EXTRACTABLE-SVOC COMPOUNDS, PG 1 OF 1  
PERCENT SOLIDS = 90%.

MATRIX: Soil

Results reported on a dry weight basis				
ANALYTICAL PARAMETERS	UNITS	RESULT	DATE TIME	ANALYTICAL METHOD
Phenol	ug/Kg	< 33	05/24/	33.33 EPA8270
2-Chlorophenol	ug/Kg	< 33	05/24/	33.33 EPA8270
2-Methylphenol (o-cresol)	ug/Kg	< 33	05/24/	33.33 EPA8270
4-Methylphenol (p-cresol)	ug/Kg	< 33	05/24/	33.33 EPA8270
2-Nitrophenol	ug/Kg	< 33	05/24/	33.33 EPA8270
Benzoic acid	ug/Kg	< 330	05/24/	333.3 EPA8270
2,4-Dichlorophenol	ug/Kg	< 33	05/24/	33.33 EPA8270
4-Chloro-3-methylphenol	ug/Kg	< 33	05/24/	33.33 EPA8270
2,4,5-Trichlorophenol	ug/Kg	< 33	05/24/	33.33 EPA8270
2,4-Dinitrophenol	ug/Kg	< 330	05/24/	333.3 EPA8270
4-Nitrophenol	ug/Kg	< 330	05/24/	333.3 EPA8270
Pentachlorophenol (ms)	ug/Kg	< 330	05/24/	333.3 EPA8270

cc:

LRL=laboratory Reporting Limit

# EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

WATER - LABORATORY REPORTING LIMITS (LRL) for NYSDEC TAGM/TAL Metals, PG 1 OF 1.

MATRIX:Water

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICA METHOD
Aluminum as Al	mg/L	< 0.05		02/19/	0.05	EPA200.7
Antimony as Sb	mg/L	< 0.05		02/19/	0.05	EPA200.7
Arsenic as As	mg/L	< 0.025		02/19/	0.025	EPA200.7
Barium as Ba	mg/L	0.38		02/19/	0.025	EPA200.7
Beryllium as Be	mg/L	< 0.005		02/19/	0.005	EPA200.7
Cadmium as Cd	mg/L	< 0.025		02/19/	0.025	EPA200.7
Calcium as Ca	mg/L	220		02/19/	1	EPA200.7
Chromium as Cr	mg/L	0.23		02/19/	0.025	EPA200.7
Cobalt as Co	mg/L	< 0.025		02/19/	0.025	EPA200.7
Copper as Cu	mg/L	< 0.05		02/19/	0.05	EPA200.7
Iron as Fe	mg/L	98		02/19/	0.05	EPA200.7
Lead as Pb	mg/L	0.3		02/19/	0.025	EPA200.7
Magnesium as Mg	mg/L	69		02/19/	0.025	EPA200.7
Manganese as Mn	mg/L	2.3		02/19/	0.05	EPA200.7
Mercury as Hg	mg/L	< 0.001		02/14/	0.001	EPA245.2
Nickel as Ni	mg/L	< 0.05		02/19/	0.05	EPA200.7
Potassium as K	58/L	58		02/19/	5	EPA200.7
Selenium as Se	mg/L	< 0.05		02/19/	0.05	EPA200.7
Silver as Ag	mg/L	< 0.025		02/19/	0.025	EPA200.7
Sodium as Na	mg/L	370		02/19/	5	EPA200.7
Thallium as Tl	mg/L	< 0.05		02/19/	0.05	EPA200.7
Vanadium as V	mg/L	< 0.025		02/19/	0.025	EPA200.7
Zinc as Zn	mg/L	0.51		02/19/	0.05	EPA200.7

cc:

LRL=laboratory Reporting Limit

# EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

WATER - LABORATORY REPORTING LIMITS (LRL) for NYSDEC TAGM VOLATILE ORGANIC COMPOUND, PG 1 OF 2

MATRIX:Water

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Chlorobenzene	ug/L	< 1		01/31/07	1	EPA8260
1,3-Dichloropropane	ug/L	< 1		01/31/07	1	EPA8260
Vinyl Chloride	ug/L	< 1		01/31/07	1	EPA8260
Chloroethane	ug/L	< 1		01/31/07	1	EPA8260
Methylene Chloride	ug/L	< 1		01/31/07	1	EPA8260
Acetone	ug/L	< 10		01/31/07	10	EPA8260
Carbon disulfide	ug/L	< 1		01/31/07	1	EPA8260
1,1 Dichloroethane	ug/L	< 1		01/31/07	1	EPA8260
1,2 Dichloroethane	ug/L	< 1		01/31/07	1	EPA8260
1,1 Dichloroethene	ug/L	< 1		01/31/07	1	EPA8260
Chloroform	ug/L	< 1		01/31/07	1	EPA8260
t-1,2-Dichloroethene	ug/L	< 1		01/31/07	1	EPA8260
2-Butanone	ug/L	< 10		01/31/07	10	EPA8260
111 Trichloroethane	ug/L	< 1		01/31/07	1	EPA8260
Carbon Tetrachloride	ug/L	< 1		01/31/07	1	EPA8260
Freon 113	ug/L	< 1		01/31/07	1	EPA8260
123-Trichloropropane	ug/L	< 1		01/31/07	1	EPA8260
Trichloroethene	ug/L	< 1		01/31/07	1	EPA8260
Chlorodibromomethane	ug/L	< 1		01/31/07	1	EPA8260
124-Trichlorobenzene (v)	ug/L	< 1		01/31/07	1	EPA8260
Benzene	ug/L	< 0.7		01/31/07	0.7	EPA8260
1,2 Dichlorobenzene (v)	ug/L	< 1		01/31/07	1	EPA8260
1,3 Dichlorobenzene (v)	ug/L	< 1		01/31/07	1	EPA8260
1,4 Dichlorobenzene (v)	ug/L	< 1		01/31/07	1	EPA8260
4-Methyl-2-Pentanone	ug/L	< 10		01/31/07	10	EPA8260

cc:

LRL=laboratory Reporting Limit

# EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

WATER - LABORATORY REPORTING LIMITS (LRL) for NYSDEC TAGM VOLATILE ORGANIC COMPOUND, PG 2 OF 2

MATRIX:Water

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Tetrachloroethene	ug/L	< 1		01/31/07	1	EPA8260
Toluene	ug/L	< 1		01/31/07	1	EPA8260
1122Tetrachloroethane	ug/L	< 1		01/31/07	1	EPA8260
Ethyl Benzene	ug/L	< 1		01/31/07	1	EPA8260
n-Butylbenzene	ug/L	< 1		01/31/07	1	EPA8260
sec-Butylbenzene	ug/L	< 1		01/31/07	1	EPA8260
Isopropylbenzene	ug/L	< 1		01/31/07	1	EPA8260
p-Isopropyltoluene	ug/L	< 1		01/31/07	1	EPA8260
ter-ButylMethylEther	ug/L	< 1		01/31/07	1	EPA8260
n-Propylbenzene	ug/L	< 1		01/31/07	1	EPA8260
124-Trimethylbenzene	ug/L	< 1		01/31/07	1	EPA8260
135-Trimethylbenzene	ug/L	< 1		01/31/07	1	EPA8260
o Xylene	ug/L	< 1		01/31/07	1	EPA8260
m + p Xylene	ug/L	< 2		01/31/07	2	EPA8260
Xylene	ug/L	< 3		01/31/07	3	EPA8260
tert-Butylbenzene	ug/L	< 1		01/31/07	1	EPA8260

cc:

LRL=laboratory Reporting Limit

# EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

WATER - LABORATORY REPORTING LIMITS (LRL) for TCL BASE/NEUTRAL-SVOC COMPOUNDS, PG 1 OF 1.

MATRIX:Water

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME	LRL	ANALYTICAL METHOD
2,4-Dinitrotoluene	ug/L	< 1		02/09/	1	EPA8270
Diethyl Phthalate	ug/L	< 1		02/09/	1	EPA8270
4-Chlorophenyl phenyl ether	ug/L	< 1		02/09/	1	EPA8270
Fluorene	ug/L	< 1		02/09/	1	EPA8270
4-Nitroaniline	ug/L	< 1		02/09/	1	EPA8270
N-Nitrosodiphenylamine	ug/L	< 1		02/09/	1	EPA8270
4-Bromophenyl phenyl ether	ug/L	< 1		02/09/	1	EPA8270
Hexachlorobenzene	ug/L	< 1		02/09/	1	EPA8270
Phenanthrene	ug/L	< 1		02/09/	1	EPA8270
Anthracene	ug/L	< 1		02/09/	1	EPA8270
Di-n-Butyl Phthalate	ug/L	< 1		02/09/	1	EPA8270
Fluoranthene	ug/L	1.8		02/09/	1	EPA8270
Pyrene	ug/L	1.4		02/09/	1	EPA8270
BenzylButylPhthalate	ug/L	< 1		02/09/	1	EPA8270
3,3'-Dichlorobenzidine	ug/L	< 10		02/09/	10	EPA8270
Benzo(a)anthracene	ug/L	< 1		02/09/	1	EPA8270

MATRIX:Water

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME	LRL	ANALYTICAL METHOD
Chrysene	ug/L	< 1		02/09/	1	EPA8270
Bis(2-ethylhexyl)phthalate	ug/L	1		02/09/	1	EPA8270
Di-n-octyl Phthalate	ug/L	< 1		02/09/	1	EPA8270
Benzo(b)fluoranthene	ug/L	1.1	\$	02/09/	1	EPA8270
Benzo(k)fluoranthene	ug/L	1	\$	02/09/	1	EPA8270
Benzo(a)pyrene	ug/L	< 1		02/09/	1	EPA8270
Indeno(1,2,3-cd)pyrene	ug/L	< 1		02/09/	1	EPA8270
Dibenzo(a,h)anthracene	ug/L	< 1		02/09/	1	EPA8270
Benzo(ghi)perylene	ug/L	< 1		02/09/	1	EPA8270

# EcoTest Laboratories, Inc. - LRL's for Typical Sample Reports

01/12/09

WATER - LABORATORY REPORTING LIMITS (LRL) for TCL ACID EXTRACTABLE-SVOC COMPOUNDS, PG 1 OF 1.

MATRIX:Water

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE TIME OF ANALYSIS	LRL	ANALYTICA METHOD
Phenol	ug/L	< 1		02/09/	1	EPA8270
2-Chlorophenol	ug/L	< 1		02/09/	1	EPA8270
2-Methylphenol (o-cresol)	ug/L	< 1		02/09/	1	EPA8270
4-Methylphenol (p-cresol)	ug/L	< 1		02/09/	1	EPA8270
2-Nitrophenol	ug/L	< 1		02/09/	1	EPA8270
2,4-Dimethylphenol	ug/L	< 1		02/09/	1	EPA8270
2,4-Dichlorophenol	ug/L	< 1		02/09/	1	EPA8270
4-Chloro-3-methylphenol	ug/L	< 1		02/09/	1	EPA8270
2,4,6-Trichlorophenol	ug/L	< 1		02/09/	1	EPA8270
2,4,5-Trichlorophenol	ug/L	< 1		02/09/	1	EPA8270
2,4-Dinitrophenol	ug/L	< 10		02/09/	10	EPA8270
4-Nitrophenol	ug/L	< 10		02/09/	10	EPA8270
2-Methyl-4,6-dinitrophenol	ug/L	< 10		02/09/	10	EPA8270
Pentachlorophenol (ms)	ug/L	< 10		02/09/	10	EPA8270

EcoTest Laboratories, Inc. - LRLs for Typical Sample Reports

01/12/09

WATER- LABORATORY REPORTING LIMITS (LRL) for NYSDEC TCL PESTICIDES & PCBS, PG 1 OF 1

MATRIX:Water

ANALYTICAL PARAMETERS	UNITS	RESULT	DATE OF ANALYSIS	LRL
Lindane	ug/L	< 0.05	10/03/06	0.05
Heptachlor	ug/L	< 0.05	10/03/06	0.05
Aldrin	ug/L	< 0.05	10/03/06	0.05
Heptachlor Epoxide	ug/L	< 0.05	10/03/06	0.05
p,p-DDE	ug/L	< 0.05	10/03/06	0.05
Dieldrin	ug/L	< 0.05	10/03/06	0.05
Endrin	ug/L	< 0.05	10/03/06	0.05
p,p-DDD	ug/L	< 0.05	10/03/06	0.05
p,p-DDT	ug/L	< 0.1	10/03/06	0.1
Chlordane	ug/L	< 0.2	10/03/06	0.2
Toxaphene	ug/L	< 1	10/03/06	1
Endrin Ketone	ug/L	< 0.1	10/03/06	0.1
a BHC	ug/L	< 0.05	10/03/06	0.05
b BHC	ug/L	< 0.05	10/03/06	0.05
d BHC	ug/L	< 0.05	10/03/06	0.05
Endosulfan 1	ug/L	< 0.1	10/03/06	0.1
Endosulfan 2	ug/L	< 0.1	10/03/06	0.1
Endosulfan Sulfate	ug/L	< 0.3	10/03/06	0.3
Methoxychlor	ug/L	< 0.1	10/03/06	0.1
Endrin Aldehyde	ug/L	< 0.3	10/03/06	0.3
Aroclor 1016	ug/L	< 1	10/03/06	1
Aroclor 1221	ug/L	< 1	10/03/06	1
Aroclor 1232	ug/L	< 1	10/03/06	1
Aroclor 1242	ug/L	< 1	10/03/06	1
Aroclor 1248	ug/L	< 1	10/03/06	1
Aroclor 1254	ug/L	< 1	10/03/06	1
Aroclor 1260	ug/L	< 1	10/03/06	1

Test Code: TO-15

Test Number: ETO-15

Test Name: TO-15 Volatiles in Air

Matrix: Air Units: ppbv

**METHOD DETECTION /  
REPORTING LIMITS**

Type	Analyte	MDL	PQL
A	1,1,1-Trichloroethane	0.0503	0.5
A	1,1,2,2-Tetrachloroethane	0.0437	0.5
A	1,1,2-Trichloro-1,2,2-trifluoroethane	0.0459	0.5
A	1,1,2-Trichloroethane	0.0373	0.5
A	1,1-Dichloroethane	0.0361	0.5
A	1,1-Dichloroethene	0.0375	0.5
A	1,2,4-Trichlorobenzene	0.0398	0.5
A	1,2,4-Trimethylbenzene	0.0234	0.5
A	1,2-Dibromoethane	0.0328	0.5
A	1,2-Dichlorobenzene	0.0256	0.5
A	1,2-Dichloroethane	0.121	0.5
A	1,2-Dichloroethene (cis)	0.0386	0.5
A	1,2-Dichloroethene (trans)	0.0446	0.5
A	1,2-Dichloropropane	0.0187	0.5
A	1,2-Dichlorotetrafluoroethane	0.0431	0.5
A	1,3,5-Trimethylbenzene	0.109	0.5
A	1,3-Dichlorobenzene	0.0302	0.5
A	1,3-Dichloropropene (cis)	0.0251	0.5
A	1,3-Dichloropropene (trans)	0.0250	0.5
A	1,3-Hexachlorobutadiene	0.114	0.5
A	1,4-Dichlorobenzene	0.0335	0.5
A	Acetone	0.0255	0.5
A	Benzene	0.0360	0.5
A	Bromodichloromethane	0.0438	0.5
A	Bromoform	0.0239	0.5
A	Bromomethane	0.0469	0.5
A	Carbon disulfide	0.0486	0.5
A	Carbon tetrachloride	0.0509	0.5
A	Chlorobenzene	0.0419	0.5
A	Chloroethane	0.0456	0.5
A	Chloroform	0.0382	0.5
A	Chloromethane	0.0720	0.5
A	Dibromochloromethane	0.0484	0.5
A	Dichlorodifluoromethane	0.0437	0.5
A	Ethylbenzene	0.0352	0.5
A	Methyl butyl ketone	0.0448	0.5
A	Methyl ethyl ketone	0.0478	0.5
A	Methyl isobutyl ketone	0.0421	0.5
A	Methyl tert-butyl ether	0.0357	0.5
A	Methylene chloride	0.0411	0.5
A	Styrene	0.0283	0.5
A	Tetrachloroethene	0.0477	0.5



Test Code: TO-15

Test Number: ETO-15

Test Name: TO-15 Volatiles in Air

Matrix: Air Units: ppbv

**METHOD DETECTION /  
REPORTING LIMITS**

Type	Analyte	MDL	PQL
A	Toluene	0.0383	0.5
A	Trichloroethene	0.0425	0.046
A	Trichlorofluoromethane	0.0414	0.5
A	Vinyl acetate	0.0304	0.5
A	Vinyl chloride	0.0483	0.5
A	Xylenes (m&p)	0.0543	0.5
A	Xylenes (o)	0.0284	0.5
I	1,4-Difluorobenzene	-	0.5
I	Bromochloromethane	-	0.5
I	Chlorobenzene-d5	-	0.5
S	4-Bromofluorobenzene	0.995	0.5
X	1,2,3-Trimethylbenzene	-	0.5
X	1,2,4,5-Tetramethylbenzene	-	0.5
X	1,2-Dichloroethene (total)	0.0863	0.5
X	1,3-Butadiene	0.0519	0.5
X	1,4-Dioxane	0.0350	0.5
X	1-Butanol	0.0825	0.5
X	1-Methylnaphthalene	-	0.5
X	1-Propanol	0.153	0.5
X	2,2,4-Trimethylpentane	0.0592	0.5
X	2-Chlorotoluene	0.0630	0.5
X	2-Methylnaphthalene	-	0.5
X	2-Pentanone	0.0441	0.5
X	3-Hexanone	0.0391	0.5
X	3-Pentanone	0.0446	0.5
X	4-Ethyltoluene	0.0589	0.5
X	4-Isopropyltoluene	-	0.5
X	Acetaldehyde	0.0987	0.5
X	Acetonitrile	0.0369	0.5
X	Acrolein	0.0461	0.5
X	Acrylonitrile	0.0562	0.5
X	Allyl Chloride	0.0401	0.5
X	Benzyl chloride	0.0286	0.5
X	Butanal	0.0769	0.5
X	Chlorodifluoromethane	0.0401	0.5
X	Cyclohexane	0.0901	0.5
X	Cyclopentane	0.0404	0.5
X	Ethanol	0.120	0.5
X	Ethyl acetate	-	0.5
X	Hexanal	0.164	0.5
X	Indan	-	0.5
X	Indene	-	0.5

Test Code: TO-15

Test Number: ETO-15

Test Name: TO-15 Volatiles in Air

Matrix: Air Units: ppbv

**METHOD DETECTION /  
REPORTING LIMITS**

Type	Analyte	MDL	PQL
X	Iodomethane	0.0396	0.5
X	Isobutene	0.0281	0.5
X	Isoprene	0.0382	0.5
X	Isopropanol	0.0447	0.5
X	Isopropylbenzene	0.0596	0.5
X	Methacrolein	0.0679	0.5
X	Methyl methacrylate	0.0440	0.5
X	Methyl vinyl ketone	0.0730	0.5
X	n-Butylbenzene	-	0.5
X	n-Heptane	0.0609	0.5
X	n-Hexane	0.0319	0.5
X	n-Propylbenzene	0.0488	0.5
X	Naphthalene	-	0.5
X	Pentanal	-	0.5
X	Pentane	0.0444	0.5
X	Propanal	0.0424	0.5
X	Propylene	0.0293	0.5
X	sec-Butylbenzene	-	0.5
X	tert-Butyl Alcohol	0.0765	0.5
X	tert-Butylbenzene	-	0.5
X	Tetrahydrofuran	0.0718	0.5
X	Thiophene	-	0.5
X	Vinyl bromide	0.0295	0.5
X	Xylene (total)	0.0284	0.5