

Remedial Investigation Scope of Work

**Chez Valet Dry Cleaners
1-3 Manorhaven Boulevard
Port Washington, New York**

**Prepared By:
Advanced Cleanup Technologies, Inc.
December 7, 2006**

To evaluate for the potential presence of soil vapor contamination beneath the dry cleaner, indoor air sampling in conjunction with soil vapor sampling will be conducted at the Site. The methodologies for these tasks are described below as Tasks 1 and 2. To determine whether the source of the ground water contamination in the area is originating from the Site, additional soil and ground water sampling will be conducted at the Site, as described in Task 3 below.

Task 1: Indoor Air Sampling

Indoor air sampling will be conducted in accordance with current New York State Department of Health requirements contained in Guidance for Evaluating Soil Vapor Intrusion in the State of New York, February 2005.

ACT will collect a total of two indoor air samples at the Site. Two indoor air samples will be collected from the front and rear portions of the 1 Manorhaven Boulevard building (the dry cleaner). Proposed indoor air sampling locations are shown in Figure 1.

To collect an indoor air sample, a 6-Liter stainless steel Summa canister with a low flow rate controller, certified laboratory clean, will be placed approximately three feet off the floor and allowed to collect air for one hour, until the canister is full. Barometric pressure will be measured inside and outside the building (and also within soil vapor probes installed beneath the building, as discussed in Task 2). This information will be utilized to evaluate mitigation measures that may be available to abate potential indoor air quality conditions. The weather conditions, start and end times, and canister pressure will be recorded in a field book by an ACT

scientist.

Task 2: Soil Vapor Probe Installation

In order to evaluate soil vapor quality, four temporary soil gas probes will be installed by ACT in the vicinity of the pipe trench located inside the dry cleaner. Four temporary probes will be utilized to collect soil gas samples in accordance with the February 2005, New York State Health Department (*NYSDOH*) "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" protocols.

Proposed soil vapor sampling locations are shown in Figure 1. The four soil gas samples will be collected by driving four soil vapor probes 5.5 feet below the floor utilizing portable hydraulic percussion equipment. Each probe will consist of a hollow steel drive rod and a retractable soil vapor point. A dedicated piece of polyethylene tubing with a threaded pin will be inserted into the probe rod and connected to the soil vapor point. Once the probe is at the desired sampling depth, the probe will then be lifted approximately 3 inches to open the retractable point. The penetration will be tightly sealed using a non-VOC containing and non-shrinking putty around the top of the borehole. Prior to sample collection, the area around the soil gas sample collection point will be covered using polyethylene sheeting and an additional putty seal will be created around the area of the penetration of the tubing and sheeting.

The area surrounding the exiting soil gas sampling tubing will be enclosed by a five-gallon plastic container for the introduction of a helium tracer gas via a tubing penetration into the plastic container. The purpose of the helium tracer gas (which will be constantly introduced throughout the sampling event) is to allow for measurement of any circumvention of air flow outside the sampling tubing. A portable helium detector will be utilized to detect for helium in the soil gas samples.

Subsequent to the introduction of helium tracer gas, the annular space will be purged a minimum of one-to-three volumes of soil gas using a personal sampling pump. The flow rate will not exceed 0.2 liters per minute. The soil gas will be initially screened using a Photo Ionization

Detector (PID) for organic compounds. The PID is capable of detecting total VOCs as low as 0.1 parts per million (ppm) by mass using a 100 ppm isobutylene standard. A dedicated 6-Liter stainless steel certified laboratory clean Summa canister with a dedicated low flow rate controller will then be connected to the tubing. The canister will be allowed to collect soil vapor for one hour, until the canister is full.

Task 3: Soil Boring and Temporary Well Installation

A total of four soil borings will be installed at Site by ACT, specifically in the vicinity of the pipe trench inside the dry cleaner. Proposed soil and ground water sampling locations are shown in Figure 1. Each soil boring will be installed utilizing a portable hydraulic percussion hammer in combination with four foot macro-core soil samplers containing dedicated acetate liners.

Soil will be continuously sampled in each soil boring to a depth of 8 feet below ground surface or the water table, whichever comes first. All soil samples will be screened in the field with a PID for volatile organic compounds (VOCs) and visually examined for the presence of contamination.

One soil sample per boring will be placed in appropriate pre-cleaned laboratory containers and refrigerated for transport to an ELAP-certified laboratory. The selection will consist of the one soil sample revealing the highest PID reading and/or olfactory signs of contamination.

In the event no PID readings or other evidence of contamination is present, the selection will consist of the one soil sample from the terminus of the boring. A boring log will be kept describing the subsurface lithology at each soil boring location. All equipment will be properly decontaminated after the completion of each boring.

A temporary monitoring well will be installed at each soil boring location utilizing portable hydraulic percussion equipment in combination with a two foot 0.02 inch slotted well

screen and solid riser pipes. The well screen will be positioned to intersect the water table. The depth to ground water will be monitored and recorded utilizing an oil/water interface probe.

Water samples will be collected from each temporary well utilizing the inertial pumping method consisting of a length of dedicated polyethylene tubing and a foot check valve. Each temporary well will be purged of development water until sediment free ground water is produced. Water samples will then be collected into appropriate sampling containers and refrigerated for transport to an ELAP-certified laboratory.

All equipment will be properly decontaminated after each use. 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 contamination of samples. 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.

Task 4: Laboratory Analysis

The indoor air and soil gas samples will be analyzed for VOCs in accordance with EPA Method TO-15/8260. The soil and ground water samples will be analyzed for VOCs in accordance with EPA Method 8260. The laboratory will be listed in the ELAP-NYSDOH

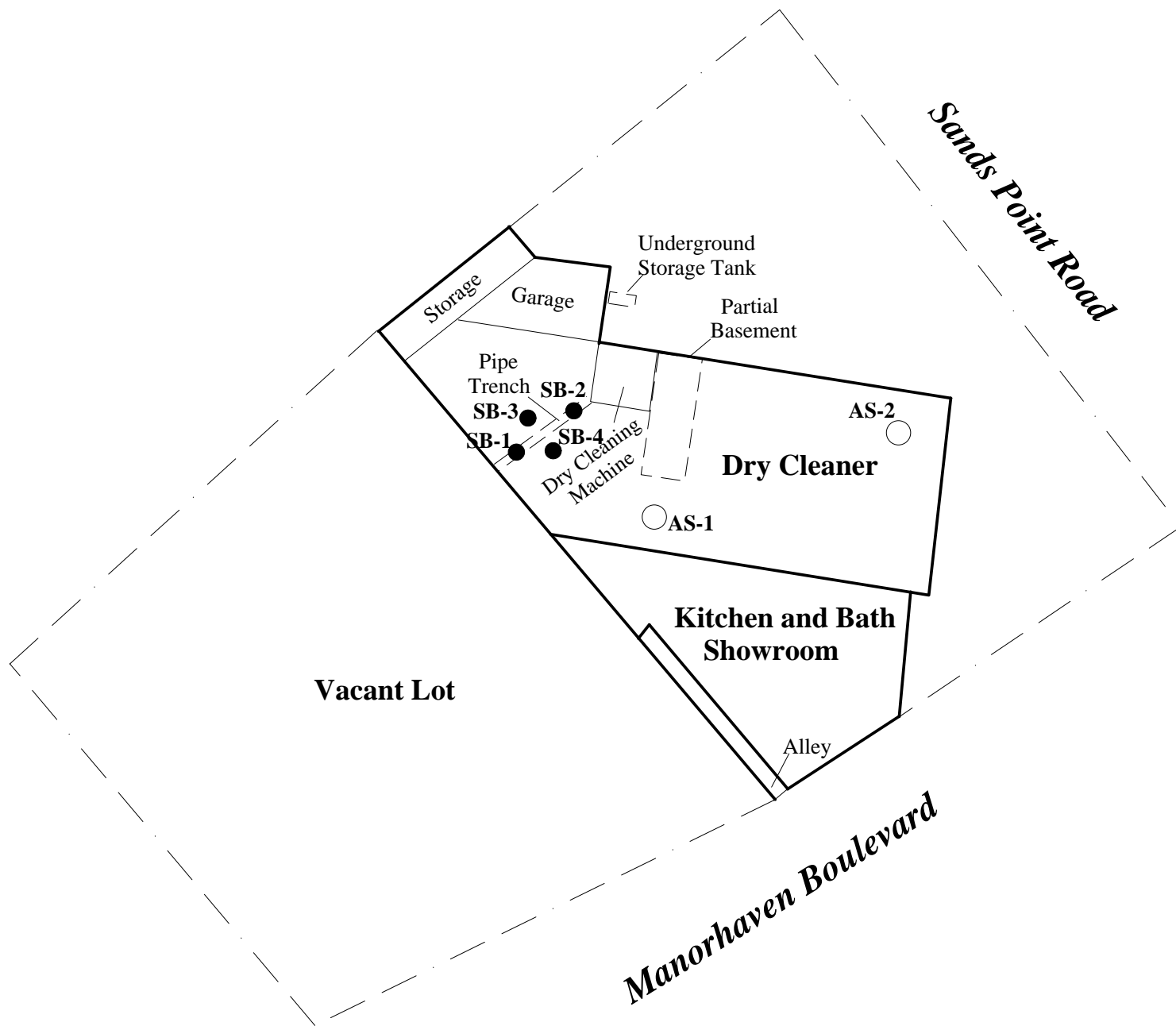
Environmental Laboratory Approval Program. The laboratory data package will include NYSDEC CLP Category B deliverables.

Task 5: Report Preparation

The results of the Remedial Investigation will be summarized and presented in an Investigation Summary Report. The report will include boring logs, sampling diagrams and tables depicting the environmental quality of the site as compared to appropriate NYSDEC Recommended Soil Cleanup Objectives, NYSDEC Ground Water Standards, and NYSDOH Background Indoor Air Concentrations and Action Levels. The report will also include recommendations for remediating conditions noted during the investigation.

Proposed Schedule

<u>Task</u>	<u>Scheduled date</u>
Indoor Air/Soil Gas Sampling	December 13, 2006
Soil Boring and Temporary Well Installation	December 13, 2006
Investigation Report Submittal	December 28, 2006



Legend

● **SB-1** Soil, Ground Water, and Soil Vapor Sample Location

○ **AS-1** Indoor Air Sample Location

Figure 1

Proposed Sampling Locations

Job No. 5621-PWNY	Date: 12/7/06
Drawing No. 5621-03	Scale: NTS
Drawn By: Caroline Cadalso	Approved By: Paul Stewart

Advanced Cleanup Technologies, Inc.