Westbury Valet Cleaners
Nassau County, New York
Site No. 1-30-088

Interim Site Management Plan

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INTERIM SITE MANAGEMENT PLAN

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1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at 123 Post Avenue (hereinafter referred to as the "Site"), Site #1-30-088, under the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program administered by the New York State Department of Environmental Conservation (NYSDEC). An Order on Consent #Wl- 0860-99-13, dated August 10, 2010, was signed by the PRP. The site is being remediated in accordance with the Record of Decision (ROD).

This interim site management plan is developed for Operable Unit One for the subject property. It will describe the site management for the on-site contamination.

1.1.1 General

Westbury Valet Cleaners entered into an Order on Consent with the NYSDEC to remediate a 0.25 acre property in the Village of Westbury, Nassau County, New York. This Order on Consent required the Remedial Party, Westbury Valet Cleaners, to investigate and remediate contaminated media at the site. Figures showing the site location and boundaries of this 0.25 acre property are provided as Figure 1 and 2.

After completion of the remedial work, some contamination was left in the subsurface at the site, which is hereafter referred to as "remaining contamination." This Site Management Plan (SMP) was prepared to manage the remaining contamination at the site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by Anson Environmental Ltd. (AEL), on behalf of Westbury Valet Cleaners, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation and the guidelines provided by the NYSDEC. The SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Environmental Easement for the site.

1.1.2 Purpose

The site contains contamination left after completion of the remedial action. Engineering Controls have been incorporated into the site remedy to control exposure to remaining contamination during the use of the site to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Nassau County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site. The ICs place restrictions on site use, and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP specifies the methods necessary to ensure compliance with all ECs and ICs required by the Environmental Easement for the contamination that remains at the site. Compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the site after implementing the activities directed in the Record of Decision, including:

(1) Implementation and management of all Engineering and Institutional Controls; (2) media monitoring; (3) operation and maintenance of all treatment, collection, containment or recovery systems; (4) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports; and (5) defining criteria for termination of treatment system operations.

To address these needs, this SMP includes the following plans: (1) an Engineering and Institutional Control Plan for implementation and management of ECs and ICs*;* (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations and certifications to the NYSDEC.

It is important to note that:

This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the environmental easement;

Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6 NYCRR Part 375 and the Order on Consent for the site, and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC Project Manager. In accordance with the Environmental Easement for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 Site Background

The 123 Post Avenue site, located in the Village of Westbury, Nassau County, consists of a 50 feet by 189 feet lot. The site consists of a building currently used for dry cleaning and a parking area surrounding the building. Dry Cleaning has been conducted at the site since the 1950s. The surrounding areas are used for commercial and residential purposes. The site was placed on the NYS Registry of Inactive Hazardous Waste Disposal Sites in December of 1998 after the Nassau County Department of Health performed a facility inspection in July 1995. Investigations by the NCDOH and the potential responsible party (PRP), who implemented the on-site Remedial Investigation (RI) and Interim Remedial Measure (IRM) with NYSDEC oversight, showed site-related PCE contamination in soils and groundwater. The source of contamination was on-site drywell and floor drains that had been improperly used to disposed of waste PCE. On-site soils were found to be contaminated with PCE; groundwater was contaminated with PCE and its breakdown constituents TCE and DCE. A soil vapor extraction, SVE, system was installed on-site by the PRP. The SVE system is scheduled to operate until the remedial objectives for this site have been met.

1.2.1 Site Location and Description

This site is located in the Village of Westbury, County of Nassau, New York and is identified as Section 10, Block 100 and Lot 10 on the Nassau County Tax Map. The site is approximately 0.25 acre in size. The building located at 123 Post Avenue is a stand-alone building that is occupied by Westbury Valet Dry Cleaners for the purposes of dry cleaning and pressing clothing, and washing and pressing shirts (Figure 2). The property is owned by Choe Realty, LLC, which purchased the property in 1987. The previous occupant of the property was Westbury Valet Co.

Post Avenue is a moderate to heavily traveled north/south thoroughfare that transits under a railroad right-of-way bridge that is located at the southeast comer of the subject property.

1.2.2 Site History

The following is a brief summary of historical activities that have taken place at the Westbury Valet Dry Cleaners site.

1949 Application for plumbing permit issued to John C. Leonardo and the building was constructed.

1957 Certificate of Occupancy issued for storage room as addition to dry cleaning business to Westbury Valet Co., Inc., John Leonardo, Vice-President.

1979-1980 Subject property connected to municipal sewer system.

1987 Business purchased by Westbury Valet Dry Cleaners, Inc., and began operating the new business at the site as Westbury Top Cleaners. The property is owned by Choe Realty, LLC.

1996 Nassau County Department of Health (NCDH) identified two floor drains for sampling and closure under the EPA Underground Injection Control (UIC) Class V Injection Well closure program. AEL sampled two floor drains inside the on-site building. The sediment in the drains was determined to be contaminated with tetrachloroethene. AEL recommended delineation of the contamination.

1997 Apex Environmental, Inc., Reading, PA, conducted Phase I and II investigations of a downgradient parcel, located on the south side of the Long Island Rail Road tracks, at 117 Post Avenue. It was determined that tetrachloroethene and its breakdown products were present in the groundwater beneath that location. Apex Environmental determined the direction of groundwater to be southwesterly.

1998 The Westbury Valet Dry Cleaners was contacted again by the EPA and NCDH to submit a plan and perform the UIC closure. AEL conducted further sampling of Floor Drain #2 in order to delineate the vertical extent of the contamination. In August, the on-site two floor drains were cleaned out and endpoint samples collected. The cleanout activity was summarized and presented to NYSDEC in the Environmental Investigation of Class V Well, Westbury Valet Cleaners, dated May 30, 1999. Based on these sample results, a work plan for further on-site investigation was submitted. In December 1998, the site was included in the NYS Registry of Inactive Hazardous Waste Sites.

1999 In March, AEL installed three on-site groundwater monitoring wells (Figure 6). The upgradient well, located to accommodate the denial of access by the property owner immediately adjacent to the north, was installed adjacent to the northeast comer of the Westbury Valet Dry Cleaners building. Two groundwater monitoring wells were installed downgradient of the inside floor drain locations. The groundwater was sampled and it was confirmed that tetrachloroethene was present in all three wells at concentrations above the NYSDEC groundwater standards (see Table 1).

2000 On October 4, 2000, groundwater samples were collected at approximately 40-feet, 60-feet and 80-feet below grade surface (bgs) at three on-site locations down gradient of the building. The purpose of the sampling was to determine the vertical and horizontal extent of groundwater contamination with tetracholorethene and its breakdown products. In summary, the most significant contamination is located in the vicinity of and downgradient of Floor Drain #2. The groundwater contamination is highest between approximately 30 to 50- feet bgs. The plume of contamination leaving the Westbury

Valet Dry Cleaners site appears to be approximately 40 feet wide.

The October investigation also included the collection of soil samples from the vicinity of the former on-site abandoned sanitary system. None of the samples contained tetrachloroethene or its break down products. The laboratory analytical data sheets are in the site Remedial Investigation Report, dated December 2000.

2001 The NYS Department of Health started analyzing indoor air samples for tetrachloroethene in February 2001. Elevated concentrations of tetrachloroethene were detected at 125 and 129 Post Avenue. AEL installed four shallow Soil Vapor Extraction (SVE) wells starting in May 200 1. The shallow SVE system was made operational in May 2001 and operated from May 2001 to April 2006.

2002 On Ju1y 27, 2002, NYSDEC, assisted by AEL, collected groundwater samples from the three on-site monitoring wells.

2003 On January 29, 2003, quarterly ground water samples were collected from Monitoring Wells #1, #2, and #3 as part of normal operation and maintenance procedures. Regular monthly site visits were conducted on the onsite soil vapor extraction system (SVES #1). These visits included the collection of air samples in Tedlar bags on the pre and post carbon filters, located to the eastern side of the SVES shed. Passive air monitor samples were collected in the adjacent buildings marked on the site maps. 30 drums of excavated soil were sampled on July 2nd, 2003. These drums contained soil from the extraction well excavation trenches and well drill cuttings collected from the monitoring and extraction well installations conducted during 2001. After the soil sampling event, the drums were picked up by Rapid Waste transported for disposal at General Environmental Management in Cleveland, Ohio.

2004 Monthly O&M site visits were conducted according to protocol. The on-site moisture separator froze during the month of January and a space heater was installed in the shed. Pre and post air samples were collected from the carbon filters Regular quarterly ground water samples were collected, as well as passive air monitor samples in the adjacent buildings. The SVES ran regularly and reliably during this time period.

2005 Monthly O&M site visits were conducted according to protocol. Pre and post air samples were collected from the carbon filters, regular quarterly ground water samples were collected, as well as passive air monitor samples in the adjacent buildings. The SVES ran regularly and reliably during this time period.

2006 January to April 2006 saw normal operation of the onsite SVES. The first set of quarterly ground water samples and passive air monitor sampling was conducted. The onsite SVES was shut off on April 12, 2006 due to issues with the building owner.

2008 An engineering consultant working for NYSDEC collected environmental samples from the site. These samples identified contaminated soil in the drywell at the rear of the structure and identified contaminated soil vapor.

2010 August 2010 the owner signed an Order on Consent with the NYSDEC to operate the SVE system and to submit a SMP.

In September 2010, AEL project managers met the building owner and associates to discuss the necessary steps to get the SVES running and continue remedial activities.

The system was re-activated and the components are operational. The shed structure was insulated for soundproofing to minimize the impact to the building occupants and nearby residents.

1.2.3 Geologic Conditions

The lithology of the site, as determined during the installation of the groundwater monitoring wells, includes medium coarse sand and gravel from the surface to the groundwater table located at approximately 30 feet below grade. The geologic logs from onsite borings are shown in Figure 3.

The direction of groundwater flow is toward the south as confirmed by on-site monitoring well measurements and off-site wells installed by others. The direction of groundwater flow is shown in Figure 4.

1.3 Summary of Remedial Investigation Findings

The following documents concerning this site were prepared for NYSDEC, and it is recommended that they be reviewed for additional details about the Westbury Valet Dry Cleaners property:

- Interim Remedial Measure Work Plan by AEL, dated April 26, 2001
- Remedial Investigation/Feasibility Study Work, Operable Unit II 123 Post Avenue, Westbury, Nassau County, New York Plan by Dvirka and Bartilucci, dated December 2000.
- Remedial Investigation Report by AEL, dated December 2000
- Remedial Investigation/Feasibility Study Work Plan by AEL, August 30, 2000

Generally, the RI determined that the soil and groundwater located to the south of the interior floor drains was contaminated with tetrachloroethene and its degradation byproducts.

Below is a summary of site conditions when the RI was performed in 2000.

Soil

On August 20, 1998, Floor Drains No. 1 and No. 2 (FD#l and FD#2) were excavated to the fullest extent possible. FD# l is located in the boiler room and FD#2 is in the dry cleaning area.

At the start of the soil excavation the bottom of FD# l was at one-foot below grade. The post excavation depth to the bottom of the floor drain was four feet below grade. Endpoint samples collected from the bottom of the excavation at FD#l had concentrations of volatile organic compounds below the NYSDEC Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels. *The laboratory data is no longer available.*

Before the start of floor drain cleanout, the depth to the bottom of FD#2 was 2.5-feet below the floor level inside the building. After excavating the soil in FD#2, the depth to bottom was 7.8- feet below floor level. Endpoint samples collected from FD#2 exceeded the TAGM for VOCs. So, in April 1999, in conjunction with the contamination delineation, soil borings were installed through the floor drain and samples were collected from 10 to 11-feet, 20 to 22-feet, 30 to 32-feet and 36 to 40-feet below the floor level. These samples were screened in the field using a Photoionization Detector (OVM) and were submitted for laboratory analysis using EPA Method 8260. The laboratory data for concentrations of the compounds detected above the laboratory method detection limit (MDL) are summarized below in parts per billion (ppb):

Compounds above MDL	10-11 feet (ppb)	20-22 feet (ppb)	30-32 feet (ppb)	36-40 feet (ppb)	TAGM (ppb)
Tetrachloroethene	270,000	53	17	62	1,400
1,4-dichlorobenzene	< l,000	2	< 1	<l	8,500
1,2,4-trichlorobenzene	< l,000	52	< 1	<l	3,400
Naphthalene	< l,000	1	< l	<1	13,000
hexachlorobutadiene	< 1,000	3	< 1	< l	No listing
OVM Head space	1,192	1,928	231	No	

The OVM was calibrated using isobutylene gas prior to performing the headspace readings.

The floor drains have been backfilled with clean sandy soil to the approximate surface of the building's floor. The floor has not been sealed in the vicinity of FD#l in the boiler room. FD#2 has been backfilled with clean soils and the concrete repaired to remove the floor drain from service.

The results of the aforementioned floor drain investigation were submitted to NYSDEC in the AEL report "Environmental Investigation of Class V Well", dated May 30, 1999.

Site-Related Groundwater

During March 1999, three 2-inch diameter groundwater monitoring wells were installed on-site. Each well was installed using hollow-stem augers. Each well was constructed with ten-feet of No. 20 slot screen and the annular space around the screened interval was gravel packed using clean #00 Morie sand. A two-foot thick bentonite seal was placed above the sand and the remainder of the annular space was filled with a bentonite/concrete grout. The wells were flush-mounted with a locking cap and curb box.

The measured depth to the bottom, feet below grade of each well is as follows:

- MW#l 40.45 feet
- MW#2 43.46 feet
- MW#3 43.95 feet

The upgradient and crossgradient groundwater monitoring well (MW#1), relocated to accommodate the "denial of access" by the property owner immediately adjacent to the north, was installed adjacent to the northeast corner of the site building. Two additional groundwater monitoring wells (MW#2 and MW#3) were installed downgradient of the former floor drain locations (Figure 5).

One week following the installation, the three wells were developed by purging 40 gallons of water from MW#l, 50-gallons from MW#2, and 45-gallons from MW#3. The development water was placed in 55-gallon drums until the liquid was filtered using a Carbtrol L-1 Water Purification Canister containing 200 pounds of virgin carbon. The development water was sampled and submitted for laboratory analysis via EPA Method 601. The filtered water contained 1 microgram per liter of tetrachloroethene, a concentration that Nassau County Department of Public Works (NCDPW) approved for discharge to the County sewer system.

On March 31, 1999, groundwater samples were collected from each of the three monitoring wells and were analyzed for concentrations of halogenated VOCs using EPA Method 601. The following table summarizes the compounds detected above the laboratory MDL. The listed concentrations are in micrograms per liter (ug/L).

Compound	MW#l (ug/L)	MW#2 (ug/L)	MW#3 (ug/L)	NYSDEC Groundwater Standard (ug/L)
1,2-dichloroethene	2	13	98	5
Trichloroethylene	3	<1	**11**	5
Tetrachloroethene	**95**	**690**	**20,000**	5
Depth to Water on March 31, 1999	31.18 feet	33.93 feet	33.76 feet	

Concentrations listed in **BOLD** print exceeded NYSDEC groundwater standard

The screened interval of MW#l extends from approximately 30-feet to 40-feet depth below grade (DBG). The screened intervals of MW#2 and MW#3 extend from approximately 33-feet to 43-feet depth below grade (DBG). The wells were installed according to the NYSDEC's high-specification monitoring well protocol, in which the annulus around the well is filled with grout. All drill cuttings were stockpiled on-site until they were properly disposed of off-site. Each monitoring well was developed using a submersible centrifugal pump to withdraw approximately 10-well volumes of water. Following well development and prior to sampling each well, 3 to 5-well volumes of water were purged from the well using a Grundfos Redi-Flo2 variable performance pump.

The results of the aforementioned groundwater investigation were submitted to NYSDEC in the AEL report "Environmental Investigation of Class V Well", dated May 30, 1999. The water and soil data from the investigation are included as Appendix 6.

Site-Related Soil Vapor Intrusion

The results of the remedial investigation indicate that dry cleaning contaminants were present at the Westbury Valet Dry Cleaners site. In order to determine the extent of remediation needed, an assessment of possible human and environmental exposure to site contamination was necessary. The results of this assessment predicated the selection of the interim remedial measure of soil vapor extraction.

This environmental assessment was part of the Remedial Investigation Report and addressed the possible human exposures for the primary contaminant of concern, PCE, resulting from the primary routes of exposure identified as ingestion, inhalation, and absorption. The principal contaminant of concern at the Westbury Valet Dry Cleaners site is tetrachloroethene (PCE). Trichloroethene (TCE) and 1, 2-dichloroethene (DCE) have also been identified at the site. However, these compounds are breakdown products of PCE and are typically found with PCE and usually exhibit concentrations significantly lower than PCE. The focus of this Exposure Assessment (EA) was PCE because it is a suspected carcinogen that has been detected at elevated concentrations at the subject site.

The remedial investigation at the Westbury Valet Dry Cleaners site involved the evaluation of the subsurface soil, on-site groundwater, and indoor air at the site and adjoining properties. Concurrent with the AEL remedial investigation activities, a supplemental air sampling program was conducted at, and adjacent to, the site by the New York State Department of Health (NYSDOH). As a result of these investigative activities, PCE contamination was determined to be a concern in several media including subsurface soil, groundwater, and indoor air.

PCE contaminated soils were identified at concentration s above NYSDEC standards, criteria, and guidelines (SCGs) beneath the floor of the Westbury Valet Dry Cleaners site building, specifically in the two building floor drains. Using a heavy duty vacuum equipped truck (vac truck), Floor Drain No. 1

(FD# 1) was cleaned out and now meets NYSDEC Soil Cleanup Standards. The same vac truck was used to excavate the soils in Floor Drain No. 2 (FD#2). However, all of the contaminated soil could not be removed without compromising the building structure. Subsequently, FD#2 was backfilled with clean soil. The concrete floor above FD#2 was then repaired and the floor drain was sealed. PCE was also detected at concentrations above the NYSDOH air quality guidelines at locations within nearby adjacent commercial and residential buildings.

Nassau County Department of Health (NCDH) and NYSDOH had been monitoring the quality of the indoor air within the adjacent building at 125, 127, and 129 Post Avenue. They also had been monitoring indoor air within the condominiums at 135 Post Avenue.

According to these two agencies and NYSDEC, elevated concentrations of PCE have been detected in the air inside at the aforementioned locations. The likely source of the PCE in the air is from vapors associated with PCE contaminated subsurface soil and groundwater beneath the Westbury Valet Dry Cleaners property. Indoor air concentrations of PCE within the adjacent buildings exceeded the NYSDOH air quality guidance value for PCE of 100 micro grams per cubic-meter.

An Interim Remedial Measure (IRM) soil vapor extraction system (SVES) was installed at the subject site in May 2001, to reduce PCE levels from the indoor air at the subject site and the adjacent buildings. In a letter to AEL dated August 9, 2002, NYSDEC stated "The most recent indoor air data, dated June 2002, indicates that the SVE system, under the current operational parameters, has achieved asymptotic conditions." Based on this statement and other information in the letter, it appears that the quality of the indoor in buildings adjacent to Westbury Valet Dry Cleaners met NCDH and NYSDOH indoor air guidelines during the timeframe of active SVES operation.

Summary of Local Well Information

Previous investigations concerning the subject property identified three public water supply wells. Wells numbered 101 and 7785 are located north and upgradient of the subject site. The downgradient Well 5654 (Well 11) is located on Old Country Road, west of Post Avenue.

The following information was provided by United States Geological Survey (USGS) in conjunction with the Nassau County Department of Public Works (NCDPW) and NYSDEC.

Well No.	Year Completed	Depth of well (bgs)	Screen length (feet)	Aquifer
101 (well 6)	1970	341	61	Magothy
5654 (well 11)	1956	340	60	Magothy
5654 (well 11)	1986	538	60	Magothy
7785 (well 7)	1965	404	70	Magothy
Big M Car Wash	1994	65	10	Upper Glacial
Big M Car Wash	2002	200	20	Magothy

Water quality data has been secured from the Westbury Water District for the first three listed wells covering quarterly sampling by H2M Labs for 1995-2000. Concentrations of individual volatile organic compounds (VOCs) have not exceeded the groundwater standards in the off-site wells. The aforementioned water quality data is included in the Remedial Investigation/Feasibility Study (RI/FS) dated December 2000, and submitted to NYSDEC by Dvirka and Bartilucci, Consulting Engineers. The RI/FS also contains additional information about the above listed wells.

1.3.1 Removal of Contaminated Materials from the Site

The 2006 NYCRR Part 375 soil cleanup objectives (SCOs) for the primary contaminants of concern (COCs) and applicable land use for this site in provided in this table:

Contaminant of Concern	NYSDEC CP-51	NYSDEC CP-51
	Commercial	Protection of GW
Tetrachloroethene	150 mg/Kg	1.3 mg/Kg

The site was remediated in accordance with the NYSDEC approved Interim Remedial Measure Work Plan, following the soil cleanup guidance prorogated at that time (TAGM 4046). The following is a summary of the Remedial Actions performed at the site:

Excavation of soil exceeding the TAGM 4046 guidelines was conducted in the floor drains to a depth of four feet (4') below floor level in Floor Drain #1, successfully remediating the soil. Excavation to a depth of 7.8 feet below floor level in Floor Drain #2 was conducted in an attempt to remove the contaminated soil. At this depth, the excavation was terminated to avoid jeopardizing the structure; therefore, contaminated soil remained below the structure for remediation through the use of the soil vapor extraction system.

1.3.2 Site-Related Treatment Systems

A soil vapor extraction system was installed in 2001, operated continuously until shutdown in 2006 and was re-started in 2010.

1.3.3 Remaining Contamination

The Remedial Investigation identified contamination that remains on site that is outlined in Section 1.3 of the Summary of Remedial Investigation Findings. Additional contamination, described in the excavation work plan, was identified in 2008 in the drywell to the rear of the structure after the completion of the Remedial Investigation.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

Since remaining contaminated soil, groundwater and soil vapor exists beneath the site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the site. The EC/IC plan is one component of the SMP and is subject to revision by NYSDEC.

2.1.2 Purpose

This plan provides:

A description of all EC/ICs on the site;
The basic implementation and intended role of each EC/IC
A description of the key components of the ICs set forth in the Environmental Easement;
A description of the features to be evaluated during each required inspection and periodic review;
A description of plans and procedures to be followed for implementation of EC/ICs, such as implementation of the Interim Remedial Measure Plan for the operation of the soil vapor extraction system; and
Provisions to identify or establish methods of implementing the EC/ICs required by the site remedy.

2.2 ENGINEERING CONTROLS

2.2.1 Engineering Control Systems

2.2.1.1 Soil Cover

Exposure to remaining contamination in soil at the site is prevented by the concrete floor of the store. The floor drains were closed and sealed with concrete. Exposure to remaining contamination in the rear drywell is minimized by the slotted cover. As the drywell is an active stormwater runoff location, there is percolation of rainwater into the sediment.

2.2.1.2 Soil Vapor Extraction System

The following is a description of the soil vapor extraction system that was installed on the site in 2001.

Procedures for operating and maintaining the soil vapor extraction system are documented in the Operation and Maintenance Plan (Section 4 of this SMP). Procedures for monitoring the system are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs.

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

The SVE system will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SVE system is no longer required, a proposal to discontinue the system will be submitted by the property owner. Conditions that warrant discontinuing the SVE system include contaminant concentrations in groundwater that: (1) reach levels that are consistently below ambient water quality standards or (2) the NYSDEC has determined that the SVE system has reached the limit of its effectiveness. This assessment will be based in part on post-remediation contaminant levels in groundwater collected from monitoring wells located throughout the site. Systems will remain in place and operational until permission to discontinue their use in writing by the NYSDEC. Termination criteria will be evaluated to show that system operation can be discontinued as described in section 3.3.4 of the SMP.

The contaminants of concern are monitored by periodic groundwater sampling and soil vapor extraction system monitoring.

2.3 INSTITUTIONAL CONTROLS

A series of Institutional Controls is required by the ROD to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; (3) limit the use and development of the site to commercial uses only; and (4) prevent the use of groundwater as a source of potable or process water without necessary water quality treatment as determined by the NYSDOH. Adherence to these Institutional Controls on the site is required by the Environmental Easement and will be implemented under this Site Management Plan.

These Institutional Controls are:

-Compliance with the Environmental Easement and this SMP by the Granter and the Grantor's successors and assigns.
-All Engineering Controls must be operated and maintained as specified in this SMP.
-All Engineered Controls on the Controlled Property must be inspected at a frequency and in a manner specified in the SMP.
-Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in this SMP.
-The property may only be used for commercial use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.
-The property may not be used for a higher level of use, such as unrestricted residential without additional remediation and amendment of the Environmental Easement.
-All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP.
-The use of groundwater underlying this property is prohibited without treatment rendering it safe for its intended use. The groundwater is not a source of potable water.
-The potential for vapor intrusion must be evaluated for any buildings developed in the area noted in Figure 7.
-Vegetable gardens and farming are prohibited on this property.
-The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls are approved by the NYSDEC; and (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

2.3.1 Excavation Work Plan

The excavation work plan is included as appendix 7.

2.3.2 Soil Vapor Intrusion Evaluation

The soil vapor intrusion evaluation was conducted in 2001. The findings are included in the Interim Remedial Report. The operation of the SVE was subsequently approved. The SVE system was re-started in 2010 and soil vapor intrusion monitoring will be continued to confirm that the system is still mitigating indoor air impacts.

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of all remedial components installed at the site will be conducted at the frequency specified in the SMP Monitoring Plan Schedule. A comprehensive site-wide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

-Whether Engineering Controls continue to perform as designed.
-If these controls continue to be protective of human health and the environment;
-Compliance with requirements of this SMP;
-Achievement of remedial performance criteria;
-Sampling and analysis of appropriate media during monitoring events;
-If site records are complete and up to date; and
-Changes, or needed changes, to the remedial or monitoring system.

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the site will be conducted within 5 days of the event by a qualified environmental professional from Anson Environmental Ltd.

2.4.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

-60-day advance notice of any proposed changes in site use as required under the terms of the Order on Consent, 6 NYCRR Part 375 and/or Environmental Conservation Law.

-7-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.

-Notification of system failures will be reported to the NYSDEC Project Manager in accordance with DER-10 chapter 6. l(d) 3&4: if it is determined to be an emergency, notification by noon the following business day, as set forth in subdivision 1.4(d); if it is not an emergency, notification within five business days of the inspection.

-Notice within 48-hours of any damage or defect to the foundation structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action to be taken to mitigate the damage or defect.

-Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken and the potential impact to the environment and the public.

-Follow-up status reports on actions taken to respond to any emergency event repairing ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

-At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the Order on Consent and all approved work plans and reports, including this SMP.

-Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing.

2.5 Contingency Plan

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions. AEL will report emergency conditions to NYSDEC including response actions.

2.5.1 Emergency Telephone Numbers

In the event of an environmentally related situation or unplanned occurrence requiring assistance, the Owner or Owner's representative should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to AEL. These emergency contact lists must be maintained in an easily accessible location at the site.

Organization	Contact Number
Anson Environmental Ltd	631-351 -3555; 516-429-4839-after 5 PM
Medical, Fire, Police	911
One Call Center	800-272-4480
Poison Control Center	800-222- 1222
Pollution Toxic Chemical Spills	800-424-8802
NYSDEC Spills Hotline	631-444-0324

Note: Contact numbers subject to change and should be updated as necessary.

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 123 Post Avenue, Westbury

Nearest Hospital Name: Winthrop University Hospital
Hospital Location: 259 First Street, Mineola, NY Hospital
Telephone: (516) 663-2211
Directions to Hospital: From 123 Post Avenue

1. Start out going south on Post Avenue toward Railroad Avenue.
2. Turn right on Old Country Road. Go 2.8 miles.
3. Turn right onto Mineola Blvd. Go 0.2 miles.
4. Take third left onto First Street. Go 0.1 miles.
5. End at Winthrop University Hospital at 259 First Street.

Total Distance: 3.56 miles

Total Estimated Time: 10 minutes

Map showing route to hospital is Appendix 8

2.5.3 Response Procedures

As appropriate, the fire department and other emergency groups will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan. The list will also be posted prominently at the site and made readily available to all personnel at all times.

There are no underground or above ground fuel oil tanks on the site. The tetrachloroethene is stored on site in 30-gallon plastic drums on secondary containment pallets. If evacuation of the premises is required, there are exits at the front and rear of the store.

3.0 SITE MONITORING PLAN

3.1 Introduction

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site and the site media identified below. Monitoring of other Engineering Controls is described in Chapter 4, Operation, Monitoring and Maintenance Plan. The Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

-Sampling and analysis of all appropriate media
-Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards and Part 375 SCOs for soil;
-Assessing achievement of the remedial performance criteria;
-Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment;
-Preparing the necessary reports for the various monitoring activities;

To adequately address these issues, this Monitoring Plan provides information on:

-Sampling locations, protocol and frequency;
-Information on all designed monitoring systems (i.e. well logs);
-Analytical sampling program requirements;
-Reporting requirements;
-Quality Assurance/Quality Control (QA/QC) requirements;
-Inspection and maintenance requirements for monitoring wells;
-Monitor well decommissioning procedures; and
-Annual inspection and periodic certification.

Trends in contaminant levels in air, soil, and/or groundwater in the affected areas, will be evaluated to determine if the remedy continues to be effective in achieving remedial goals. Monitoring programs are summarized in the Table and outlined in detail in Sections 3.2 and 3.3 below.

Monitoring/Inspection Schedule

Monitoring Program	Frequency	Matrix	Analysis
SVES	Weekly	Air	
SVES	Monthly	Air	vocs
Groundwater	Quarterly	Water	vocs
Soil Vapor Intrusion	Once per heating season	Air	vocs

The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH. NYSDEC Division of Air Resources' Air Guide One will be utilized to determine when carbon treatment of the effluent will be required.

3.2 Soil Cover System Monitoring

The building footprint does not have floor drains into the subsurface. There will be no floor drains installed. An annual inspection of the building slab will be conducted to confirm that no drains have been installed.

3.3 Media Monitoring Program

The media monitoring program will include groundwater sampling, air sampling from the soil vapor system and soil vapor monitoring.

3.3.1 Groundwater Monitoring

Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy. The network of monitoring wells has been installed to monitor both upgradient and downgradient groundwater conditions at the site.

The monitoring wells are located to the east of the store (upgradient) and two in the alley on the south side of the store (downgradient). The wells were installed to a depth of 40- 43 feet below grade. The average depth to groundwater is 30 feet. The well locations are noted in Figure 4. The direction of groundwater flow is southerly as determined by depth to water measurements after initial installation and confirmed by Dvirka & Bartilucci ground water study in 2006.

The groundwater sampling will be conducted on a quarterly basis. The groundwater will be analyzed for the presence of volatile organic compounds using EPA Method 8260. The sampling frequency may be modified with the approval by NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC.

Deliverables for the groundwater monitoring program are specified below.

3.3.1.1 Sampling Protocol

All monitoring well sampling activities will be recorded in a field book and ground water sampling log presented in Appendix 1. The well sampling log will serve as the inspection form for the groundwater monitoring well network.

Prior to groundwater sampling, the depth to water will be measured. The well volume will be calculated and three volumes will be purged prior to sampling. The samples will be collected using a Redi-flo low volume pump and the groundwater will be placed in laboratory-cleaned 40 ml vials. The samples will be placed on ice for delivery to the laboratory.

The laboratory will be a NYS ELAP certified laboratory. The groundwater will be analyzed using EPA Method 8260 protocol for the presence of volatile organic compounds.

3.3.1.2 Monitoring Well Repairs, Replacement and Decommissioning

If biofouling or silt accumulation occurs in the on-site monitoring wells, then the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced, if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

Monitoring wells that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC. Well abandonment will be performed in accordance with NYSDEC Groundwater Monitoring Well Decommissioning Procedures.

3.3.2 SVE Air Monitoring

The SVE system will be monitored for effectiveness based upon the collection of air samples pre and post carbon adsorption canister. The sampling will be conducted on a quarterly basis, beginning with the approval of the SMP. The samples will be analyzed for the presence of volatile organic compounds using EPA Method 8260. The sampling frequency may be modified with the approval by NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC.

Deliverables for the system air monitoring program are specified below.

3.3.2.1 Sampling Protocol

Weekly Measurements for Duration of the Project:

1. Flow rates and vacuum readings at each extraction well
2. OVM readings between blower and carbon filter canister # 1
3. OVM readings between carbon filter # 1 and #2
4. OVM readings between carbon filter #2 and exhaust stack
5. The actual ROI of each extraction well will be documented weekly by collecting readings at appropriate SVE monitoring points, shown on Figure 4
6. Manometer readings will include at least two locations where the vacuum readings are less than 0.1 inches of water.

One Week After Carbon Canister Change:

1. Sample between blower and carbon filter #1 using a Tedlar air sampling bag
2. Sample between carbon filter #2 and exhaust stack using a Tedlar air sampling bag

Monthly Measurements for Duration of the Project:

1. Sample between blower and carbon filter #1 using a Tedlar air sampling bag
2. Sample between carbon filter #2 and exhaust stack using a Tedlar air sampling bag

All Tedlar bag samples will be submitted to an ELAP certified laboratory for analysis via EPA Method 8260.

Changes in the frequency of sampling will be approved by the NYSDEC prior to making those changes.

3.3.3 Vapor Intrusion Sample Collection

Soil vapor intrusion samples will be collected once per heating season as described in Appendix 4 section 4.0.

3.3.4 Termination of System Operations

The SVE system is operating as a mitigation system in addition to a remedial system; therefore, termination criteria must be evaluated. The termination will follow sample collection as outlined in the October 2006 NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York section 4.5.

3.4 Site-Wide Inspection

Site-wide inspections will be performed on a regular schedule at monthly intervals. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. During these inspections, an inspection form will be completed (Appendix 2). The form will compile sufficient information to assess the following:

-Compliance with all ICs, including site usage;

-An evaluation of the condition and continued effectiveness of ECs;

-General site conditions at the time of the inspection;

-The site management activities being conducted, including, where appropriate, confirmation sampling and a health and safety inspection;

-Compliance with permits and schedules included in the Operation and Maintenance Plan; and

-Confirm that site records are up to date.

3.5.1 Monitoring Quality Assurance/Quality Control

All sampling and analyses will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the site (Appendix 3). Main components of the QAPP include:

-QA/QC Objectives for Data Measurement;

-Sampling Program:

-Sampling containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservatives will be tagged as such. The 40 *ml* vials for the sampling on-site will contain HCl as a preservative.

-Sample holding times will be in accordance with the NYSDEC ASP requirements.

-Field QC samples (e.g. trip blanks, coded field duplicates and matrix spike/matrix spike duplicates) will be collected as necessary.

-Sample Tracking and Custody;

-Calibration Procedures

-All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.

-The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for analytical methods.

-Analytical Procedures;

-Internal QC and Checks;

-QA Performance and System Audits;

-Preventative Maintenance Procedures and Schedules;

-Corrective Action Measures.

3.5.2 Monitoring Reporting Requirements

Forms and any other information generated during regular monitoring events and inspections will be kept on file at the office of the environmental consultant, Anson Environmental Ltd. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP.

All monitoring results will be reported to NYSDEC on a periodic basis in the Periodic Review Report. A letter report will also be prepared, if required by NYSDEC, subsequent to each sampling event. The report (or letter) will include, at a minimum:

-Date of event;

-Personnel conducting sampling;

-Description of activities performed;

-Types of samples collected;

-Copies of all field forms completed (i.e. well sampling logs, chain-of- custody forms, etc.)

-Sampling results in comparison to appropriate standards/criteria;

-A figure illustrating sample type and sample locations;

-Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled

-Any observations, conclusions or recommendations; and

-A determination as to whether groundwater conditions have changed since the last reporting event.

Data will be reported in hard copy or digital format as determined by NYSDEC. In addition, the sample results will be sent to the property owner as required by Environmental Conservation Law (ECL 27-24).

A summary of the monitoring program deliverables are summarized in the table below:

Schedule of Monitoring/Inspection Reports

Task	Reporting Frequency
SVE system check	Weekly
SVE system port sampling	Monthly
Groundwater sampling	Quarterly
Soil vapor sampling	Annually

3.5.3 Operation And Maintenance Plan

This Operation and Maintenance Plan describes the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the site. The Operation and Maintenance Plan:

-Includes the steps necessary to allow individuals unfamiliar with the site to operate and maintain the soil vapor extraction system;

-Includes an operation and maintenance contingency plan; and,

-Will be updated periodically to reflect changes in site conditions or the manner in which the soil vapor extraction systems are operated and maintained.

The Operation and Maintenance Plan is attached as Appendix 4.

4.0 INSPECTIONS, REPORTING AND CERTIFICATIONS

4.1 Site Inspections

4.1.1 Inspection Frequency

4.2 All inspections will be conducted at the frequency specified in the schedules provided in Section 3 Monitoring Plan, Section 4 Inspections, Reporting and Certifications, and Appendix 4 Operation and Maintenance Plan of this SMP. At a minimum, a site-wide inspection will be conducted annually. Inspections of remedial components will also be conducted when a breakdown of any treatment system component has occurred or whenever a severe condition has taken place that may affect the ECs.

4.1.1.1 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate forms for the respective system and are contained in the appendix.

All applicable inspection forms and other records, including all media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format in the Periodic Review Report.

4.1.1.2 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

-EC/ICs are in place, performed properly, and remain effective;
-The Monitoring Plan is being implemented;
-Operation and maintenance activities are being conducted properly; and based on the above items,
-The site remedy continues to be protective of public health and the environment and is performing as designed in the ROD.

4.3 Certification of Engineering and Institutional Controls

After the last inspection of the reporting period, a New York State Licensed Professional Engineer will prepare the following certifications:

For each institutional or engineering control identified for the site, the engineer will certify that all the following statements are true:
-The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
-The institutional control and/or engineering control employed at this site is unchanged from the date the control was put into place, or last approved by the Department;
-Nothing has occurred that would impair the ability of the control to protect the public health and environment;
-Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
-Use of the site is compliant with the environmental easement;
-The information presented in this report is accurate and complete.
-I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Engineer's Name, of, Company Name, Company Address, am

certifying as Owner's Designated Site Representative and I have been authorized and designated by all site owners to sign this certification for this site.

4.2.1 Periodic Review Report

A Periodic Review Report will be submitted to the Department for first year, beginning twelve months after the SMP is approved. The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the each certification period. Media sampling results will also incorporated into the Periodic Review Report. The report will include:

-Identification, assessment and certification of all EC/ICs required by the remedy for the site;

-Results of the required annual site inspections and severe condition inspections, if applicable;

-All applicable inspection forms and other records generated for the site during the reporting period in electronic format;

-A summary of the discharge monitoring data from the soil vapor extraction system with comments and conclusions;

-Data summary tables and graphical representations of contaminants of concern by groundwater, air and soil vapor which include a listing of all compounds analyzed, along with applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;

-Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC approved format;

-A site evaluation, which includes the following:

-The compliance of the remedy with the requirements of the site- specific Record of Decision;

-The operation and the effectiveness of all treatment units, including identification of any needed repairs or modifications;

-Any new conclusions or observations regarding site contamination based on inspections or date generated by the Monitoring Plan for groundwater and air;

-Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and

-The overall performance and effectiveness of the remedy.

-A performance summary for the soil vapor extraction system at the site during the calendar year, including such information as:

-The number of days the system was run for the reporting period;

-The average, high and low flows per day;

-The contaminant mass removed;

-A description of breakdowns and/or repairs along with an explanation of any significant downtime;

-A description of the resolution of performance problems;

-A summary of the performance, effluent and/or effectiveness monitoring; and

-Comments, conclusions, and recommendations based on data evaluation.

The Periodic Review Report will be submitted, in hard-copy format, to the NYSDEC Central Office and in electronic format to NYSDEC Central Office and the NYSDOH Bureau of Environmental Exposure Investigation.

4.3 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval within sixty days. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

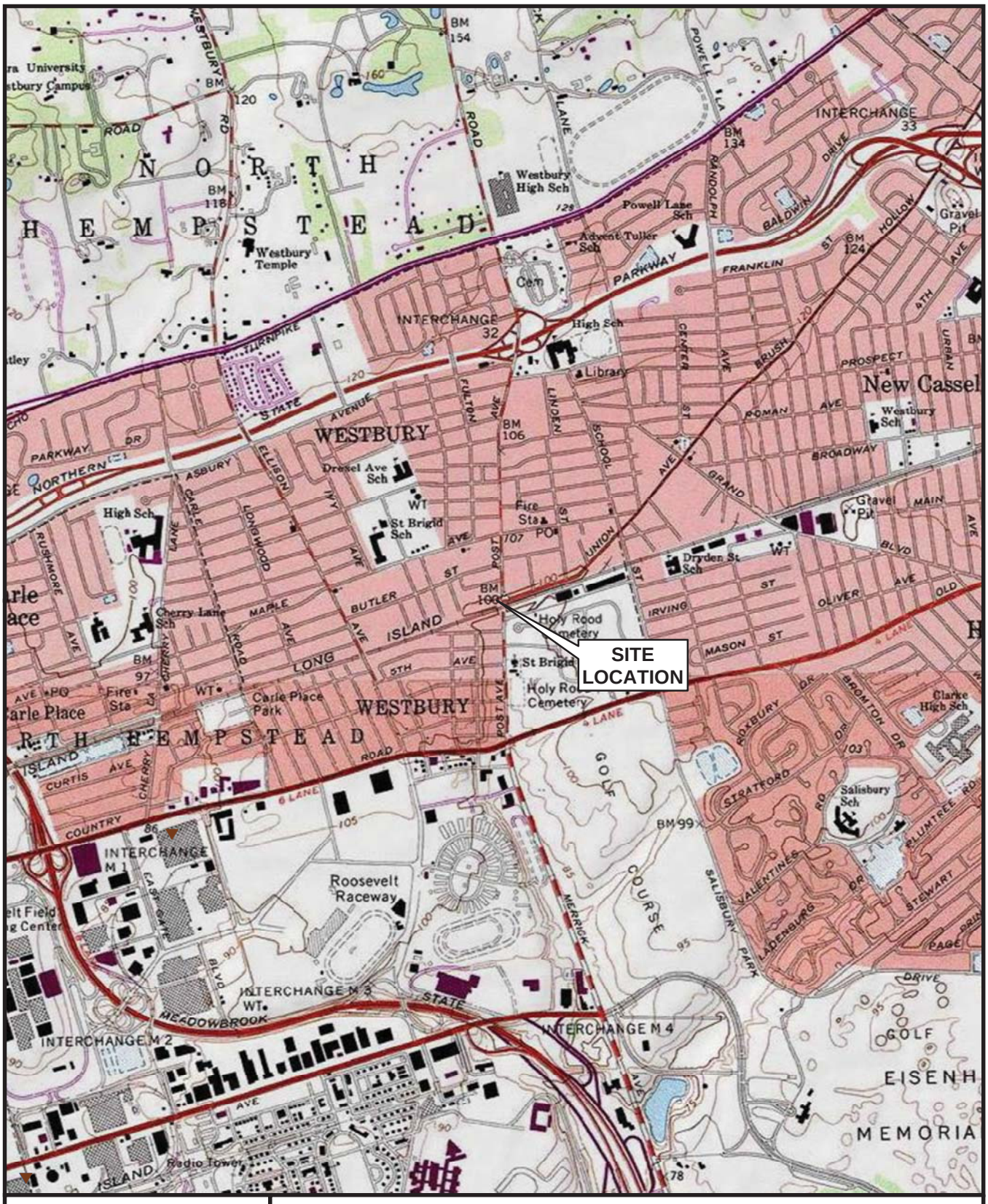


Figure 1

Site Location Map

123 Post Avenue
Town of North Hempstead
Nassau County
Site No. 130088

DEPARTMENT OF ENVIRONMENTAL CONSERVATION · NEW YORK STATE ·

N
W E
S

0 50 100
Feet

Figure 2
Site Map
123 Post Avenue
Town of North Hempstead, Nassau County
Site No. 130088

DEPARTMENT OF ENVIRONMENTAL CONSERVATION • NEW YORK STATE •

Soil Boring Logs
123 Post Avenue, Westbury, New York
October 3, 2000

Soil Boring SS #1

DBG Feet	PID Reading (PPM)	Submitted to Lab By:	Sample Description
16-20	3.5	AEL	Medium to fine grained sand with some coarse, whitish tan (macro used)
22-24	8.1	AEL	Medium to fine grained sand, whitish tan
26-28	6		Medium to coarse grained sand, trace gravel and fine sand, orange tan, large bore
30-32	11	AEL	Fine to medium grained sand, light white, large bore

Soil Boring SS #2

DBG Feet	PID Reading (PPM)	Submitted to Lab By:	Sample Description
16-20	3	AEL	Medium to coarse grained sand, some pebbles, some fine sand, iron staining (macro sampler)
20-24	9.4	AEL	Medium grained sand, some fine and coarse, light tan
26-28	2.8		Fine to medium grained sand, some pebbles, dry, light tan
30-32	3.7	AEL	Fine grained with trace medium sand, soft, dry, light tan/whitish

Soil Boring SS #3

DBG Feet	PID Reading (PPM)	Submitted to Lab By:	Sample Description
0-4	5		Black fill material, cobbles, coarse sand, orange-tan
4-8	8		Medium grained sand, orange 2 inches of medium fine to coarse grained sand, black
8-12	8		Fine to medium grained sand, light brown black sand interspersed,
12-16	5		Coarse grained sand with medium to fine sand, orange
16-20	9		Medium to coarse grained sand, light brown, Medium fine and some coarse sand, light brown
20-24	2		Medium coarse and fine grained sand, light brown
24-28	9		Fine to medium grained sand, light brown
30-32	2.5	AEL	Medium grained with some fine sand, light brown (large bore)
32-34	2.2	AEL	Medium grained with some fine sand, light brown (large bore)

Figure 3
Geological Lithology

Soil Boring Logs

123 Post Avenue, Westbury, New York
October 3, 2000

Soil Boring SS #4

DBG Feet	PID Reading (PPM)	Submitted to Lab By:	Sample Description
16-20	0.2	AEL	Medium grained sand with some fine, light brown (macro)
20-24	1.2	AEL	Medium to fine grained sand, some pebbles light brown (macro)
26-28	1		Fine grained whitish tan sand, well sorted (large bore)
30-32	1.3	AEL	Fine to medium grained sand, light brown/whitish, large bore

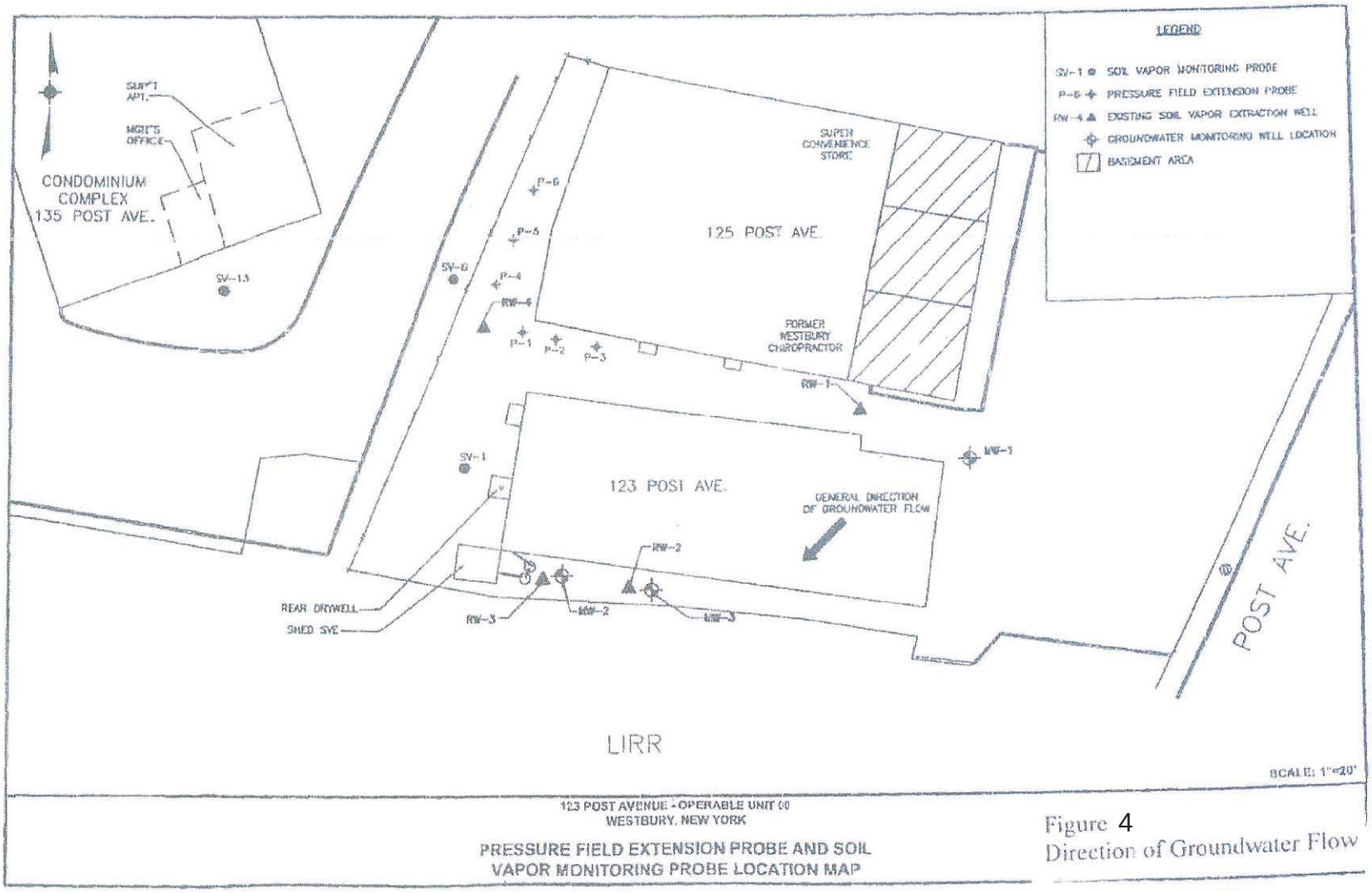


Figure 4
Direction of Groundwater Flow

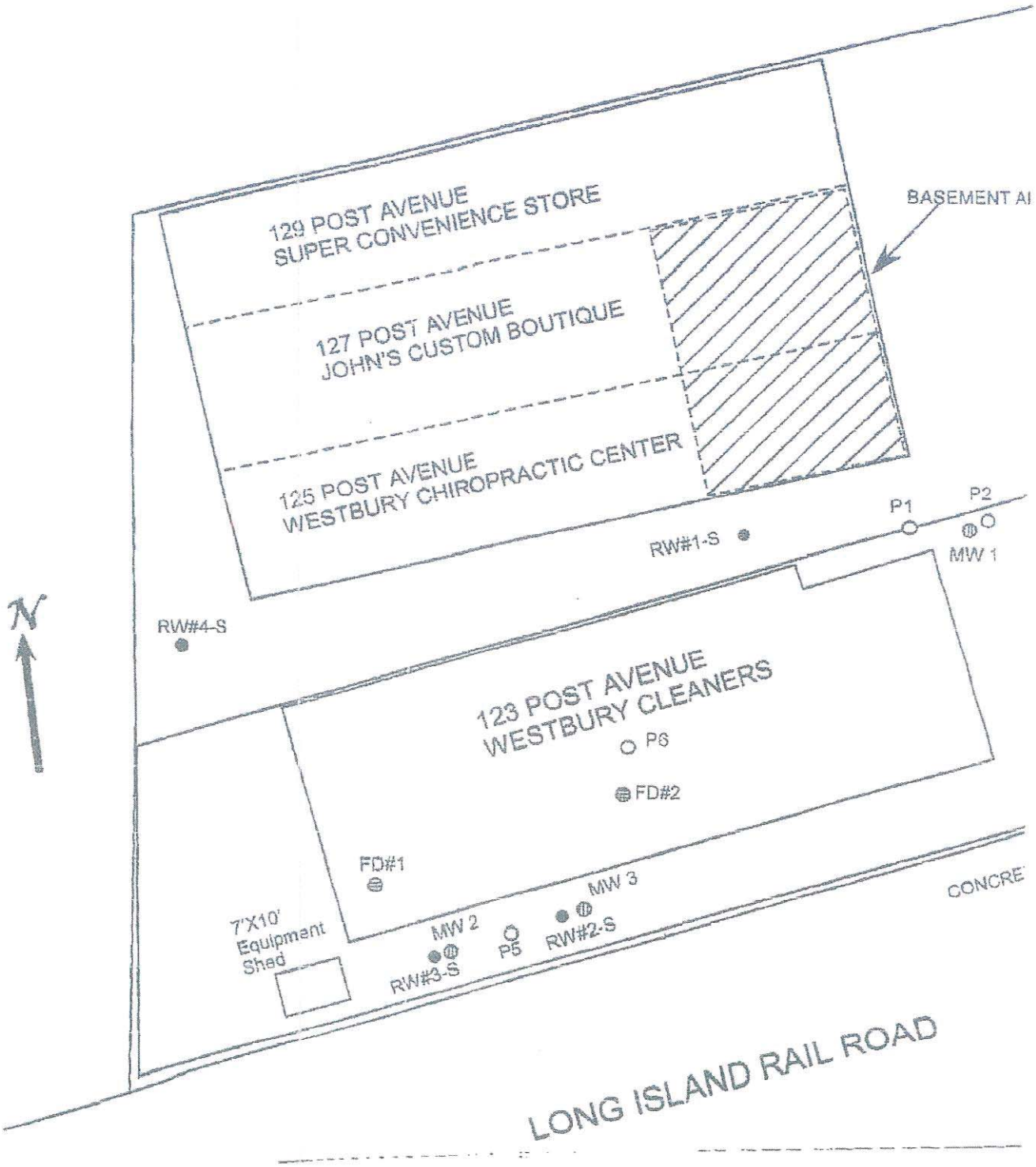


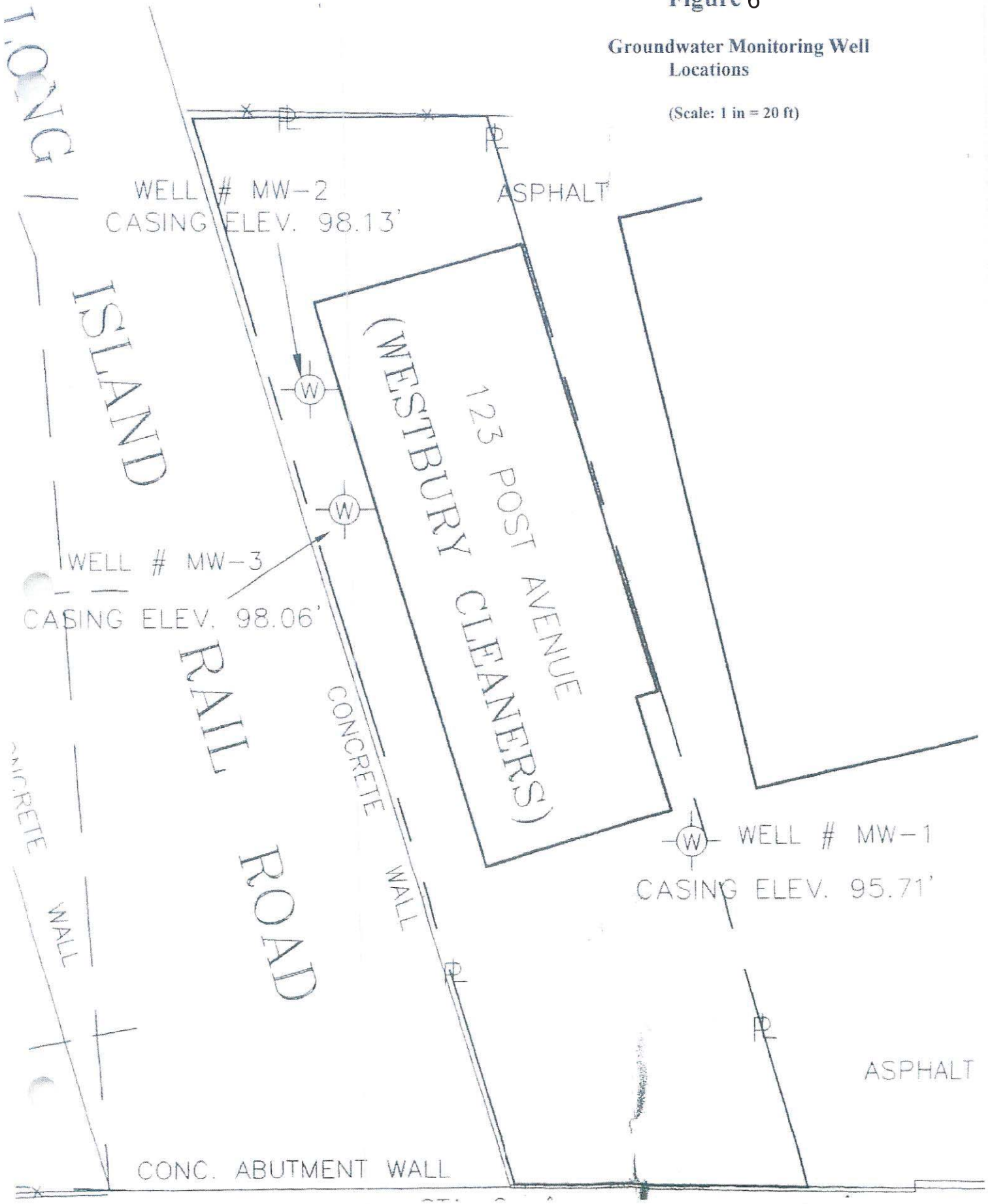
Figure 5

Adjacent Structures

Figure 6

Groundwater Monitoring Well Locations

(Scale: 1 in = 20 ft)



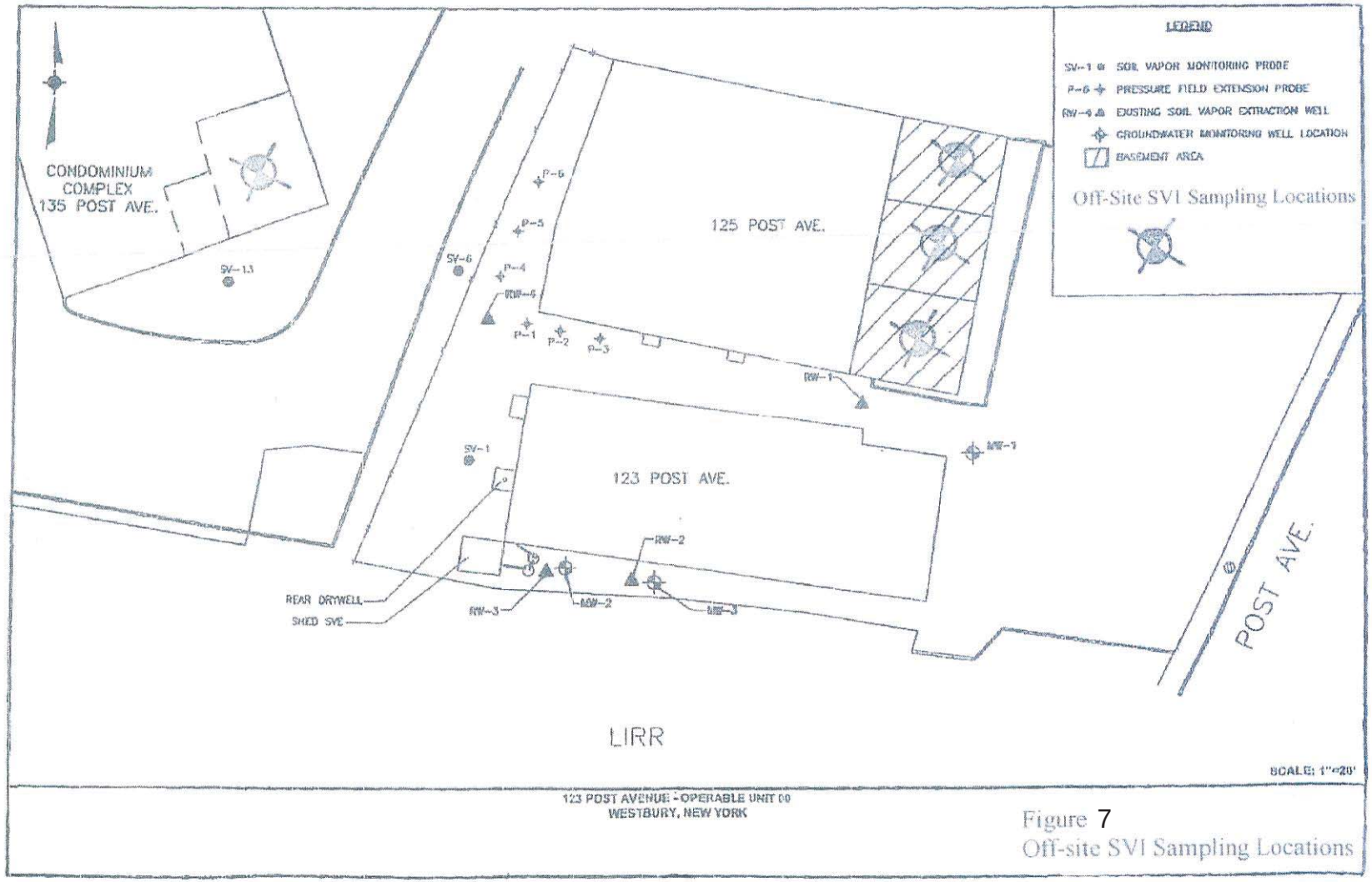


Figure 7
Off-site SVI Sampling Locations

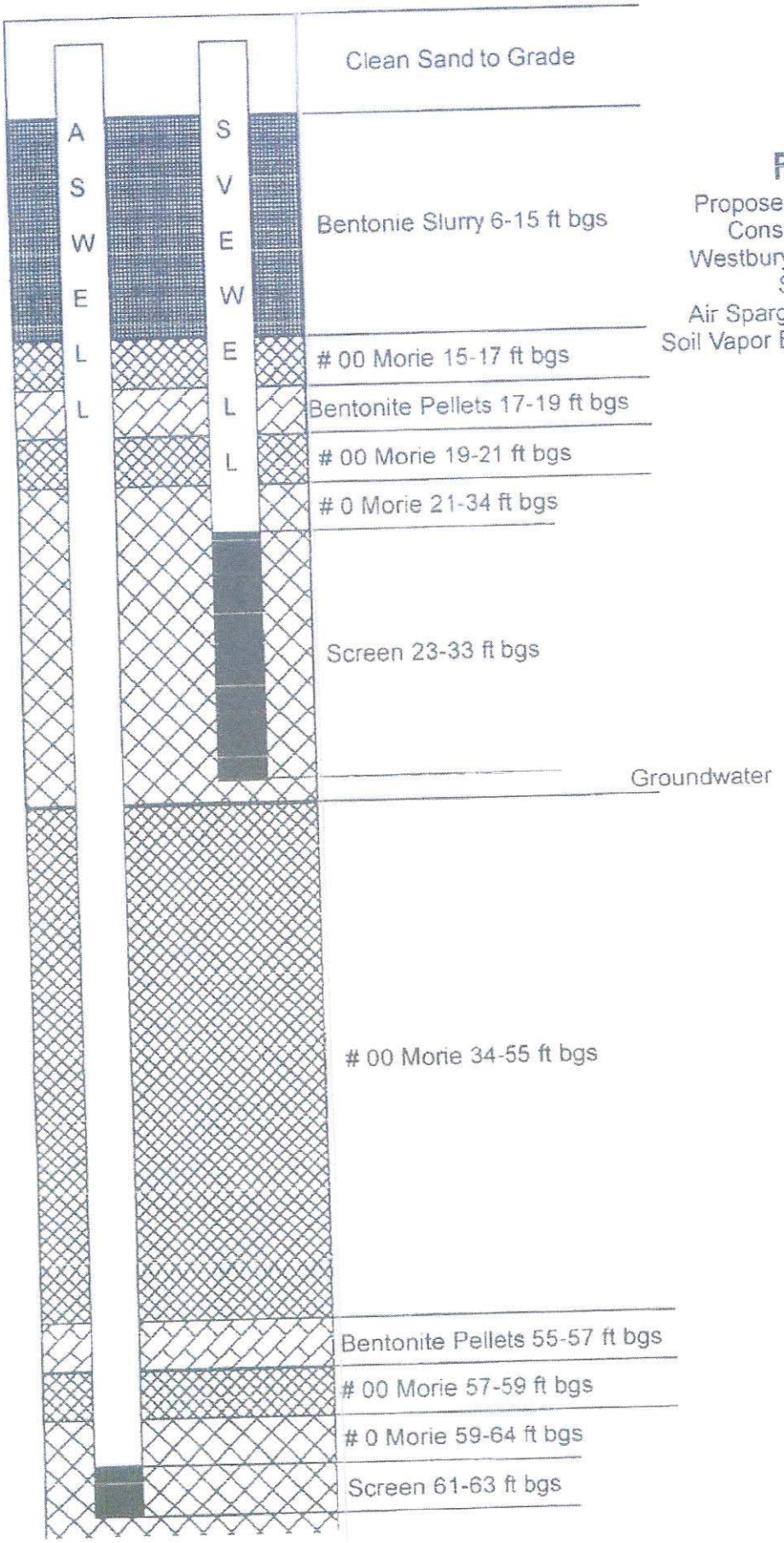
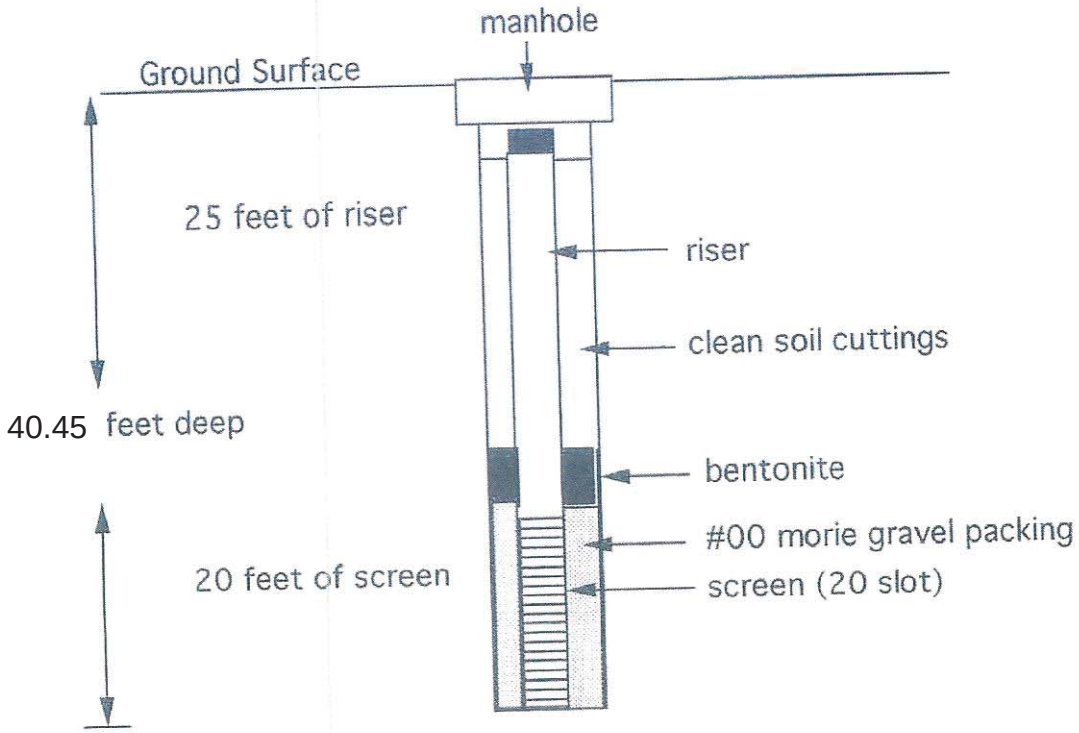


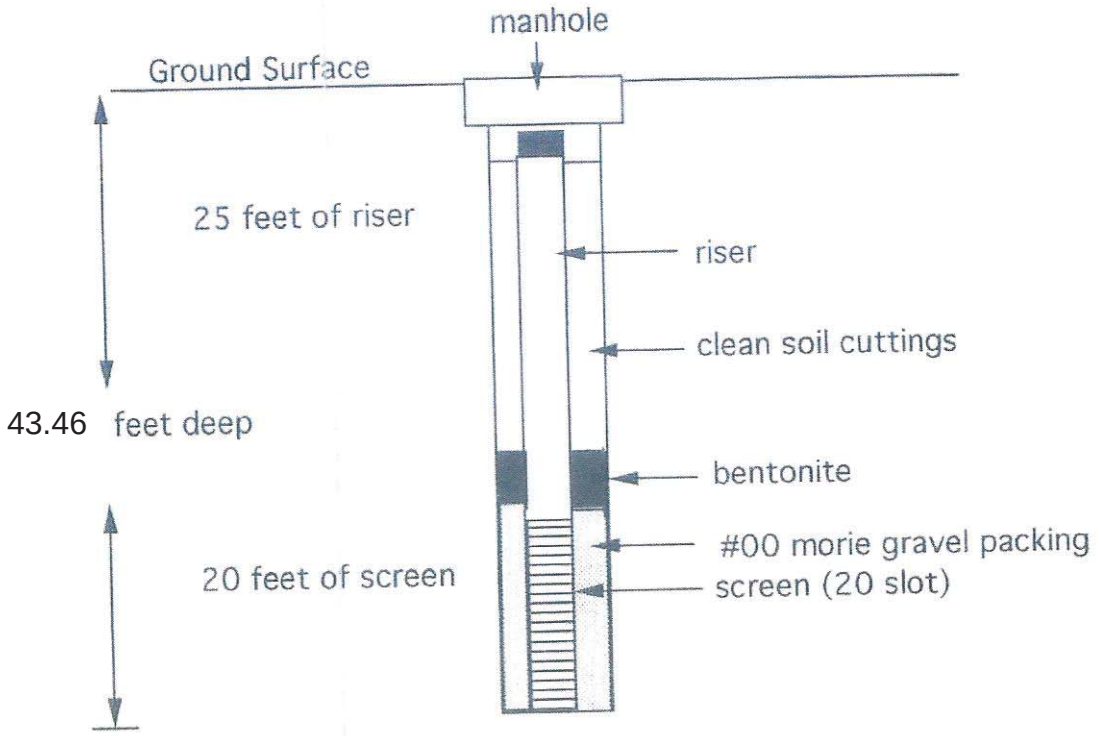
Figure 8

Proposed SVE and AS Well
Construction Diagram
Westbury Valet Dry Cleaners
Scale 1" = 6'
Air Sparge Well Diameter= 2"
Soil Vapor Extraction Diameter= 4"



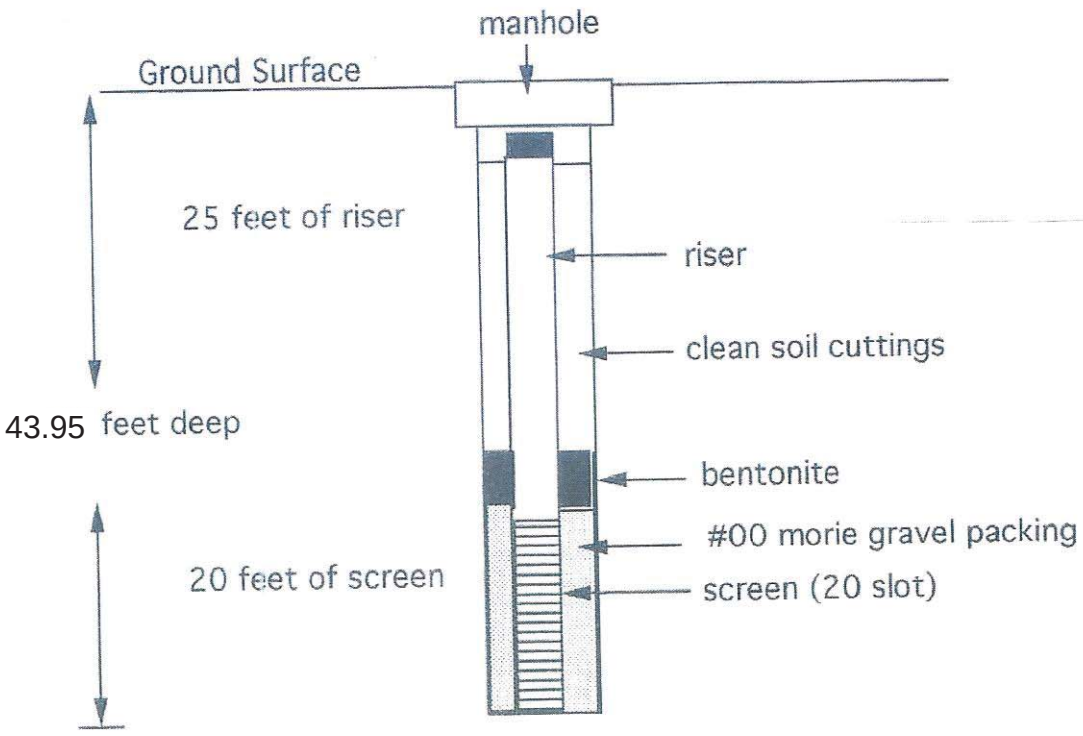
Monitoring Well MW-1 Construction Diagram
Westbury Valet Cleaners
123 Post Avenue
Westbury, New York

Anson Environmental Ltd.



Monitoring Well MW-2 Construction Diagram
Westbury Valet Cleaners
123 Post Avenue
Westbury, New York

Anson Environmental Ltd.



Monitoring Well MW-3 Construction Diagram
Westbury Valet Cleaners
123 Post Avenue
Westbury, New York

Anson Environmental Ltd.

Appendix 1

Ground Water Sampling Log

123 Post Avenue

Westbury Valet Cleaners

GROUNDWATER SAMPLING LOG

SITE NAME:	SITE LOCATION:	
WELL NO:	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.86
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y N (replaced)	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February

Appendix 2

System Inspection Checklist

123 Post Ave
Westbury, NY 11590

O&M CHECKLIST FOR SVE/AIR SPARGE SYSTEM

Date _____ Inspected By: _____

Control Panel	Arrival	Departure
System	On / Off	On / Off
SVE Relief Valve	Open / Closed	cfm

SVE SYSTEM INSIDE TRAILER

Was Moisture Separator Emptied?	Yes / No
Moisture Disposal Drum	F / 75 / 50 / 25 / E

SVE WELL READINGS (INSIDE TRAILER)

SVE WELL #	Flow	PID Readings	Vacuum	Ball Valve
RW1-S	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
RW2-S	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
RW3-S	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
RW4-S	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
RW1-D	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
RW2-D	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C

SVE SYSTEM FLOW

	Pre-Blower	Post Blower	Exhaust	Moisture Separ.
Vacuum	inch of water			inch of Water
Pressure		psi		
Flow	cfm	cfm	cfm	

CARBON SYSTEM

	Pre-Carbon	Between Carbon	Post Carbon	Notes
PID	ppm	ppm	ppm	
Temp	degrees F	degrees F	degrees F	

SVE Radius of Influence

Piezometer ID	Vacuum (inches of water)	Piezometer ID	Vacuum (inches of water)	Notes
P-1		P-6		
P-2		MW # 1		
P-3		MW # 2		
P-4		MW # 3		
P-5				

Appendix 3

Quality Assurance/Quality Control Plan

Quality Assurance/Quality Control Plan
Westbury Valet Dry Cleaners
Site # 1-30-088

Table of Contents

1.0 Introduction

This Quality Assurance Project Plan (QAPP) has been prepared in conjunction with and to accompany the Westbury Valet Dry Cleaners Site Management Plan for Site #1-30-088. It specifies quality assurance/quality control (QA/QC) measures, functional activities and policies that will be implemented in order to achieve the data quality objectives of this environmental investigation. This document was prepared to adhere to the U.S. Environmental Protection Agency's report entitled "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans"(EPA-600/4-83-004). A review of the New York State Department of Environmental Conservation (NYSDEC) memorandum "Guidance for Review of Work Plans and Quality Assurance Project Plans" was conducted to make sure that this Quality Assurance Project Plan (QAPP) includes and adequately address QA/QC issues so that QA approval will be received. Prior to deviations from the protocols set forth in this QAPP, the designated NYSDEC QA/QC officer will be notified.

2.0 Project Background and Description

2.1 Project Background

Westbury Valet Dry Cleaners is located at 123 Post Avenue, Westbury, Nassau County, NY. Subsurface contamination with perchloroethene and its breakdown products have been identified on site. With the operation of a soil vapor extraction system, this plan outlines the quality procedures to be implemented with the SMP.

2.2 Project Description

The objectives of this Work Plan are to monitor the ongoing remediation of the subsurface soils and execute the remediation of remaining sources of on-site contamination.

3.0 Project Organization and Responsibility

Fritzi Gros-Daillon of Anson Environmental Ltd. (AEL) will be responsible for ensuring the collection of valid data, in a precise and accurate manner, by personnel under her direction. The QA official will be responsible for conducting unannounced field visits to observe data collection procedures and for periodic review of data generated. The QA official will also be responsible for review of project deliverables.

Peter Williams will be the Project Manager for the site. He will serve as Field Manager and will be responsible for coordination of field activities, technical supervision and execution of the field effort. Dennis Hudson will serve as Field Coordinator. Fritzi Gros-Daillon will serve as Health and Safety Officer. In this capacity, her responsibilities will be implement the requirements of the Health and Safety Plan and ensure that all team members meet the training requirements for the project.

Ecotest Laboratories, H2M or other qualified New York State certified laboratory would be responsible for performing the sample analyses.

EP2 Associates of Huntington, NY or other qualified contractor will be responsible for providing the Geoprobe services.

Reports and findings of the Westbury Valet Dry Cleaners site monitoring will be forwarded to the property owner and the NYSDEC within 30 days of sample result validation.

The information gathered from the work briefly described above will be used to define the extent of contamination on site and identify remedial measures.

4.0 Data Usage and Data Quality Objectives

4.1 Data Usage

Data collected for this project will be used to further define the onsite contamination and implement the SMP designed for this site. The SMP will concentrate on eliminating the source(s) of contamination that exist on site and monitoring current remedial systems.

4.2 Data Quality Objectives

It is the objective of this project to ensure that all measurements be made so that the results are representative, precise, accurate, complete and comparable. Procedures to meet this objective tin the field are included in Section 5 of this report. Within this section, sampling, decontamination, and field measurement procedures are described which will ensure the QA/QC of all data collected.

The above objectives apply to laboratory sample analysis as well. To meet these objectives, standard methods will be applied.

5.0 Sampling and Analytical Procedures and Protocol

This phase of the project, as fully described in the Work Plan, entails the collection of soil and groundwater samples. Soil samples will be procured using a split spoon sampler and/or acetate liners with Geoprobe rods. Groundwater samples will be collected using dedicated polyethylene bailers. A description of each sampling method to be used for the collection of samples is addressed in the following sections.

5.1 Soil Sampling/Manual Collection

Soil samples will be collected using Geoprobe sampling rods. The sampling will be conducted as follows:

(1) The clear acetate liner will be inserted into the large bore sampler and driven to 2-4 feet using the Geoprobe rig.

(2) The sampling rod will be removed from the boring and the sample will be removed intact within the acetate liner.

(3) The liner will be sliced open and the soil scanned immediately using the PID. The PID reading, soil composition, structure, consistency, color and soil condition will be recorded. The sample jars will be filled immediately with representative material and sealed to prevent evaporation of soil moisture. The samples will be stored on ice in a cooler. Labels will be affixed to the sample jars bearing the job number, date, time, initials of sampler, boring number, sample number, depth of penetration and length of recovery. The remaining soil will be placed in clean jars for headspace analysis.

(4) All samples collected will be retained and preserved for future analysis (if necessary).

Soil samples from each boring will be selected for analysis. The soil samples will be collected from the stainless steel auger, decontaminated between sampling events and handled in the same technique as above. After each soil sample bottle is filled, it will be appropriately labeled and put in an ice-filled cooler for delivery to the laboratory for analysis. Completed chain-of-custody form will accompany all samples. The sample information will be recorded in the hydrogeologist's field book. The quality assurance of field sampling and sample custody is included in Sections 5.5 and 6.0 respectively.

The soil samples will be analyzed by EPA Method 8260 for volatile organic compounds plus 10 tentatively identified compounds (TICs). Analytical procedures, calibration of equipment, calibration frequency and matrix specification detection limits corresponding to this method are included in the appendix. The purpose of this analysis is to determine if there are measurable quantities of those organic compounds in the soil, which have been known to be used on site in the past. These compounds are manmade and would not be expected to occur naturally in the soil.

Soil screening for this project will be performed with a PID calibrated to provide direct readings in the filed. Calibration procedures from the instrument's instruction manual are

included in the appendix. Frequency of calibration is based upon manufacturer's recommendations.

5.2 Groundwater Samples

All groundwater sampling will follow strict USEPA QA/QC protocols. Prior to sampling the wells, a 4-foot by 4-foot plastic sheet will be placed at the foot of each well. This will be the designated work zone for the sampling event. All sampling equipment will be placed on the sheet to minimize the possibility of contaminating sampling equipment from the surrounding surfaces. Upon opening the monitoring well, the PID will be used to screen for total volatile organic contaminants in the ambient atmosphere and in the headspace of the well. Any readings will be recorded and compared to ambient background readings. Ambient air sampling for this project will be performed with a PID calibrated to manufacturer's instructions.

The following procedure will be followed for groundwater sampling:

(1) Prior to the purging of the wells for sample collection, a synoptic static water level measured to the nearest 0.01 foot in each monitoring well will be taken.

(2) To ensure a representative sample form the monitoring well, purging of the wells is required. The standing water will be purged from the top of the water column. In general, the groundwater standing in the well casing prior to sample collection will be similar in quality to that in the surrounding aquifer or local groundwater, but it may not be representative.

(3) A volume of water equal to three to five times the volume of standing water in the well will be purged from the well before taking the sample. If the monitoring well has a low yield, standing water will be evacuated until the well is dry and a sample will be collected upon recovery. Wells with high yield can be sampled immediately after evacuation. A dedicated polyethylene bailer will be used to collect the groundwater sample. Prior to the sampling event, sampling equipment shall be decontaminated as outlined in Section 5.8.2. All water removed during the evacuation process shall be placed in clearly labeled 55-gallon drums and stored on site pending analysis.

(4) Dedicated, laboratory-cleaned, polyethylene disposable bailers will be attached to dedicated polypropylene rope or nylon line. The sample will be collected from the screen zone. The first bailer volume shall be placed in a pre-cleaned glass jar and used to conduct analytical field tests such as temperature, pH and specific conductivity. The measurements will be recorded in the field book. All field instruments shall be calibrated daily prior to the sampling events. And cleaned between each sampling point. The balance of the samples will be collected in the following order: volatiles, semivolatiles and metals.

The groundwater samples shall be collected in laboratory-cleaned containers on the second bail. The first round of groundwater samples will be analyzed using EPA method 8260, following appropriate laboratory protocols for that method. The purpose of this analysis is to determine if there are measurable quantities of volatile organic compounds that have been known to be used on site in the groundwater.

One (1) trip and one (1) field blank QA/QC sample will accompany the groundwater sampling per sample day. A trip blank is used in order to determine if outside contamination has been introduced in the course of the transportation of the samples. The trip blank vials are filled in the laboratory using analyte-free distilled/deionized water and will accompany the glassware from the laboratory to the filed and back to the laboratory. The filed blank vial will be filled during the sampling by adding distilled/deionized water to one of the bailers and then filling the empty field blank vials from the bailer. The blank samples will be analyzed for the same parameters as the groundwater samples.

Field tests will include temperature, pH, salinity, and specific conductivity and will be taken immediately upon collection. The pH probe will be field calibrated with a No. 7 buffer solution. The specific conductivity probe will be calibrated in air to zero. Complete calibration procedures are included in the copies of the instrument instruction manuals in the Appendix. A mercury thermometer will be used to measure temperature and will be visibly inspected. The above calibration procedures will be performed each day of groundwater sampling.

The well cap shall be secured and the above process repeated at each groundwater sampling location.

5.3 Preparation and Preservation of Sample Containers

Both soil and groundwater samples will be placed in a cooler provided with ice packs as soon as they are collected. All samples will be delivered the same day or shipped for overnight delivery.

The scope of the project necessitates that 40 milliliter vials and 4 ounce sampling containers be used. The laboratory will provide sample containers. Each sample container will be provided with a label for sample identification purposes. The amount of information will include identification number, time, date, and initials of sample collector. A full chain-of-custody as outlined by the USEPA will accompany all sample containers.

All sample containers will be thoroughly cleaned by the laboratory prior to sampling. The 40-milliliter vials will contain hydrochloric acid (HCl). The 4-ounce soil sampling jars will be not preserved.

5.4 Groundwater Level Monitoring

Groundwater levels will be obtained from the monitoring wells and the newly installed monitoring wells. Water levels will be taken using an electronic water level indicator. The depth to water will be measure to the nearest 0.01 foot and referenced to the top of the well casing. After use in each monitoring well, the measuring device will be cleaned to prevent cross contamination between wells using decontamination procedures

addressed in Section 5.9. A licensed land surveyor will survey the well casings in order to determine the direction of groundwater flow.

5.5 Field Sampling Quality Assurance

5.5.1 Field QA/QC

Blanks will be used to verify the quality of the field sampling results. A field blank will be used to determine the effectiveness of the decontamination of the sampling devices (i.e. bailers and split spoon samplers). Analyte free water will be poured into the device and then transferred to sample containers before use in sampling. Dedicated disposable polyethylene bailers will be used; however, these equipment blanks will be used to ensure that the manufacturer does not introduce contamination.

5.5.2 Field Records

All information pertinent to any field activities will be recorded in bound, waterproof field books. Duplicates of all notes will be prepared and kept in a ringed binder. The binder will be stored in a secure place in the office of AEL. Proper documentation will consist of field personnel maintaining records of work accomplished including the items listed below:
-Date and time of work events
-Weather
-Purpose of work
-Description of methods
-Description of samples
-Number and size of samples
-Description of sampling
-Date and time of collection of sample
-Sample collector's name
-Field observations
-Any field measurements with portable instruments

Each sample collected in the field will be labeled using waterproof ink. Each bottle will be labeled with a number or location, parameter to be analyzed, sampling time and date.

Data obtained from borings shall be recorded in the field notebook and shall include the following:
-name, location and job number
-date of boring
-boring number
-surface elevation (if available)
-sample number and depth
-method of advancing sampler, penetration and recovery lengths
-type and size of sampler

-PID reading during field screening
-description of soil
-thickness of layer
-depth to water
-type of equipment used
-size of casing, depth to well
-blow counts

5.6 Decontamination of Field Equipment

Proper decontamination protocols will be followed during field activities in order to minimize the possibility of introducing contaminants into non-contaminated areas of the site and to ensure that samples and data collected are representative of the actual conditions.

5.6.1 Equipment Requiring Decontamination

The field equipment and sampling devices that require decontamination include:

1. Drilling Equipment-paying particular attention to down-hole tools, back of the drilling rig and drilling rod racks.
2. Sampling Equipment-split spoons, trowels, pumps and hoses, stainless steel bailers, temporary well screen and casing, water level measuring device, etc.
3. Personnel Protective Equipment-respiratory protection and protective clothing.

5.6.2 Decontamination Procedures

The water level meter, sampling rods and miscellaneous tools will be decontaminated according to the following procedure:
-non-phosphate detergent and tap water wash
-tap water rinse
-distilled/deionized water rinse
-total air dry

Field decontamination for drilling equipment, split spoons, temporary well screening and casing, and other sampling equipment will consist of steam cleaning and/or manual scrubbing to remove foreign material and steam cleaning inside and out. These items will then be stored in such a manner as to preserve their clean condition.

Field decontamination for pumps and hoses shall consist of manual scrubbing to remove foreign materials followed by a non-phosphate detergent scrub and flushing.

Field personnel protective equipment decontamination procedures shall consist of the minimum decontamination stations outlined in the Health and Safety Plan prepared for this project. The contractor will prepare a decontamination station whose perimeter is diked to prevent ground contamination from wash waters running out of the area. All drilling equipment shall be decontaminated in this zone. Wash waters from equipment

requiring decontamination will be contained and stored in 55-gallon drums pending laboratory analyses.

5.7 Soil Vapor Intrusion Sample Collection

Soil vapor samples will be collected as described in section 4.1 of Appendix 4.

6.0 Sample Custody

The purpose of sample custody procedures is to document the history of sample containers and samples from the time of preparation of sample containers through sample collection and analysis. To maintain and document sample possession, chain of custody procedures will be followed. A chain-of-custody form contains the signatures of individuals who have possession of the samples after collection and identification in the field.

A sample is in custody if:
1. it is in your actual possession; or
2. it is in your view, after being in your physical possession; or
3. it is in your physical possession and then you locked it up or sealed it to prevent tampering; or
4. It is in a designated secure place restricted to authorized personnel.

Each person involved with the samples will know chain of custody procedures. A discussion of the various stages of sample custody, transfer of custody and laboratory custody is presented below.

6.1 Environmental Sample Chain of Custody

The field sampler initiates the chain of custody procedure in the field and is the first to sign the form upon collection of samples.

The field sampler is personally responsible for the care and custody of the samples until they are transferred and properly dispatched. Sample labels shall be completed for each sample using waterproof ink and packaged to preclude breakage during shipment. Every sample shall be assigned a unique identification number that is entered on the chain of custody form. Samples can be grouped for shipment using a single form.

The record shall be completed in the field so as to indicate: project number, unique sample number, sample location, sampling date and time, person obtaining the sample and method of sample preservation. The paperwork will be done and checked at an on-site location.

A sample chain of custody form is attached.

6.2 Transfer of Custody

A chain of custody record will accompany all samples. When transferring possession of samples, the individuals relinquishing and receiving will sign, date and note the time of the transfer. This record documents transfer of custody of samples whether from the sampler to another person or mobile laboratory or to a permanent laboratory.

Whenever samples are split with a facility or government agency, a separate chain of custody record will be prepared for those samples and marked to indication with whom the samples were split.

6.3 Laboratory Custody Procedures

The laboratory utilized will follow a minimum standard operating procedure for documenting receipt, tracking and sample preparation. A full explanation of laboratory procedures is included in the laboratory documentation in the appendix. Sample custody is described briefly below:

6.3.1 Sample Custody

1. Shipping or Pickup of Cooler by Client
    a. Cooler packed at lab after contact with client.
    b. Cooler wrapped with evidence tape.
    c. Chain of custody forms filled out by lab personnel.
    d. Client supplied with evidence tape to seal cooler prior to shipment back to laboratory.

2. Delivery of Cooler to Lab
    a. Samplers check for external damage (such as leaking).
    b. Lab signs for cooler from shipper.

3. Cooler Delivery to Sample Custodian
    a. Samplers place cooler in air lock to special process lab.
    b. Sample custodian or assistant removes cooler.

4. Opening of Cooler
    a. Check condition of external seal.
    b. Open cooler and check and record temperature.
    c. Remove chain of custody forms, fill out and sign.
    d. Check to see if any samples are broken or damaged
        1. If the samples are broken, note manner of disposal and contact client immediately.

5. Report Sent to Client
    a. Traveler's Way Bill
    b. Final Report
    c. Log-out Sheet

6. Final Steps
   a. Raw data stored on file.

6.3.2 Sample Storage

Samples will be maintained in storage in the GC/MS laboratory in a locked refrigerator prior to sample preparation and analysis. The storage refrigerators will be maintained at 4 degrees Celsius. The samples will be stored no longer than the required holding time before analysis. It is the responsibility of the laboratory to properly dispose of samples beyond the holding period.

6.4 Field Notebook Chain of Custody

Dedicated field notebooks will be used for the duration of the project. These will be numbered and assigned to field personnel. A log of the notebook number, the personnel assigned to the notebook and the date and time signed out and signed in will be the responsibility of the field hydrogeologist. Sufficient number of notebooks will be provided.

All field notes during drilling data will be copied and stored in a ringed binder. Sample chain of custody forms will also be retained in the binder.

7.0 Calibration Procedures and Frequency

The in-field analytical instruments to be used in the site investigation include:

Photoionization Air Monitor (PID)
pH meter
Specific conductivity meter
Depth to water measuring tape.

The instruments will be calibrated in compliance with manufacturer's recommended schedule.

8.0 Documentation, Data Reduction, Validation and Reporting

8.1 Field and Technical Data Documentation

All information pertinent to any field activities will be recorded in bound, field books. Duplicates of all notes will be prepared each night and kept in a ring binder, at the AEL office. Proper documentation will consist of all field personnel maintaining detailed records of all work accomplished including:

1. date and time of work events
2. purpose of work
3. names and address of people relevant to the project

4. description of all methods
5. description of all samples
6. number and size of samples
7. description of sampling point
8. date and time of collection of sample
9. sample collector's name
10. reference to sit map and/or photographs
11. field observations
12. any field measurements with portable instruments

8.1.1 Field and Technical Reporting

During the performance of the project, field and technical data will be assembled and will be made available to those individuals who need the data. Data reported will be as follows:

1. data collected by the field manager
2. data will be reduced by the field manager
3. data will then by reviewed by the project manager

After the data in the field books are checked, the data will be reduced to tabular form and entered into data files. Objective data such as water table measurements will be compiled on a spreadsheet. Subjective data such as boring logs will be included as hard copies.

8.1.2 Field and Technical Data Validation

The two levels upon which the field and technical data will be validated will be:

Validated at the time of collection
After data reduction into tables and charts

Inconsistencies will be resolved by reviewing the original data or by discussing the inconsistencies with the field personnel or laboratory performing the analysis.

Where possible, peer review will be used to maximize consistency among field personnel.

8.2 Laboratory Data

8.2.1 Laboratory Data Documentation

A complete description of the Upstate Laboratories standard operating procedures is presented in the appendix.

8.2.3 Laboratory Data Reporting

Applicable data presentation and all laboratory reports will conform to full reporting standards including:

1. Laboratory data will be reviewed and approved by laboratory manager.
2. Data presentation will include:
   Sample identification numbers used by laboratory,
   Chemical parameters analyzed, report values, and units of measurement,
   Detection limits,
   Data for chemical parameters,
   Results of QA sample analysis, and
   Footnotes if required.

8.2.3 Laboratory Data Reduction

The laboratory data report must be in the NYSDEC Analytical Services Protocol (ASP) Category B deliverable package format. This level of reporting provides the necessary documentation to evaluate the usability of the data and the validity of the analytical reporting limits.

8.2.4 Laboratory Data Validation

Data validation procedures performed internally by Upstate Laboratories is based upon the following document as reference:

Technical Directive Document No. HQ-8410-01
"Functional Guidelines for Evaluation of Organic Analysis".

In addition, Environmental Standards of Valley Forge, PA will perform third party validation.

Appendix 4

Operation and Maintenance Plan

Operation and Maintenance Manual For Soil Vapor Extraction System No. 1

Site:
Westbury Valet Dry Cleaners 123 Post Avenue
Westbury, NY 11590
Site ID# 130088

January 2014

Table of Contents

List of Attachments

1.0 Introduction

This Operations and Maintenance (O&M) manual describes the procedures for operating, servicing and maintaining the soil vapor extraction system installed at the Westbury Valet Dry Cleaners site and designated SVES # 1. Soil vapor extraction is an *in* situ remedial technology that reduces concentrations of volatile organic compounds (VOCs) adsorbed to soils in the unsaturated (vadose) zone. In this technology, a vacuum is applied to the soil matrix to create a negative pressure gradient that causes movement of vapors toward extraction wells. Volatile constituents are readily removed from the subsurface through extraction wells. The extracted vapors are then treated, as necessary, and discharged to the atmosphere.

With the exception of the extraction wells and the carbon canisters, all of the SVES # 1 equipment is contained inside a metal shelter (shed) that is located near the southwest corner of the on-site building. SVES # 1 has a 5-horsepower explosion-proof regenerative blower that is powered by a three-phase 230-volt alternating current. This blower is used to create a negative pressure (vacuum) environment in the system extraction wells. Underground 2-inch diameter (DIA) Schedule 80 PVC piping connects the blower and its associated equipment to four 4-inch diameter (DIA) PVC extraction wells. Presently, SVES # 1 is configured to service four extraction wells. The blower for SVES # 1 and its associated equipment is housed in a 10-foot by 10-foot metal shed. The associated equipment includes a moisture separator, particulate filter, dilution valve, air purification canisters, pressure/vacuum gauges, flow meters, flow control valves and the PVC and metal piping connection the aforementioned units.

SVES # 1 is presently configured to service four extraction wells, namely: RW1-S, RW2- S, RW3-S, and RW4-S. One SVES extraction well is located on the north eastern boundary of the Westbury Valet Dry Cleaners Site, designated Remediation Well # 1 Shallow and is positioned to remediate the soil and the soil gas in the parking area for 123 Post Avenue and under the 123, 125 and 127 Post Avenue buildings including the common basement. Two SVES extraction wells are located in the southern alley between the 123 Post Avenue building and the Long Island Rail Road train tracks, designated Remediation Well# 2 Shallow and Remediation Well # 3 Shallow and is positioned to remediate the soil and the soil gas in the vicinity of the former location of Floor Drain # 1 (FD # 1) and Floor Drain # 2 (FD # 2) as well as the rear parking lot of the 123 Post Avenue building. One SVES extraction well is located on the south western comer of the Westbury Valet Dry Cleaners site, designated Remediation Well# 4 Shallow and is positioned to remediate the soil and the soil gas in the parking area for the 123 Post Avenue building and the parking are of the Westbury Terrace Condominiums.

The aforementioned remediation wells were installed to comply with NYSDEC requirement for a high specification monitoring well. However, the wells do not penetrate the groundwater interface. The wells were installed using 6.25-inch inside diameter (DIA) hollow stem augers. No drilling fluids were introduced into the boring during construction. The wells are constructed with 4-inch DIA Schedule 40 PVC flush joint pipe. The screened portion of each well is 10-feet long and has a slot width size measuring 0.010-inch. Industrial Quartz No. 1 was installed as gravel pack in the annular space around the screened portion of each well. A one-foot thick bentonite pellet seal was placed above the gravel pack in each well. The remaining annular space between the PVC riser pipe and the boring wall for each well was filled with bentonite and cement grout slurry. The top of the riser pipe is each well is sealed with a waterproof cap and covered with an 8-inch DIA, steel, bolt-down manhole flush to grade. Each of the four extraction wells, RW1-S, RW2-S, RW3-S and RW4-S, is set to 20-feet depth below grade (DBG) and screened from 10 to 20 feet DBG.

Under the influence of the negative pressure environment created by the blower, soil vapor moves through the soil toward each active extraction well and then through the underground piping to a moisture separator inside the metal shed. Moisture in the soil vapor is removed through cyclonic

action and is stored in the drum of the moisture separator. To protect the sensitive components of the blower, a particulate filter is installed in line between the moisture separator and the blower input. The blower exhaust output is fed to two air purification canister that use activated carbon to remove VOCs from the vapor before it is exhausted to the atmosphere. The exhaust vapor of SVES # 1 is moved under slight pressure through 4-inch DIA Schedule 40 PVC piping to a location about 10-feet above the roof of the Westbury Valet Dry Cleaners building.

2.0 Overview of SVES Monitoring Program

Different methods will be used to monitor the operation of SVES # 1 at sampling points. One method will use Tedlar air bags to collect vapor samples at specific sampling ports for laboratory analysis. The second method uses a Thermal Environmental Instruments, Inc. Model 580B Organic Vapor Monitor (OVM), or equivalent, to measure the concentration of total VOCs in the vapor at a sampling port.

After the shakedown period is completed, the SVES # 1 exhaust emissions will be sampled on a weekly basis for the first month. These samples will be collected from the previously mentioned sampling ports located in the blower exhaust piping before the first air purification canister, in-between the two air purification canisters, and at the system exhaust stack.

In addition, monthly air samples will be collected in Tedlar air bags and submitted to an ELAP certified laboratory for analysis to determine the concentrations of VOCs using EPA Method 8260. These samples will be collected from the exhaust side of the SVES # 1 system at the sampling ports located before the first air purification canister and after the second air purification canister. The laboratory analyses will detect individual contaminants in the effluent of the SVE system. The concentrations of the individual contaminants detected by the laboratory analyses will be used to calculate the quantity of volatile organic compounds that have been removed from the soils on-site.

After the first month with weekly sampling, the sampling will be conducted monthly for three months and then quarterly to year end.

3.1 SVES Monitoring Schedule

The operation of SVES # 1 will be periodically monitored to measure its effectiveness for removing contamination from the soil, and to ensure that the operation of SVES # 1 is in compliance with applicable rules and regulations.

During the first thirty (30) days of SVES # 1 operation, weekly inspection and sampling of the system exhaust vapors will be performed and recorded. After this thirty (30) day startup period it is anticipated that monthly inspections and sampling will provide sufficient information for determining the effectiveness and safety of system operation.

The results of OVM readings and other field measurements will be recorded on SVES # 1 System Status log sheets (Appendix 1).

The following describes the periodic schedules, measurements, and sampling that will be recorded during the operation of SVES # 1.

3.2 Weekly Measurements for Duration of Remedial Activities

- Record flow rate and vacuum reading at each extraction well.
- Record flow rate at input and output of the blower.
- Record flow rate at output of second air purification canister.
- Record the pressure reading at the output of the blower.

- Record the vacuum reading at the output to the moisture separator and the input of the blower.

- Record OVM reading from the blower exhaust sampling port located before the first air purification canister.
- Record OVM reading from the air sampling port located at the output of the first air purification canister.
- Record OVM reading from the air sampling port located on the system exhaust stack.
- Record the Moisture Separator water level.
- Use an OVM to measure the total concentration of VOCs being removed from each extraction well.

3.3 Monthly Measurements for Duration of the Project

- Use a Tedlar air-sampling bag to collect an air sample from the air sampling port located before the first air purification canister and at the sampling port after the second air purifying canister.

3.4 Annual Measurements for Duration of the Project

Collect indoor air quality samples annually (during the heating season) from the locations identified on Figure 7.

3.5 Semi-Annual Measurements for Duration of the Project

- Record depth to water measurements in each of the three on-site groundwater monitoring wells.
- Collect groundwater samples from the three on-site groundwater monitoring wells and submit to a certified laboratory analysis for volatile organic compounds using EPA Method 8260.

4.0 Soil Vapor Intrusion and Indoor Air Sampling

In compliance with the 2006 New York State Department of Health Guidance Document, soil vapor intrusion samples will be collected during the heating season. The schedule of when these samples will be collected will be included in the November monthly report or within 30 days of the approval of the SMP.

- Implant points will be installed inside the structures indentified on Figure 7, for sample collection using Summa Canisters. The points will be installed four inches below the concrete floor and sealed with bentonite. The sampling point will be tested for integrity with the use of helium.

- The first round of sampling using Summa canisters will be analyzed with EPA Method TO-15 to evaluate the constituents that would not be detected with the use of “Perc” badges. If compounds are detected in the samples that would not be adequately monitored utilizing “Perc” badges, then the use of Summa Canisters to collect samples would need to be continued.

- "Perc" badges will be installed in the common basement of 127 Post Avenue, from the lobby of the southernmost tenant space and interior of the superintendent's apartment of the Westbury Terrace Condominiums, as shown on Figure 7, on an annual basis. These locations were identified when the SVE system was installed and initially monitored and will

provide continuity of sampling data for the system performance.

- The "Perc" badge monitoring will be performed using passive diffusion monitors manufactured by 3M, St. Paul, MN (Organic Vapor Monitor Model 3500). The passive diffusion monitors will be exposed for a minimum of 24 hours in order to properly detect PCE at concentrations below NYSDOH guidelines. The exposed monitors will be submitted to Galson Laboratories, an ELAP-approved laboratory, where they will be analyzed for concentrations of PCE using NYSDOH Method 311-9.

5.0 MAINTENANCE PROCEDURES

5.1 Moisture Separator Drum

- The water level in the drum will be checked at least weekly. Turn off the power to the blower using the motor control switches, place a container under the drain valve at the bottom of the drum and open the drain valve. Liquid drained from the system will be stored in a suitable container with a watertight lid. Once the moisture separator is drained, the valve will be closed and the system can then be restarted. The liquid will be sampled to ensure proper disposal of the condensate.

5.2 Particulate Filter

- An air filter is located between the moisture separator and the blower to prevent sediment from entering the blower. The filter will be checked every month or after a significant increase in the measured vacuum at the inlet to the blower. The filter element will be either cleaned or replaced depending on the condition of the element.

5.3 Vacuum Relief Valve

- There is no periodic maintenance procedure recommended by the manufacturer.

5.4 Carbon Canisters

- The sampling ports on the intake, between and discharge sides of the carbon canisters will be monitored weekly using an OVM and the values recorded. Once the meter indicates a potential for a breakthrough of the carbon, Anson Environmental will arrange for replacement of the unit.
- A Carbon canister change will be implemented by replacing Canister No. 1 with the canister in the No. 2 position and installing a new canister in the former Canister No. 2 position.
- An adequate supply of carbon will be kept on-site for carbon change outs when carbon breakthrough is anticipated.
- There are no periodic canister maintenance procedures recommended by Carbtrol.
- The concentration of total VOCs and system flow rate data will be supplied to Carbtrol so the carbon manufacturer can predict the carbon breakthrough time.
- Carbtrol will be queried regarding upgrading the size of the carbon units to improve SVE system operation. At least one extra carbon canister will be kept on-site at all times.

5.5 Electrical Power On/Off

A dedicated electrical starter switch is mounted on the north wall of the shelter housing the SVES. The starter switch is magnetically operated and has a START control pushbutton and a STOP control pushbutton. The starter switch front panel also contains a reset pushbutton that is used to reset the internal controls of the starter switch. By depressing the START pushbutton electrical

power is connected to the SVES blower and it immediately begins to rotate and attains full rotational electrical speed within a few seconds. Depressing the STOP pushbutton will disconnect electrical power from the blower and it will stop rotating within a few seconds.

If there has been an electrical outage in the vicinity of the SVES that affects the system, then the system will be manually re-started by depressing the START button during the weekly site visit.

6.0 Reports

The monthly report detailing the previous month’s activities will be submitted to NYSDEC by the tenth day of the month. The contents of the monthly reports will present the previous month's activities in detail including:

-A summary of the previous month's activities,
-year to date mass removal calculation,
-Operations and Maintenance logs for the month, and
-sampling or test data, including but not limited to the quarterly groundwater and annual vapor intrusion data, received or generated during the month.

SVES Equipment List

Pressure Indicator	Vacuum gauge, AMETEK Rotron Industrial Products
Flow Meter	Air Flow Meter, 2 inch dia., AMETEK Rotron Industrial Part No. 550601 Air Flow Meter, 4 inch dia., AMETEK Rotron Industrial Part No. 550608
Moisture Separator	Moisture Separator, AMETEK Rotron Industrial Part No. 038520
Particulate Filter	Inline Filter, AMETEK Rotron Industrial Filter Element, AMETEK Rotron Industrial
Dilution Valve/Filter	Filter/Silencer, AMETEK Rotron Industrial
Blower	Explosion-proof Regenerative Blower, AMETEK Rotron Industrial Products, Model No. 038710
Air Purification Canister	Vapor Phase Adsorber, Carbtrol Model No. G10/400
PVC Piping	
Underground Locations:	2-inch dia., Sch.80
Aboveground Locations:	2-inch dia., Sch.40 3-inch dia., Sch. 40 4-inch dia., Sch. 40
PVC Ball Valve	2-inch dia., PVC, Matco-Norga Inc, 770T08N threaded

123 Post Ave
Westbury, NY 11590

O&M CHECKLIST FOR SVE/AIR SPARGE SYSTEM

Date _____ Inspected By: _____

Control Panel	Arrival	Departure
System	On / Off	On / Off
SVE Relief Valve	Open / Closed	cfm

SVE SYSTEM INSIDE TRAILER

Was Moisture Separator Emptied?	Yes / No
Moisture Disposal Drum	F / 75 / 50 / 25 / E

SVE WELL READINGS (INSIDE TRAILER)

SVE WELL #	Flow	PID Readings	Vacuum	Ball Valve
RW1-S	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
RW2-S	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
RW3-S	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
RW4-S	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
RW1-D	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
RW2-D	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C
	cfm	ppm	inches of Water	O / 75 / 50 / 25 / C

SVE SYSTEM FLOW

	Pre-Blower	Post Blower	Exhaust	Moisture Separ.
Vacuum	inch of water			inch of Water
Pressure		psi		
Flow	cfm	cfm	cfm	

CARBON SYSTEM

	Pre-Carbon	Between Carbon	Post Carbon	Notes
PID	ppm	ppm	ppm	
Temp	degrees F	degrees F	degrees F	

SVE Radius of Influence

Piezometer ID	Vacuum (inches of water)	Piezometer ID	Vacuum (inches of water)	Notes
P-1		P-6		
P-2		MW # 1		
P-3		MW # 2		
P-4		MW # 3		
P-5				

Appendix 5

Health and Safety Plan

Westbury Valet Dry Cleaners

Health and Safety Plan
Westbury Valet Dry Cleaners
Site #1-30-088

Table of Contents

1.0 General Information

Described below are Anson Environmental Ltd.(AEL) project health and safety requirements, responsibilities, and procedures to protect workers during the site monitoring for the Westbury Cleaners site located in Westbury, Nassau County, New York.

As part of this plan, access to the areas of concern and ambient air monitoring will be performed at the location of soil disturbance, downwind and at the site perimeter to minimize the potential for possible on-site and off-site exposure.

1.1 Requirements

The requirements for workers health and safety area based on the following:
-The Standard Operating Safety, U.S. Environmental Protection Agency (EPA), Office of Emergency Remedial Response.

-The Occupational Safety and Health Administration (OSHA) Regulations, 29 CFR Parts 1910.120 and 1992.

-Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, NIOSH, OSHA, USCG and EPA.

-Superfund Amendments Reauthorization Act (SARA), Title I, Section 126.

1.2 Applicability

The protection of AEL's workers' and subcontractors' health and safety and the environment are major concerns at the Westbury Cleaners property. Personnel must be protected from the risk of incurring illness or injury during the field investigation at the site. Since each and every safety hazard associated with the site cannot be anticipated, precautions will be taken to prevent illness or injury to workers during the project. Based on these considerations, this health and safety plan will be applicable for each phase of work at this site as described in this work plan. The implementation of this plan will be based on the judgment of the Project managers as described below in the work plan.

2.0 Site Specific Information

The Westbury Cleaners site is a commercial building located in Westbury, New York. The principal areas of concern are the floor drains, former sanitary locations, exterior drywell and groundwater conditions.

2.1 Hazard Characterization/Identification

The primary concern at the site is to protect the workers from contaminated subsurface soils and groundwater beneath the site. During this portion of the site monitoring, exposure to a potential source of contamination is limited. Ambient air monitoring will be performed during any soil disturbance procedures (soil borings) and any filed operations that warrant it. The health and safety officer and/or field project manager will discuss the chemical exposure for the site with all field personnel at the beginning of each workday.

Each day that field work is to be performed, AEL personnel and subcontractors will be made aware of the chemical compounds that may be present on site. The health and safety symptoms of exposure to those chemical compounds will be discussed. Workers on site the previous day will be interviewed to see if they experience any of the symptoms of exposure.

2.2 Potential Exposures

Potential exposure will be considered on a daily basis during the site monitoring. Therefore, disposable gloves will be worn during any contact with any medium being sampled on the property.

2.3 Level of Protection

Level of protection during the field investigations will be level D and will be upgraded, if conditions require.

3.0 Site Personnel

The project will require the interaction of government agencies (NYSDEC), contractors, site facility operators and technical specialists. The project team will be composed of AEL and various subcontractors. The Health and Safety Plan will be implemented during all field operations performed on the property. The Field Operations Manager will be responsible for implementing safety precautions during all field activities/sampling phases.

3.1 General Work Practices

The following general health and safety requirement will apply to all persons working at the site:

1. All personnel working on the site investigation team shall read the Health and Safety Plan. A copy of the Acknowledgement Form is provided at the last page of

this work plan.

2. No employee will be allowed in the active field investigation areas without the prior knowledge of the field project manager.
3. All personnel involved in the site monitoring at the site will notify the field operations manager of any unsafe conditions or activities.
4. Standard hygiene practices will be implemented such as no smoking, eating or drinking during site investigative work activities and require a thorough washing of hands and face prior to smoking, eating, or drinking. At all times, personnel should perform investigative activities from upwind directions.
5. Workers will avoid unnecessary contamination such as walking through, sitting on, leaning on, or kneeling in areas that are known or suspected to be hazardous.
6. All site personnel shall observe their partners for any signs of adverse effects associated with the work activity and will inform their partner of supervisor of any unusual signs or symptoms that they are experiencing themselves.

3.2 Orientation and Training

Each member of the field investigation team has completed the 40-hour training course required by the Occupational Safety and Health Administration for personnel working at hazardous waste sites. Each field team member is trained and experienced in the standard field sampling techniques and procedures to be utilized in this project.

Each person who may be required to use respiratory protection had been medically approved, trained and fit tested with a NIOSH approved respirator appropriate for the conditions likely to be encountered. In addition, each field team member participated in an orientation session to commencing work at the site. The orientation will include the following:

-Project goals and objectives
-Overview of the Health and Safety Plan
-Health and safety requirements and procedures
-Chemicals contaminating the site and their properties
-Potential health and safety hazards
-Safe sampling procedures
-First aid and emergency procedures
-Use of respiratory protection and respirator fit testing
-Use of protective clothing
-Decontamination protection
-Waste disposal procedures

3.3 Monitoring Equipment

The principal forms of chemical contamination at the site are known and are generally low hazard levels if appropriate precautionary measures are used. However, routine monitoring for health and safety purposes will be performed during all site activities.

Monitoring equipment will be operated, maintained and calibrated each working day in accordance with the manufacturer's instructions and AEL's quality assurance procedures. Organic vapor monitoring will be conducted during field activities. Should contaminant levels indicated high hazard potential, operations will be discontinued until the situation is evaluated.

Organic vapor monitoring will be performed as outlined in the NYSDOH Community Air Monitoring Plan. If TOV Levels exceed 5 parts per million (ppm) above-established pre-work background levels, work activities will be halted and monitoring will continue under the provisions of the Vapor Emission Response Plan.

3.4 Injuries

Injured or over-exposed person will be removed from the area immediately. Where applicable, first aid will be administered and/or emergency rescue team called. Depending on the nature of the injury/emergency, appropriate notifications will be made.

4.0 Levels of Protection

Four protection levels (A, B, C and D) will be used as benchmarks for selection of personal protection equipment.

Level A requires the highest degree of protection including fully encapsulating, chemical resistant suit with full face-piece, SCBA or supplied air respirator. No situations are anticipated in this investigation that would require this level of protection.

Level B protection requires full chemical resistant clothing with a full face-piece SCBA or supplied air respirator. No levels of VOCs or toxic chemical expected at this site that would require this level of protection. However, provisions will be made to have this equipment available should its use to be determined to be required. Investigative activities that may result in this level of protection being required will not be implemented until the equipment has been transported to the site. Implementation of level B protection shall only be performed when sufficient trained personnel (minimum of two) are available.

Level C protection requires full face-piece, air purifying cartridge-equipped respirator (or a half-face, air purifying cartridge-equipped respirator if specifically approved), and protective coveralls, (Tyvek or full chemical resistant clothing or other protective clothing if specifically approved). Level of contaminants in the study area is not expected to require this level of protection. Activities that significantly disturb the soil or generate dust will be closely monitored to determine if upgrading to this level of protection is appropriate. Sampling and handling of highly contaminated waste or soils onsite could result in potential exposures to where this level of protection is warranted. The decision to require this level of protection will be made on a case-by-case basis. Unknown hazardous conditions suspected of containing risks that have not been identified, as part of this plan shall be investigated with Level C protection.

Level D protection requires standard work clothes, such as protective coveralls, work boots, safety glasses/ goggles, and hard hat. This protection level applies to situations in which there is minimal risk of dust generation with subsequent inhalation and dermal risk to hazardous chemicals. It is currently anticipated that level of protection will be applicable to all investigative activities both on and off site.

Should ambient air monitoring during the study indicate a need for higher protection levels that those currently in use, implementation of the appropriate level or cessation of all activities, which are generating the excessive levels, shall be performed. Work activities will be halted when concentrations are 5 ppm above background concentrations.

In addition, protection and first aid will be provided for common health hazards associated with outdoor work such as poison ivy, insect bites and stings, and ticks. Since ticks are known disease vectors, affected persons are instructed to report tick bites to a physician. Poison ivy contact should be treated immediately. A medical kit for first aid will be available in the field. Any signs of rashes, inflammation, irritation, or burning sensation will be reported immediately.

5.0 Personal Protective Equipment

All employees at the site will be required to use appropriate equipment for protection against potential hazards at the site. Since Level D is anticipated for the field investigation, equipment listed under Level D in Section 4.0 will be required.

6.0 Emergency Information

6.1 Emergency Services and Notification

The emergency procedure will include notifying emergency and other affected personnel and keeping their locations and emergency telephone numbers in a convenient and readily accessible area at the project site. A map showing the route from the project site to the nearest emergency medical facility will be provided at the project area.

Emergency services for the Westbury Cleaners site include:

Nearest Emergency Medical Facility
Winthrop University Hospital
295 First Street
Mineola, NY 11501
Emergency Room: (516) 663-2211

Fire/emergency calls: (516) 334-7924

Police Department
Nassau County Police Department
Third Precinct
220 Hillside Avenue, Williston Park

Emergency calls: 911
Non-emergency calls: (516) 573-6300

Poison Control Center
General Area Number: (516) 542-2323

7.1 Community Air Monitoring Plan

The NYSDOH Generic Community Air Monitoring Plan (Appendix 1A) will be followed. It is prepared using the CAMP from DER-10. Real-time air monitoring for volatile organic compounds and particulate levels at the perimeter of the work area are required for intrusive work. The plan includes the following parameters-volatile organic compounds will be monitored at the downwind perimeter of the work area on a continuous basis. If total organic vapor levels exceed 5 ppm above background, then work activities must be halted and monitoring continued under the Vapor Emissions Response Plan. All readings must be recorded and be available for State (DEC and DOH) personnel to review.

7.2 Vapor Emission Response Plan

If the ambient air concentrations of organic vapors exceed 5 ppm above background at the perimeter of the work area, then activities will be halted and monitoring continued. If the organic vapor levels decreased below the 5-ppm above background, then activities can resume. If the organic vapor levels are greater than 5 ppm over background but are less than 25 ppm over background at the perimeter of the work area and are less than 5 ppm above background at half the distance to the nearest residential or commercial structure, whichever is closer, work activities will be modified to mitigate the vapor levels.

If the organic vapor level is above 25 ppm at the perimeter of the work area, then activities must be shut down. When work shut down occurs, downwind air monitoring as directed by the Safety Officer will be implemented to ensure that the vapor emissions do not impact the nearest residential or commercial structure.

7.2 Major Vapor Emission

If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, all work activities must be halted.

If, following the cessation of the work activities, or as a result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, then the air quality must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If efforts to abate the emission source are unsuccessful and if the following levels persist for more than 30 minutes in the 20-Foot Zone, then the Major Vapor Response Plan shall

automatically be placed in effect if the organic vapor levels are approaching 5 ppm above background.

If the organic vapor levels are greater than 10 ppm above background in the 20-Foot Zone, the major vapor emission response plan shall be implemented immediately.

7.3 Major Vapor Emission Response Plan

Upon activation, the following activities will be undertaken:

- -All Emergency Response contacts as listed in Section 6 of the Health and Safety Plan will go into effect.
- -The local police authorities will be conducted immediately by the Safety Officer and advised of the situation
- -Frequent air monitoring will be conducted at 30-minute intervals with the 20-Foot Zone. If two successive reading below action levels are measured, air monitoring may be halted or modified by the safety officer.

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

mapquest

Notes

Health and Safety Plan
Appendix 2

Trip to:

259 1st St
Mineola, NY 11501-3957
3.53 miles / 9 minutes

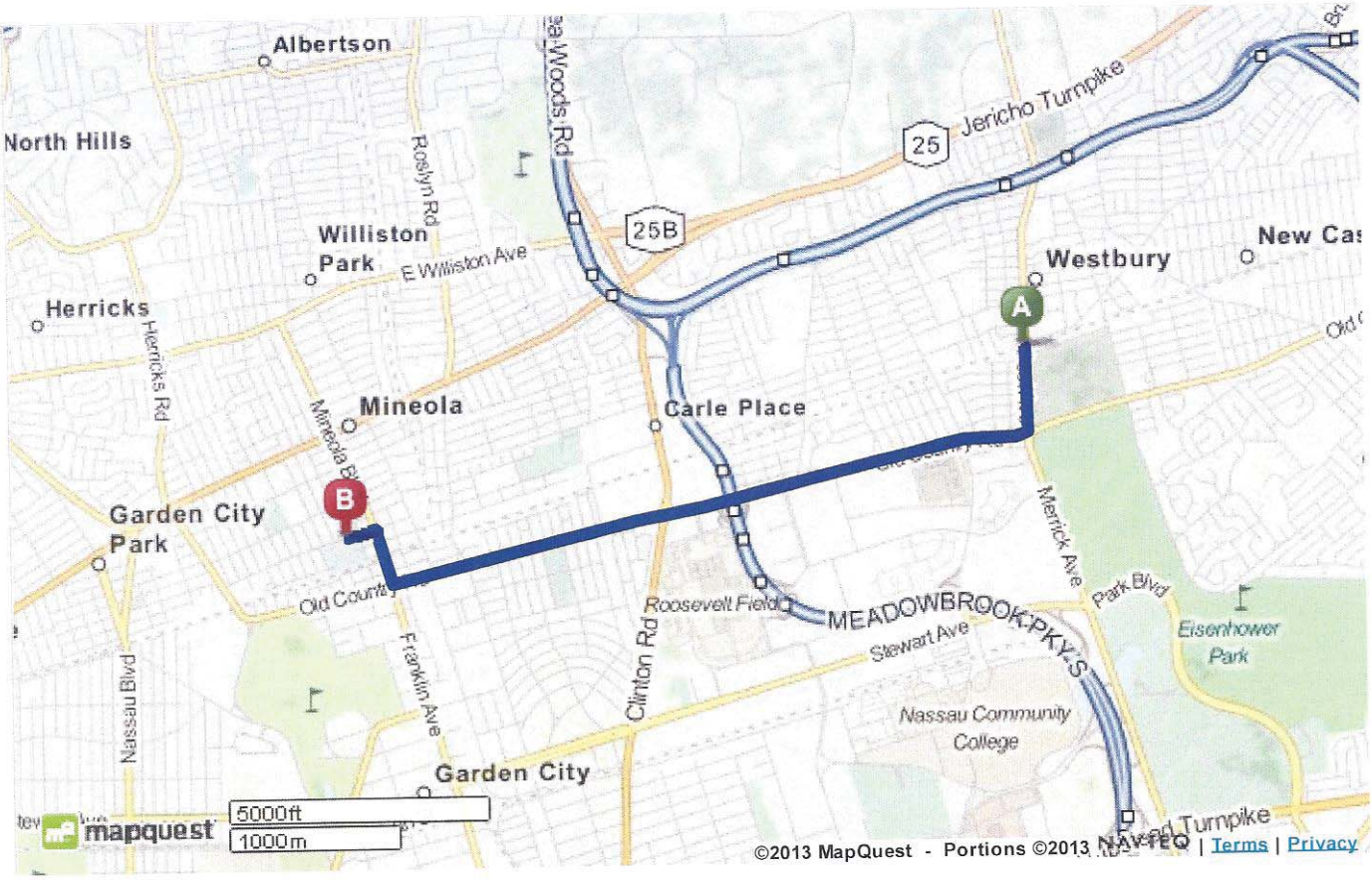
123 Post Ave, Westbury, NY 11590-3140

1. Start out going **south** on **Post Ave** toward **Railroad Ave**. Map	**0.4 Mi** *0.4 Mi Total*
2. Turn **right** onto **Old Country Rd**. Map *Old Country Rd is just past Myrtle Ave* *Mobil is on the corner* *If you are on Merrick Ave and reach Taylor Ave you've gone a little too far*	**2.8 Mi** *3.2 Mi Total*
3. Turn **right** onto **Mineola Blvd**. Map *Mineola Blvd is just past Kellum Pl* *Blimpie is on the corner* *If you reach 3rd Ave you've gone a little too far*	**0.2 Mi** *3.4 Mi Total*
4. Take the 3rd **left** onto **1st St**. Map *1st St is just past 2nd St* *Jani is on the left* *If you reach Harrison Ave you've gone a little too far*	**0.1 Mi** *3.5 Mi Total*
5. **259 1ST ST** is on the **left**. Map *Your destination is just past Horton Hwy* *If you reach Wellington Rd you've gone a little too far*	

259 1st St, Mineola, NY 11501-3957

Total Travel Estimate: **3.53 miles - about 9 minutes**

BOOK TRAVEL with mapquest (877)-577-5766



Appendix 6

Laboratory Report Contained in "Environmental Investigation of Class V Injection Well", Westbury Valet Cleaners

for

Soil and Groundwater Samples

Collected From MW#1, MW#2, MW#3 and Floor Drain #2

Date: May 30, 1999

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.991339.01

04/09/99

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Dennis Madigan

SOURCE OF SAMPLE: Westbury Dry Cleaners, #96002
COLLECTED BY: Client DATE COL'D:03/31/99 RECEIVED:04/01/99

SAMPLE: Water sample, MW#1

ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlordifluomethane	ug/L	<2
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<2
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	2
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	3
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
c-1,3Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	95

ANALYTICAL PARAMETERS		
Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<2
1,2 Dichlorobenzene	ug/L	<2
1,4 Dichlorobenzene	ug/L	<2

cc:

REMARKS:

DIRECTOR

rn= 8379

NYSDOH ID# 10320

ECOTEST LABORATORIES, INC. ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.991339.02 04/09/99

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Dennis Madigan

SOURCE OF SAMPLE: Westbury Dry Cleaners, #96002
COLLECTED BY: Client DATE COL'D:03/31/99 RECEIVED:04/01/99

SAMPLE: Water sample, MW#2

ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlordifluomethane	ug/L	<2
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<2
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
,,2 Dichloroethene	ug/L	13
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
c-1,3Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	690

ANALYTICAL PARAMETERS		
Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<2
1,2 Dichlorobenzene	ug/L	<2
1,4 Dichlorobenzene	ug/L	<2

cc:

REMARKS:

DIRECTOR

rn= 8380 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.991339.03

04/09/99

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Dennis Madigan

SOURCE OF SAMPLE: Westbury Dry Cleaners, #96002
COLLECTED BY: Client DATE COL'D:03/31/99 RECEIVED:04/01/99

SAMPLE: Water sample, MW#3

ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlordifluomethane	ug/L	<2
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<2
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	98
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	11
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
c-1,3Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	20000

ANALYTICAL PARAMETERS		
Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<2
1,2 Dichlorobenzene	ug/L	<2
1,4 Dichlorobenzene	ug/L	<2

cc:

REMARKS:

DIRECTOR

rn= 8381

NYSDOH ID# 10320

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.991339.05

04/09/99

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Dennis Madigan

SOURCE OF SAMPLE: Westbury Dry Cleaners, #96002
COLLECTED BY: Client DATE COL'D:03/31/99 RECEIVED:04/01/99

SAMPLE: Soil sample, FD#2 (10-11)

ANALYTICAL PARAMETERS		
Vinyl Chloride	ug/Kg	<1000
Trichlorofluomethane	ug/Kg	<1000
1,1 Dichloroethene	ug/Kg	<1000
Methylene Chloride	ug/Kg	<1000
t-1,2-Dichloroethene	ug/Kg	<1000
1,1 Dichloroethane	ug/Kg	<1000
2,2-Dichloropropane	ug/Kg	<1000
c-1,2-Dichloroethene	ug/Kg	<1000
Bromochloromethane	ug/Kg	<1000
Chloroform	ug/Kg	<1000
111 Trichloroethane	ug/Kg	<1000
1,1-Dichloropropene	ug/Kg	<1000
Carbon Tetrachloride	ug/Kg	<1000
Benzene	ug/Kg	<1000
1,2 Dichloroethane	ug/Kg	<1000
Trichloroethylene	ug/Kg	<1000
1,2 Dichloropropane	ug/Kg	<1000
Bromodichloromethane	ug/Kg	<1000
Dibromomethane	ug/Kg	<1000
Toluene	ug/Kg	<1000
112 Trichloroethane	ug/Kg	<1000
Tetrachloroethene	ug/Kg	270000
1,3-Dichloropropane	ug/Kg	<1000
Chlorodibromomethane	ug/Kg	<1000
1,2 Dibromoethane	ug/Kg	<1000

ANALYTICAL PARAMETERS		
1112Tetrachloroethan	ug/Kg	<1000
Chlorobenzene	ug/Kg	<1000
Ethyl Benzene	ug/Kg	<1000

cc:

REMARKS: Volatile Organic Compounds by EPA Method 8260.
Page 1 of 2.
Elevated detection limit due to interference in sample.

DIRECTOR

rn= 8383 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.991339.05

04/09/99

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Dennis Madigan

SOURCE OF SAMPLE: Westbury Dry Cleaners, #96002
COLLECTED BY: Client DATE COL'D:03/31/99 RECEIVED:04/01/99

SAMPLE: Soil sample, FD#2 (10-11)

ANALYTICAL PARAMETERS		
m + p Xylene	ug/Kg	<2000
o Xylene	ug/Kg	<1000
Styrene	ug/Kg	<1000
Bromoform	ug/Kg	<1000
Isopropylbenzene	ug/Kg	<1000
1122Tetrachloroethan	ug/Kg	<1000
Bromobenzene	ug/Kg	<1000
123-Trichloropropane	ug/Kg	<1000
n-Propylbenzene	ug/Kg	<1000
2-Chlorotoluene	ug/Kg	<1000
135-Trimethylbenzene	ug/Kg	<1000
4-Chlorotoluene	ug/Kg	<1000
tert-Butylbenzene	ug/Kg	<1000
124-Trimethylbenzene	ug/Kg	<1000
sec-Butylbenzene	ug/Kg	<1000
p-Isopropyltoluene	ug/Kg	<1000
1,2 Dichlorobenzene	ug/Kg	<1000
1,3 Dichlorobenzene	ug/Kg	<1000
1,4 Dichlorobenzene	ug/Kg	<1000
DBCP	ug/Kg	<1000
124-Trichlorobenzene	ug/Kg	<1000
Hexachlorobutadiene	ug/Kg	<1000
Naphthalene	ug/Kg	<1000
123-Trichlorobenzene	ug/Kg	<1000
c-1,3Dichloropropene	ug/Kg	<1000

ANALYTICAL PARAMETERS		
t-1,3Dichloropropene	ug/Kg	<1000
Acetone	ug/Kg	<10000
% Solids		98

cc:

REMARKS: Volatile Organic Compounds by EPA Method 8260.
Page 2 of 2.
Elevated detection limit due to interference in sample.

DIRECTOR

rn= 8384 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.991339.07

04/09/99

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Dennis Madigan

SOURCE OF SAMPLE: Westbury Dry Cleaners, #96002
COLLECTED BY: Client DATE COL'D:03/31/99 RECEIVED:04/01/99

SAMPLE: Soil sample, FD#2 (30-32)

ANALYTICAL PARAMETERS		
Vinyl Chloride	ug/Kg	<1
Trichlorofluomethane	ug/Kg	<1
1,1 Dichloroethene	ug/Kg	<1
Methylene Chloride	ug/Kg	<1
t-1,2-Dichloroethene	ug/Kg	<1
1,1 Dichloroethane	ug/Kg	<1
2,2-Dichloropropane	ug/Kg	<1
c-1,2-Dichloroethene	ug/Kg	<1
Bromochloromethane	ug/Kg	<1
Chloroform	ug/Kg	<1
111 Trichloroethane	ug/Kg	<1
1,1-Dichloropropene	ug/Kg	<1
Carbon Tetrachloride	ug/Kg	<1
Benzene	ug/Kg	<1
1,2 Dichloroethane	ug/Kg	<1
Trichloroethylene	ug/Kg	<1
1,2 Dichloropropane	ug/Kg	<1
Bromodichloromethane	ug/Kg	<1
Dibromomethane	ug/Kg	<1
Toluene	ug/Kg	<1
112 Trichloroethane	ug/Kg	<1
Tetrachloroethene	ug/Kg	17
1,3-Dichloropropane	ug/Kg	<1
Chlorodibromomethane	ug/Kg	<1
1,2 Dibromoethane	ug/Kg	<1

ANALYTICAL PARAMETERS		
1112Tetrachloroethan	ug/Kg	<1
Chlorobenzene	ug/Kg	<1
Ethyl Benzene	ug/Kg	<1

cc:

REMARKS: Volatile Organic Compounds by EPA Method 8260.
Page 1 of 2.

DIRECTOR

rn= 8387 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.991339.06

04/09/99

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Dennis Madigan

SOURCE OF SAMPLE: Westbury Dry Cleaners, #96002
COLLECTED BY: Client DATE COL'D:03/31/99 RECEIVED:04/01/99

SAMPLE: Soil sample, FD#2 (20-22)

ANALYTICAL PARAMETERS		
Vinyl Chloride	ug/Kg	<1
Trichlorofluomethane	ug/Kg	<1
1,1 Dichloroethene	ug/Kg	<1
Methylene Chloride	ug/Kg	<1
t-1,2-Dichloroethene	ug/Kg	<1
1,1 Dichloroethane	ug/Kg	<1
2,2-Dichloropropane	ug/Kg	<1
c-1,2-Dichloroethene	ug/Kg	<1
Bromochloromethane	ug/Kg	<1
Chloroform	ug/Kg	<1
111 Trichloroethane	ug/Kg	<1
1,1-Dichloropropene	ug/Kg	<1
Carbon Tetrachloride	ug/Kg	<1
Benzene	ug/Kg	<1
1,2 Dichloroethane	ug/Kg	<1
Trichloroethylene	ug/Kg	<1
1,2 Dichloropropane	ug/Kg	<1
Bromodichloromethane	ug/Kg	<1
Dibromomethane	ug/Kg	<1
Toluene	ug/Kg	<1
112 Trichloroethane	ug/Kg	<1
Tetrachloroethene	ug/Kg	53
1,3-Dichloropropane	ug/Kg	<1
Chlorodibromomethane	ug/Kg	<1
1,2 Dibromoethane	ug/Kg	<1

ANALYTICAL PARAMETERS		
1112Tetrachloroethan	ug/Kg	<1
Chlorobenzene	ug/Kg	<1
Ethyl Benzene	ug/Kg	<1

cc:

REMARKS: Volatile Organic Compounds by EPA Method 8260.
Page 1 of 2.

DIRECTOR

rn= 8385 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC. ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.991339.06

04/09/99

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Dennis Madigan

SOURCE OF SAMPLE: Westbury Dry Cleaners, #96002
COLLECTED BY: Client DATE COL'D:03/31/99 RECEIVED:04/01/99

SAMPLE: Soil sample, FD#2 (20-22)

ANALYTICAL PARAMETERS		
m + p Xylene	ug/Kg	<2
o Xylene	ug/Kg	<1
Styrene	ug/Kg	<1
Bromoform	ug/Kg	<1
Isopropylbenzene	ug/Kg	<1
1122Tetrachloroethan	ug/Kg	<1
Bromobenzene	ug/Kg	<1
123-Trichloropropane	ug/Kg	<1
n-Propylbenzene	ug/Kg	<1
2-Chlorotoluene	ug/Kg	<1
135-Trimethylbenzene	ug/Kg	<1
4-Chlorotoluene	ug/Kg	<1
tert-Butylbenzene	ug/Kg	<1
124-Trimethylbenzene	ug/Kg	<1
sec-Butylbenzene	ug/Kg	<1
p-Isopropyltoluene	ug/Kg	<1
1,2 Dichlorobenzene	ug/Kg	<1
1,3 Dichlorobenzene	ug/Kg	<1
1,4 Dichlorobenzene	ug/Kg	2
DBCP	ug/Kg	<1
124-Trichlorobenzene	ug/Kg	52
Hexachlorobutadiene	ug/Kg	3
Naphthalene	ug/Kg	1
123-Trichlorobenzene	ug/Kg	<1
c-1,3Dichloropropene	ug/Kg	<1

ANALYTICAL PARAMETERS		
t-1,3Dichloropropene	ug/Kg	<1
Acetone	ug/Kg	<10
% Solids		98

cc:

REMARKS: Volatile Organic Compounds by EPA Method 8260.
Page 2 of 2.

DIRECTOR Thomas K...

rn= 8386 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC. ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.991339.07 04/09/99

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Dennis Madigan

SOURCE OF SAMPLE: Westbury Dry Cleaners, #96002
COLLECTED BY: Client DATE COL'D:03/31/99 RECEIVED:04/01/99

SAMPLE: Soil sample, FD#2 (30-32)

ANALYTICAL PARAMETERS		
m + p Xylene	ug/Kg	<2
o Xylene	ug/Kg	<1
Styrene	ug/Kg	<1
Bromoform	ug/Kg	<1
Isopropylbenzene	ug/Kg	<1
1122Tetrachloroethan	ug/Kg	<1
Bromobenzene	ug/Kg	<1
123-Trichloropropane	ug/Kg	<1
n-Propylbenzene	ug/Kg	<1
2-Chlorotoluene	ug/Kg	<1
135-Trimethylbenzene	ug/Kg	<1
4-Chlorotoluene	ug/Kg	<1
tert-Butylbenzene	ug/Kg	<1
124-Trimethylbenzene	ug/Kg	<1
sec-Butylbenzene	ug/Kg	<1
p-Isopropyltoluene	ug/Kg	<1
1,2 Dichlorobenzene	ug/Kg	<1
1,3 Dichlorobenzene	ug/Kg	<1
1,4 Dichlorobenzene	ug/Kg	<1
DBCP	ug/Kg	<1
124-Trichlorobenzene	ug/Kg	<1
Hexachlorobutadiene	ug/Kg	<1
Naphthalene	ug/Kg	<1
123-Trichlorobenzene	ug/Kg	<1
c-1,3Dichloropropene	ug/Kg	<1

ANALYTICAL PARAMETERS		
t-1,3Dichloropropene	ug/Kg	<1
Acetone	ug/Kg	<10
% Solids		83

cc:

REMARKS: Volatile Organic Compounds by EPA Method 8260.
Page 2 of 2.

DIRECTOR

rn= 8388 NYSDOH ID# 10320

ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.991339.04

04/09/99

Anson Environmental Ltd.
771 New York Avenue
Huntington, NY 11743
ATTN: Dennis Madigan

SOURCE OF SAMPLE: Westbury Dry Cleaners, #96002
COLLECTED BY: Client DATE COL'D:03/31/99 RECEIVED:04/01/99

SAMPLE: Water sample, FD#2 (GW 36-40)

ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlordifluomethane	ug/L	<2
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<2
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	<1
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
c-1,3Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	62

ANALYTICAL PARAMETERS		
Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<2
1,2 Dichlorobenzene	ug/L	<2
1,4 Dichlorobenzene	ug/L	<2

cc:

REMARKS:

DIRECTOR

rn= 8382 NYSDOH ID# 10320

Appendix 7

Excavation Work Plan

Excavation Work Plan
Westbury Valet Cleaners
123 Post Avenue, Westbury, NY 11590
Site# 1-30-088

Drywell Excavation:

This is the DW1 (Dry Well 1) Excavation Work Plan for the exterior small drywell located at Westbury Valet Cleaners, 123 Post Avenue, Westbury, NY. The drywell is located at the bottom of the wooden stairs at the rear entrance, which allows access to the employee parking area.

DW1 is an approximately 12-inch cylindrical structure, with a perforated square grate cover. The structure is filled with soil/sediment from rain runoff. The soil/sediment is approximately 12 inches below grade surface (bgs).

This Work Plan is being prepared based on the analytical results of the 2008 sampling event. These results indicated concentration of tetrachloroethene (PCE) was 190,000 ug/kg. This sample was collected at a depth of 3-5 feet bgs. The PCE concentration was 4 ug/kg in the location at a depth of 31-33 feet bgs.

Scope of Work:

Anson Environmental Ltd. (AEL) will perform the oversight, endpoint sampling, coordination with any agencies required and final report preparation. A sample will be collected for the presence of tetrachloroethene (PCE) from the structure prior to clean out. This sampling is required to secure appropriate disposal of chlorinated solvent contaminated soils present in the structure. The sample will be analyzed for the Reactivity, Ignitibility, and Corrosivity characteristics, pH and Toxicity Characteristic Leaching Procedure (TCLP) volatile organic compounds. The sample will be collected using a handheld auger. The sample will be placed into laboratory-cleaned glassware for analysis by a New York State ELAP certified laboratory. The auger will be decontaminated on site. Upon receipt of the laboratory data, a cleanout/disposal firm will be contracted to conduct the work.

Clean-out of Structures:

The clean-out will be performed utilizing Vactor/Guzzler rigs. The sediment will be removed until a depth of 8-10 feet has been achieved. Due to the small diameter of DW1, a vactor hose reducer will be necessary to facilitate proper cleanout of the structure. Clean backfill will be provided if needed; in the event that collapse of the small structure becomes a concern. Clean backfill will meet DER-10 criteria for soil imported onto a site.

Sample Collection and Report Preparation:

After the respective structure has been cleaned out, AEL will conduct endpoint sampling of the structure. As stated, the sample will be collected from a depth of 8-10 feet. The sample will be field screened by a photoionization detector. If the readings are near background, the sediment sample will be deposited in laboratory-cleaned glassware and submitted to a New York State certified laboratory where they will be analyzed for the New York State Department of Environmental Conservation (NYSDEC) lists of volatile organic compounds (VOC's) using EPA Method 8260. If the reading is above background and additional material can be removed safely, the excavation will continue until the background level is achieved.

Upon receipt of the analytical data, AEL will prepare a comprehensive summary report of the clean out operation and subsequent sampling event. The analytical data will be charted and compared to the NYSDEC CP-51 Soil Cleanup Guidance standard.

Additional Remedial Measures:

If it is determined that the soil in the vicinity of the drywell was not remediated sufficiently with the drywell cleanout, the soil vapor system will be modified to add an additional soil vapor extraction point. The blower capacity of the current system is adequate to add an additional extraction point.

The radius of influence testing would be completed with the new extraction point in the system to confirm adequate vapor remediation.

Site-Wide Excavation Plan:

This is Site-wide Excavation Work Plan for the exterior of the subject property located at Westbury Valet Cleaners, 123 Post Avenue, Westbury, NY.

This Work Plan is being prepared to accommodate site-wide excavation requirements for purposes other than those outlined in the Interim Site Management Plan. As indicated in the SMP, the original soil contamination was located in the former floor drain locations inside the subject building. Additional contamination was identified in 2008 in the exterior drywell located at the rear of the building for which the preceding excavation plan was developed.

Scope of Work:

If excavation is required on the subject property, it should be noted that the soil contamination was located under the building and not identified in the perimeter soils, with the exception of the rear drywell.

Plans to conduct on-site excavations must take into account the piping of the soil vapor extraction system and the on-site groundwater monitoring wells. The locations of the equipment and wells are included in the SMP Figures 3, 4, and 5.

If excavation is to be performed on site, Anson Environmental Ltd. (AEL) will perform the oversight, endpoint sampling, coordination with any agencies required and final report preparation. A representative will be on site to monitor operations and conduct ambient air sampling with a photoionization detector. Any soil to be removed from the site will be considered hazardous waste until it is determined not to be hazardous by NYSDEC.

Any equipment operators must be trained in 10 OSHA Construction and HAZWOPER as the site is a designated New York State Inactive Hazardous Waste Site.

Sample Collection and Report Preparation:

AEL will conduct soil sampling if contamination is identified during excavation. As stated, the sample will be collected and will be field screened by a photoionization detector. If the readings are near background, the sediment sample will be deposited in laboratory-cleaned glassware and submitted to a New York State ELAP certified laboratory where they will be analyzed for the New York State Department of Environmental Conservation (NYSDEC) lists of volatile organic compounds (VOC's) using EPA Method 8260.

Upon receipt of the analytical data, AEL will prepare a summary report and the analytical data will be charted and compared to the NYSDEC CP-51 Soil Cleanup Guidance standard.

If new areas of contaminated soil are determined to be present, the operation will be halted until a work plan for the excavation, sampling and disposal can be prepared for and approved by the NYSDEC.

Appendix 8

Route Map to Hospital for Emergencies

Notes

mapquest

Trip to:

259 1st St

Mineola, NY 11501-3957

3.53 miles / 9 minutes

123 Post Ave, Westbury, NY 11590-3140

1. Start out going **south** on **Post Ave** toward **Railroad Ave**. Map	**0.4 Mi** *0.4 Mi Total*
2. Turn **right** onto **Old Country Rd**. Map *Old Country Rd is just past Myrtle Ave* *Mobil is on the corner* *If you are on Merrick Ave and reach Taylor Ave you've gone a little too far*	**2.8 Mi** *3.2 Mi Total*
3. Turn **right** onto **Mineola Blvd**. Map *Mineola Blvd is just past Kellum Pl* *Blimpie is on the corner* *If you reach 3rd Ave you've gone a little too far*	**0.2 Mi** *3.4 Mi Total*
4. Take the 3rd **left** onto **1st St**. Map *1st St is just past 2nd St* *Jani is on the left* *If you reach Harrison Ave you've gone a little too far*	**0.1 Mi** *3.5 Mi Total*
5. **259 1ST ST** is on the **left**. Map *Your destination is just past Horton Hwy* *If you reach Wellington Rd you've gone a little too far*	

259 1st St, Mineola, NY 11501-3957

Total Travel Estimate: **3.53 miles - about 9 minutes**