

**Interim Remedial Measure Work Plan  
Westbury Valet Cleaners  
123 Post Avenue  
Westbury, New York 11790**

**Operable Unit 01 – On-Site Remediation**

**Site #13-0-088**

**Submitted to:**

**New York State Department of Environmental Conservation  
50 Wolf Road  
Albany, New York 12233**

**April 26, 2001**



**Westbury Valet Cleaners  
123 Post Avenue  
Westbury, New York  
Site ID# 130088  
Interim Remedial Measure Work Plan**

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**1.0 Executive Summary**

A Focused Remedial Investigation (FRI) for soil and groundwater sampling was conducted by Westbury Valet Dry Cleaners (Westbury Valet Cleaners), 123 Post Avenue, Westbury, Nassau County, New York with oversight by New York State Department of Environmental Conservation (NYSDEC). The implementation of this work plan was pursuant to an Order on Consent between Westbury Valet Cleaners and the NYSDEC.

The FRI Work Plan was for an on-site investigation that resulted in the preparation of this interim remedial measure to remediate the contamination in the soils on-site and gain control of the soil gas contamination that has impacted the adjacent property to the north of 123 Post Avenue.

The FRI work performed for the site was divided into four phases. The first two phases were performed by Westbury Valet Cleaners and the second two phases are currently being performed by the NYSDEC:

- Phase 1 Investigation near former floor drain and sanitary system locations
- Phase 2 Design of SVES for remediation of previously delineated soil contamination
- Phase 3 Delineation of groundwater contamination at adjacent site (117 Post Avenue)
- Phase 4 Offsite, downgradient investigation toward Well #5654. Well #5654 is an active Westbury Water District public water supply well.

The initial objectives of the FRI are to determine the nature, extent and sources of contamination that may be associated with tetrachloroethene (and its breakdown products) in the soil surrounding floor drain #2 and former sanitary structures located on the western side at the rear of the building.

The purpose of the Interim Remedial Measure (IRM) work plan is to address only the contamination in the soils on-site and soil gases to the north of the site. This work plan describes the proposed remedial technique – soil vapor extraction. This remedial technique is effective in removing volatile organic compounds from sandy soils such as those under the Westbury Valet Cleaners.

## **2.0 Previous Field Investigations**

This section of the IRM Work Plan summarizes information about the site location, ownership and access; the site description; and background, such as site hydrology, nearby public water supply wells and a chronology of previously performed investigations.

### **2.1 Site Location, Ownership and Access**

The NYSDEC designated Inactive Hazardous Waste Disposal Site at Westbury Valet Dry Cleaners is located at 123 Post Avenue, Westbury, Nassau County, New York. The site is approximately 0.2 acre in size. The designation on the New York State Registry of Inactive Hazardous Waste Disposal site listing is Site No. 1-30-088. Choe Realty Inc. owns the property. The site and its proximate environs are shown on Figure 1.

### **2.2 Site Description**

The property is rectangular in shape, and is 50-feet in the north/south direction by 189-feet in the east/west direction. There is a single story concrete block and masonry building on site that is approximately 3,494 square feet in size. The building was built in 1949 and was renovated in 1954. It is built on a concrete slab and has no basement. However, the concrete slab is multilevel and portions of the slab are several feet below grade. It has been operated as a dry cleaner since the 1950s and is the only business in the building. The building water supply and sanitary facilities are connected to the municipal water and sewer systems.

The building is situated on the northern property boundary and is located twenty feet from the concrete wall/rail bed for the Long Island Rail Road on the south. The commercial building located north of the site has space leased to the following businesses:

- 125 Post Avenue is occupied by Westbury Chiropractic Center
- 127 Post Avenue is occupied by John's Custom Tailor Boutique
- 129 Post Avenue is occupied by Super Convenience Store

There is a basement under a portion of Westbury Chiropractic Center and John's Custom Tailor. During a recent building inspection on March 23, 2001, the basement, which is approximately 30 feet deep by 40 feet wide with an 8 feet high ceiling, was observed to be empty except for a few older display setups used by Super Convenience Store. The utility meters and heating system for all three stores are located in the aforementioned basement. Access to the basement is via the inside of the Super Convenience Store and through flush-mounted steel doors in the sidewalk exterior to the convenience store. The heating ducts are also located in the basement. Which stores are serviced by the heating ducts was not determined.

No floor drains were observed in the basement area.

### **2.3 Background Information**

This section of the IRM describes the geology and hydrology in the general locality of the subject site, the nearby public water supply wells are identified, and a listing of the previously performed site investigations is presented in chronological order.

### 2.3.1 Hydrogeology

The site is located near the southern perimeter of the Town of North Hempstead. The groundwater reservoir underlying the Town of North Hempstead is composed of unconsolidated local deposits of Holocene age, glacial deposits of Pleistocene Age, and coastal-plain deposits of continental and marine origin of the Late Cretaceous Age. The deposits consist of clay, silt, and bedrock. Weathered and crystalline bedrock of Low Paleozoic and/or Precambrian Age underlies the unconsolidated deposits and forms the virtually impermeable base of the groundwater reservoir.

From oldest (deepest) to youngest (shallowest) these sediments have been identified and divided into a series of hydrogeologic units: the Lloyd aquifer; the Raritan clay confining unit; the Magothy aquifer, and the Upper Glacial aquifer.

The Upper Glacial aquifer consists of late Pleistocene and Holocene age sand, gravel, silt, and clay deposits. The upper surface of the upper glacial deposits comprise present day land surface except in areas such as the Westbury site where they are overlain by recent Holocene deposits and/or fill materials. The water table at the site is found in this aquifer at a depth of approximately 35-feet below grade.

The southernmost part of the Town is underlain by highly permeable glacial outwash consisting of stratified sand and gravel and occasional thin clay beds. The deposits forming the Upper Glacial Aquifer range in thickness from 6-feet to more than 350-feet. The extreme variation in thickness results from the highly eroded surface upon which these materials were deposited and the irregularity of their upper surface that is the present land surface. The outwash deposits range in thickness from 14-feet to about 165-feet.

The Magothy Aquifer is the principal aquifer underlying the Town of North Hempstead. It consists mainly of lenticular bed of very fine to medium sand that are interbedded with beds of clay, sandy clay, silt and some sand and gravel. The aquifer reaches a maximum thickness in the southeast corner of the Town, where its thickness is about 530-feet.

### 2.3.2 Public Drinking Water Supply Wells

There are three public water supply wells that were identified in previous investigations as relate to the subject property. Wells numbered 101 and 7785 are located north of the subject site. Well No. 5654 is located downgradient of the site on Old Country Road, west of Post Avenue. The following information is provided by USGS in conjunction with the NCDPW.

Well No.	Year Completed	Depth of well (feet)	Screen length (feet)	Aquifer
101 (well 6)	1970	341	61	Magothy
5654 (well 11)	1956	340 **	60 **	Magothy
7785 (well 7)	1965	404	70	Magothy

\*\* According to NYSDEC, Well No. 5654 was re-drilled in 1986 and its screened portion is at a depth of 474 to 535-feet.

Water quality data has been secured from the Westbury Water District for the three wells covering quarterly sampling by H2M Labs for the last five years. Concentrations of individual volatile organic compounds (VOCs) in the above listed wells have not exceeded NYSDOH drinking water standards. Figure 2 shows the locations of the three wells relative to the subject site.

### **2.3.3 Previous Investigations**

The following is a brief chronological summary of the activities and investigations that have occurred in connection with the site.

- 1949 Application for plumbing permit issued to John C. Leonardo
- 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. (d/b/a Westbury Top Cleaners). Property purchased by Choe Realty Inc.
- 1996 Nassau County Department of Health (NCDH) identified floor drains for sampling and closure under USEPA Underground Injection Control (UIC) Class V Injection Well closure program. Anson Environmental Ltd. (AEL) sampled two floor drains. The sediment in the drains was contaminated with tetrachloroethene. AEL recommended delineation of the contamination.
- 1997 Apex Environmental conducted Phase I and II investigations of a down gradient parcel, located on the south side of the Long Island Railroad tracks, at 117 Post Avenue. It was determined that tetrachloroethene and its breakdown products were present in the groundwater beneath this location. Apex Environmental determined the direction of groundwater to be southwesterly.
- 1998 The owner of the site was contacted again by the USEPA 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 two floor drains were cleaned out and endpoint samples collected. 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.

### **2.4 Excavation of Contaminated Soils**

In August 20, 1998, floor drains FD#1 and FD#2 were excavated to the fullest extent possible. FD#1 is located in the boiler room and FD#2 is in the dry cleaning area (Figure 4).

At the start of the soil excavation the bottom of FD#1 was at one foot below grade. 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#1 had concentrations of volatile organic compounds below the NYSDEC Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels.

The depth of the bottom of FD#2 was 2.5 feet below grade and at the end of excavation the bottom was 7.8 feet below grade. Endpoint samples collected from FD#2 exceeded the TAGM for VOCs so 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 (PID) 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	<1,000	2	<1	<1	8,500
1,2,4-trichlorobenzene	<1,000	52	<1	<1	3,400
Naphthalene	<1,000	1	<1	<1	13,000
hexachlorobutadiene	<1,000	3	<1	<1	No listing
PID Headspace	1,192	1,928	231	No reading	

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

The floor drains have been backfilled with clean sandy material to the approximate surface of the site. The floor has not been sealed in the vicinity of FD#1 in the boiler room. FD#2 has been backfilled with clean soils and the concrete repaired such that there is no floor drain.

## 2.5 Previous Investigations On-Site Groundwater

In March 1999, three two-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 depth to the bottom (DTB) below grade of each well is:

- MW#1 40.45 feet
- MW#2 43.46 feet
- MW#3 43.95 feet

The upgradient groundwater monitoring well (MW-1), relocated to accommodate the “denial of access” by the property owner immediately adjacent to the north, was installed at the northeast corner of the site. Two additional groundwater monitoring wells (MW-2 and MW-3) were installed downgradient of the floor drain locations.

One week following the installation, the three wells were developed by purging 40-gallons of water from MW-1, 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#1 (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	

The screened interval of MW#1 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 development water and purge water was disposed of on-site into DW#1.

## 2.6 Soil and Groundwater Investigation - 2000

A soils investigation was performed on-site in October 2000. The purpose of this investigation was to determine the vertical and horizontal extent of volatile organic compound contamination in the vicinity of the formerly used sanitary system located in the eastern portion of the site. Also, groundwater samples were collected from locations down gradient of the Westbury Valet Cleaners building.

The soils investigation did not identify contamination in the soils near the former sanitary system. The vertical extent of the groundwater contamination on-site extends deeper than 80 feet below grade. The full report of findings is located in Appendix 1 of this work plan.

In October 2000, groundwater samples were collected from the three groundwater monitoring wells on-site and from three locations along the southern border of the Westbury Valet Cleaners site. These three locations were sampled using a Geoprobe and at each location groundwater samples were collected at depths of 36-40 feet, 56-60 feet and 76-80 feet below grade. The data for tetrachloroethene are summarized on Figure 2.

The entire report of findings for the October 2000 soils and groundwater investigation are included in Appendix 1.

### **2.7 Indoor Air Sampling**

Nassau County Department of Health (NCDH) installed personal exposure badges in the first floor and basement of the chiropractic center and convenience store at 125 and 129 Post Avenue, respectively. The laboratory analysis of the badges revealed elevated concentrations of tetrachloroethene (PCE).

NCDH also performed indoor air sampling at the site of John's Custom Tailor located at 127 Post Avenue, the second floor apartments at 125A and 125B Post Avenue, and at the Westbury Terrace Condominiums located at 135 Post Avenue. Laboratory results for these air sampling activities are pending.

The complete laboratory analytical data for the aforementioned personal exposure badges will be incorporated into a future progress report when the NYSDOH provides these data.

The New York State guideline for PCE in indoor air is 100 micrograms per cubic meter (cu-mtr), which is equivalent to 0.015 ppm.

### **2.8 Off-Site Investigations**

To further define the extent of contamination off-site to the south and west of the site, the NYSDEC and NYSDOH are currently performing groundwater sampling to determine if those properties have been contaminated with tetrachloroethene.

### **3.0 Conclusions and Recommendations**

Known on-site source areas in the soil are floor drains FD#1 and FD#2. The contaminated soils in those structures have been excavated to the fullest extent possible.

The laboratory analysis of the endpoint sample collected from FD#1 indicated that the soils at FD#1 meet the TAGM cleanup objectives.

The laboratory analysis of the endpoint soil samples collected from FD#2 revealed that the samples had concentrations of VOCs that exceed the New York State TAGM cleanup objectives. This soil contamination may have caused soil gas contamination that has migrated off-site and impacted the adjacent building at 125 to 129 Post Avenue.

In addition, on-site soils contamination appears to have impacted both on-site and off-site groundwater. Since the specific gravity of Tetrachloroethene and its byproducts is greater than one, it sinks in water. The vertical and horizontal extent of this off-site groundwater contamination is being investigated by NYSDEC. Once the laboratory data for the off-site sampling being performed by the NYSDEC has been received and evaluated, the soil and groundwater remediation systems may be modified accordingly.

Based on the feasibility study that evaluated the various remedial alternatives, the remedial technique proposed to remove the remaining volatile organic contamination in the soils is soil vapor extraction. Groundwater contaminated by these soils will be remediated using air sparging in conjunction with soil vapor extraction. These two remedial techniques will be designed to reduce the concentration of VOCs to NYSDEC cleanup levels.

The on-site soil contamination will be addressed by implementing an Interim Remedial Measure described in Section 4.0. The IRM is a soil vapor extraction system that will be installed and operated to control the migration and intrusion of contaminated soil gas at the site and at neighboring properties. The intrusion of contaminated soil gas has adversely impacted the indoor air quality at adjacent businesses.

#### **4.0 On-Site Interim Remedial Measure (IRM) Work Plan**

The two known contaminant source areas FD#1 and FD#2 in the on-site soils have been excavated to the fullest extent possible. The remaining contamination in FD#2 will be remediated *in-situ* using soil vapor extraction (SVE) to remediate the soils and air sparging (AS) to remediate the contamination in the groundwater. The AS component of the IRM will be constructed after the SVE system is in operation and the indoor air levels reach acceptable levels. At such time, a second design work plan will be submitted to address this component of the remediation.

#### **4.1 IRM Remedial Activities**

To remediate the migration of contaminated soil gas in the sandy soils on-site and to gain control of the contaminated soil gases around the adjacent building to the north (125, 127 and 129 Post Avenue) and all other nearby properties that may be affected, a soil vapor extraction system (SVES) will be installed to accomplish *in situ* remediation of residual halogenated volatile organic compound contamination in the soils.

To effectively remediate the soils on-site, eight (8) four-inch diameter soil vapor extraction wells will be installed at two on-site and two off-site locations designated RW#1, RW#2, RW#3 and RW#4 (Figure 4). Two extraction wells will be installed at each location of the four locations, one shallow well and one deep well. The shallow extraction well will be screened from 10 to 20-feet below grade surface (bgs) and the deep extraction well will be screened from 19 to 29-feet bgs. The two remediation extraction wells will be located approximately 5-feet apart.

##### Remediation Well Location RW#1

Two extraction wells will be located near the northeast corner of the Westbury Cleaners building. One extraction well designated Remediation Well #1-Shallow (RW#1-S) will be installed near the northeast corner of the building. RW#1-S will be screened from 10 to 20-feet bgs.

The second extraction well designated Remediation Well #1-Deep (RW#1-D) will be located in the driveway between the Westbury Cleaners building and 125 Post Avenue. RW#1-D will be screened from 19 to 29-feet bgs.

##### Remediation Well Location RW#2

Two extraction wells will be located at the south side of the Westbury Cleaners building in the vicinity of Floor Drain #2 (FD#2). FD#2 is located inside the building. One extraction well designated Remediation Well #2-Shallow (RW#2-S) will be installed near the proposed location of a shed that will house the SVE and AS equipment. RW#2-S will be screened from 10 to 20-feet bgs.

The second extraction well designated Remediation Well #2-Deep (RW#2-D) will be located approximately 5-feet west of RW#2-S and will be screened from 19 to 29-feet bgs.

##### Remediation Well Location RW#3

Two extraction wells will be located at the southwestern corner of the Westbury Cleaners property. One extraction well designated Remediation Well #3-Shallow (RW#3-S) will be

installed near the proposed location of a shed that will house the SVE and AS equipment. RW#2-S will be screened from 10 to 20-feet bgs.

The second extraction well designated Remediation Well #3-Deep (RW#1-D) will be located approximately 5-feet northwest of RW#3-S and will be screened from 19 to 29-feet bgs.

#### Remediation Well Location RW#4

Two extraction wells will be located in the driveway north of the northwestern corner of the Westbury Cleaners building. One extraction well designated Remediation Well #4-Shallow (RW#4-S) will be installed in the driveway approximately 5-feet north of the northwestern corner of the Westbury Cleaners building. RW#4-S will be screened from 10 to 20-feet bgs.

The second extraction well designated Remediation Well #4-Deep (RW#4-D) will be located approximately 10-feet northwest of RW#4-S and will be screened from 19 to 29-feet bgs.

After the start of continuous SVES operations, periodic indoor air sampling will be performed using "Perc" badges to determine if the operation of the system is impacting the quality of the air inside the stores at 125, 127 and 129 Post Avenue. These air quality samples will be collected using passive diffusion monitors type Organic Vapor Monitor model 3500, manufactured by 3M, St. Paul, MN. After being exposed for a minimum of eight hours, the badges will be submitted for laboratory analysis to Galson Laboratories using NYSDOH Method 311-9 for tetrachloroethene. Galson Laboratories is an ELAP-approved laboratory.

Monthly air quality samples will be collected on the first floor and basement inside 125, 127 and 129 Post Avenue. The monthly samples will be reduced to quarterly when the concentration of tetrachloroethene is reduced below the state guideline of 100 micrograms per cubic meter or less.

An on-site and off-site exposure assessment for VOCs will be performed. This information will be used to design the on-site SVES and air sparging remediation systems.

The NYS Department of Health Community Air Monitoring Plan (CAMP) will be used during ground-intrusive activities (extraction well drilling, trenching to install horizontal piping). Airborne VOCs will be monitored using a calibrated PID and airborne particulates will be measured using a MIE Airborne Particulate Meter Model PDR 1000AN. A copy of the CAMP is in Appendix 5.

This work plan describes how the IRM equipment will be installed and monitored to determine how effectively SVES is removing volatile organic contamination from the soils. The quality assurance/quality control plan is included to ensure that work is performed in accordance with USEPA and NYSDEC standards and protocols.

The health and safety plan has been developed to ensure the use of safe work practices on-site and protection of surrounding adjacent properties off-site during the remediation of the site. All work performed on-site will be in accordance with the Community Air Monitoring Plan as described in Section 7.15 and Appendix 5.

This work plan covers the IRM that will be taken to install and operate a SVES to reduce airborne exposures at the site and neighboring properties. Subsequent documents to be submitted will be as follows:

- SVE IRM as-built drawings with SVE system operations and maintenance manual
- Remediation design and work plan documents for the air sparging system
- Remediation system as-built information with operations and maintenance manual

#### **4.2 Installation of a Soil Vapor Extraction System**

The on-site IRM SVE wells will be installed in locations identified on Figure 4. Each of the four on-site well clusters will be screened at depths of 10 to 20 feet and 20 to 29 feet. The need for additional on-site wells will be determined during the calculation of the radius of influence of these wells. Figure 5 illustrates the area covered by a fifty feet radius of influence for these wells.

Figure 6 is a schematic diagram of the soil vapor extraction system. The gas vapors from the eight extraction wells are removed from the ground by the vacuum created by the blower motor. The block diagram illustrates the various components of the SVES. Information is presented about each of the major components of the SVES.

##### **4.2.1 5-Horsepower Rotron Blower**

The blower which will be supplied by Ametek Rotron TMD Industrial Products, Saugerties, New York will be connected to the particulate filter and carbon canisters via 2.5 inch 8 NPSC female thread metal piping. The input pipe and output pipe will each be approximately three feet long.

The blower characteristics are:

Model No.	Rotron 707F2MXL, explosion proof regenerative blower
Horsepower	5
Phase-Frequency	Three – 60HZ
Voltage	208-230
Maximum blower amps	15.8
Inrush Amps (time zero)	152 (lasts less than one second)
Maximum flow	295 SCFM
Maximum vacuum	87 inches of water gauge

The SVES blower will have an on/off power control switch equipped with thermal overload protection. Input power will be approximately 5,000 watts. A second on/off control switch will be installed to provide for an additional SVES blower, if needed.

The blower specification catalogue sheets are in Appendix 2.

The estimated flow rate through the system will be:

Post-carbon canister	250 cfm
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With the proposed system design, operation of the blower should result in an average vacuum of at least 10 inches of water at each extraction well.

#### **4.2.2 Extraction Wells**

The SVES remediation wells will be connected to a manifold that is connected to a 5-horsepower electric regenerative blower manufactured by Ametek Rotron. The four-inch diameter extraction wells will be installed using a truck-mounted drill rig equipped with 8-inch diameter hollow-stem augers. The extraction wells will be screened with a 0.01-inch slot size. The balance of these wells will be constructed of solid PVC riser pipe.

Each extraction well will be constructed by back filling the area around the well casing with filtered Morie #00 sand in the screened area of the well. A two-foot thick layer of bentonite clay will be placed above the screened interval to seal the screened area from the soils above. The solid PVC riser will be back filled to grade with a slurry of bentonite and Portland cement. The well will be finished at grade inside a curb box set in concrete (Figure 3).

Approximately two feet below the ground surface, the 4-inch diameter remediation wells will be reduced to 2-inch diameter solid horizontal PVC pipe. The horizontal two-inch diameter piping will be schedule 80 PVC piping. The horizontal piping for RW#2 and RW#3 will be placed in trenches that are approximately two-feet deep by one and one-half feet wide. The piping will be placed approximately one-foot below grade and the trench will be back filled with clean native soils. The installed horizontal piping will be installed with a one-quarter inch per foot slope back to the monitoring well to prevent entrained water from plugging the pipe. The pipe slope will encourage condensation to flow back toward the well.

The surface of the trench will be paved with asphalt. The piping connecting wells RW#1 and RW#4 to the SVES will be run vertically along the side wall of the Westbury Valet Cleaners building to the roof of the building where the horizontal piping will be placed. The vertical piping will be run down the south wall of the building to connect to the SVES equipment inside the equipment shed. This above ground piping will be schedule 80 PVC piping.

Each of the SVE wells will be completed at grade with a curb box. An independently operated vapor flow regulating valve will be installed in line with each extraction well and will be located inside an equipment shed. These vapor flow valves will be used to segregate the various legs of the extraction system. The legs of the SVES will be attached to a manifold such that each leg can be individually controlled and monitored using the vapor monitoring points that will be located between the extraction well and the blower. Once the soils around an extraction well have had the VOCs removed from them, that extraction well will be removed from operation by turning the regulating valve to the off position.

#### **4.2.3 Moisture Separator**

Emissions from the SVES will pass through a moisture separator drum. A single flexible 2-inch diameter reinforced plastic pipe will be connected to the 2-inch diameter PVC "tee" from the manifold of the remediation wells.

The moisture separator uses high efficiency cyclonic action to separate and contain entrained liquids in the gas vapor stream from the remediation wells.

The moisture separator is constructed of heavy-duty plastic walls and has a liquid capacity of approximately ten gallons. It is equipped with a vacuum relief valve and a vacuum gauge. The moisture separator is equipped with a Flotect Model L-6 float switch that is explosion-proof. The collected liquid will be removed from the separator by gravity feed using an on/off valve located at the bottom of the unit. The removed liquid will be stored on-site in a 55-gallon secured drum for proper disposal.

#### 4.2.4 Particulate Filter

The output of the moisture separator will be fed to an inline steel-housing filter. The filter protects the SVES blower from harmful dust and other particulates that may be drawn into the blower from the gas vapor extraction piping system. Piping from the particulate filter will connect it to the Rotron Blower. From the blower, the gas vapors will flow to the carbon filters.

#### 4.2.5 Carbon Filters

The SVES equipment will be operated in accordance with the NYSDEC's Air Guide-1. The Annual Guideline Concentration at the property line will be calculated. Carbon canisters will be replaced when required to ensure compliance with these air regulations. The replacement of spent carbon canisters will be accomplished by removing canister #1 and replacing it with canister #2, then a new canister will be placed in the #2 position.

The carbon filters will be purchased from Carbtrol. The three models evaluated for this project are listed below and the manufacturer's descriptive literature is in Appendix 3.

Model No.	Design Flow Maximum	Carbon Weight in Pounds	Inlet/Outlet Diameter in Inches	Availability from Carbtrol
G-2	300 cfm	170	4/4	2 days
G-3S	500 cfm	140	4/4	2 days
G-10/400	250 cfm	400	4/4	4-6 weeks

The Model G-10/400 was the carbon canister selected because it is the most cost-effective model and the design flow maximum and inlet/outlet pipe size matches SVES design.

The anticipated size and weight (approximately 400 pounds) of the two carbon canisters requires that they be located outside of the equipment shed.

#### 4.2.5 SVES Exhaust Stack

After moving through the carbon canisters, the SVES emissions will flow through a four-inch diameter pipe to a flow meter that is connected in series to the SVES exhaust stack. A sampling port will be installed in the pipe so the discharge emissions can be monitored during SVES operation. The piping from the carbon canisters to the exhaust stack will be attached to the exterior wall of the building and will extend approximately eight feet above the roof line of the southern side of the Westbury Valet Cleaners building.

#### **4.2.6 Electrical Service Panel**

The electrical connections to the SVES blower will use appropriate control switches and distribution panels and will connect to a utility box on the exterior of the Westbury Valet Cleaners building. The SVES distribution panels, control switches, blower and other related equipment will be located inside a locked shed. All electrical connections will be made by a licensed electrician.

The SVES distribution box will be connected to the Westbury Valet Cleaners electrical distribution panel located inside the building. The SVES distribution box will be located inside the equipment shed and will supply three-phase, 220-VAC power to two separate starter controls. One starter control will supply power to the SVES and the other will be set aside for the air sparge motor. The distribution box will also supply electrical power for the equipment shed lighting and utility outlets.

#### **4.3 Calculation of Radius of Influence of SVES**

The radius of influence of the SVES will be calculated by installing one-inch diameter PVC vapor monitoring probes (VMP) whose screened portion will be from 10 to 15-feet below grade. The VMPs will be placed in a line where each of the four probes is located approximately ten feet apart with the first probe being located twenty feet from RW#1 (Figure 5). One VMP will be located between and twenty feet from each RW#2 and RW#3.

The radius of influence of the SVES will be determined by collecting a round of static vacuum measurements at each of the VMPs using a digital manometer. The SVE blower will then be started with valve to RW#1 open and the valves to the other three remediation wells closed. The digital manometer will be used to measure the stabilized vacuum readings at each of the VMPs. These readings will be plotted on a scaled map of the site and the radius of influence (ROI) of RW#1 calculated. A vacuum reading of 0.1 inches of water will be considered to be limit of the ROI for the blower.

The second ROI test will be performed with all four shallow remediation well valves open. This system ROI will be plotted on a site base map. To support this test and to monitor the effectiveness of the SVE system within the foundation walls, an additional VMP will be installed inside the Westbury Cleaners building.

The valves for each of the remediation wells will be adjusted to maximize the ROI for the system. System ROI will be calculated on a monthly basis.

#### **4.4 Waste Disposal**

Wastes collected during the installation and operation of the SVES will include: contaminated drill cuttings, liquid from the moisture separator, purge and development water from the monitoring wells, personnel protective equipment and contaminated spent carbon in the carbon canisters. Wastes will be sampled and submitted for laboratory analysis as appropriate to ensure proper disposal of these wastes.

Waste Manifests will be provided documenting the disposal of each waste stream.

## **5.0 Monitoring During On-Site Soil Remediation**

The site remediation systems will be monitored during operation to both measure their effectiveness at removing the contamination from the soils, as well as, to ensure that they are in compliance with applicable rules and regulations.

The following listing summarizes sampling during the implementation of on-site interim remedial measures. VOC samples will be collected using field instruments (PID) and Gastec tubes for tetrachloroethene.

### **Daily Measurements During System Startup/Shakedown**

1. Flow rates and vacuum readings at each extraction well
2. PID and Gastec readings between blower and carbon filter canister #1
3. PID and Gastec readings between carbon filter #1 and #2
4. PID and Gastec readings between carbon filter #2 and exhaust stack

### **Weekly Measurements for Duration of the Project**

1. Flow rates and vacuum readings at each extraction well
2. PID and Gastec readings between blower and carbon filter canister #1
3. PID and Gastec readings between carbon filter #1 and #2
4. PID and Gastec 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 monitoring points. During this monitoring, VOC samples will be collected at each well using carbon tubes and low volume pumps. These carbon tubes samples will be submitted to an ELAP certified laboratory for analysis via EPA Method 8260.

### **Week 1 After Shakedown Change to Weekly Sampling**

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
3. The actual ROI of each extraction well will be documented weekly by collecting readings at appropriate monitoring points. During this monitoring, VOC samples will be collected at each well using carbon tubes and low volume pumps. These carbon tubes samples will be submitted to an ELAP certified laboratory for analysis via EPA Method 8260.

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

Monitoring of the SVE system will be on a daily basis at system start-up and during shakedown. Daily flow readings will be taken at each extraction well to aid in determining the flow rates that will be used to achieve an efficient operation of the SVE. Once system shakedown has been

completed and systems are working properly, monitoring will be performed on a weekly basis following the procedures identified in Section 5.2.

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

An adequate supply of carbon canisters will be kept at the site for one change when the carbon canister connected to the SVES is used up. Initially, carbon usage could be more rapid because of the concentration of VOCs in the soils will be the highest. To monitor the usage of the carbon, daily air sampling for VOCs will be performed before, between the two carbon filters and after the carbon filtering units using a PID. Following system startup/shutdown, the frequency of this sampling will be changed to weekly per the schedule below.

### **5.1 Soil Vapor Extraction System**

The SVES will have two carbon filters attached to it in series to remove VOCs prior to the air being released to the atmosphere. The emissions from the SVES will be sampled once per week using Gastec and/or Sensidyne tetrachloroethene tubes. These samples will be collected from ports in the exhaust piping located both before and after the air goes through the carbon filters, as well as between the two filters. The emissions from the system will be monitored using Gastec and/or Sensidyne PCE tubes and the concentrations at the three locations will be compared.

The concentration of VOCs in the air stream and the flow rate of the stream will be used to determine approximately when the contaminants will break through the carbon filters. The purpose of this monitoring is to allow for a carbon change before the break through occurs. To gather additional information regarding the quality of the air leaving the second carbon canister, Gastec and/or Sensidyne PCE tubes will be used to sample for tetrachloroethene.

In addition, monthly air samples will be collected in a Tedlar air sampling bag and submitted to the ELAP certified laboratory for analysis for VOCs via EPA Method 8260. These samples will be collected from sampling points located before, between and after the carbon filtering units. This laboratory analysis will detect individual contaminants within the emissions of the SVES. The concentrations of individual contaminants in the samples will be used to calculate the quantity of individual compounds that have been removed from the soils on-site on both a monthly and cumulative basis.

Laboratory analysis of air samples will be collected periodically using the PID, Gastec and/or Sensidyne PCE tubes to monitor the concentration of total VOCs and tetrachloroethene being removed from the soils. The concentration being removed from each of the extraction wells of the SVES will be determined by shutting down all but one of the wells and collecting air samples to measure the concentration of the total VOCs and tetrachloroethene being removed from the ground at the operating well.

When the concentration of tetrachloroethene in an extraction well is below one part per million, that extraction well will be shut off for three months. At the end of that quarter, the well will be turned back on and re-sampled using Gastec and/or Sensidyne PCE tubes the following quarter. If the laboratory analysis the following quarter is below one part per million for

tetrachloroethene, an air sample will be collected in a Tedlar air sampling bag and submitted for laboratory analysis to determine if the air being removed from the well is clean. If the air is clean, the NYSDEC will be notified and the well will be taken out of service.

## **5.2 Operation, Maintenance and Monitoring Schedule**

This section describes the procedures to be used to monitor the operation of the SVES on a daily, weekly and monthly schedule.

### **5.2.1 Introduction**

This Operations and Maintenance (O&M) plan has been prepared for the operation of the SVES at the Westbury Valet Cleaners property. The components of the system consist of SVE wells and AS points. The soil vapor is extracted using an Ametek Rotron 5-horsepower blower located in a steel equipment shed. This shed will be manufactured and assembled by Man Products of Amityville, New York. The soil vapor passes through a moisture separator drum, particulate filter, into the blower and flows through a series of 2 carbon units located adjacent to the SVES.

A more detailed O&M manual and as-built report will be prepared following installation of the SVES. This manual will include a description of the vapor monitoring points used to calculate the ROI of the extraction wells including the vacuum readings.

This O&M plan will address, component by component, the standard maintenance needed to operate the system as provided by the manufacturers. Copies of the owner's manuals for new equipment purchased for this project will be supplied to the NYSDEC upon receipt from the manufacturer. The O&M plan will be included in the SVE IRM as-builts and SVE system O&M manual.

Although, this IRM describes a plan to control and remediate the soil gas contamination at Westbury Cleaners and adjoining properties, the AS system will be designed to remediate the groundwater below these subject areas. The AS will operate in concert with the SVE to remediate groundwater. The AS component of the IRM will be constructed after the SVE system is in operation and the indoor air levels reach acceptable levels. At such time, a second design work plan will be submitted to address this component of the remediation.

### **5.2.2 Maintenance Procedures**

The SVE system will be checked at least once per week for possible air leaks, vacuum leaks, excessive temperatures, freezing conditions or other equipment related issues.

#### **Daily Measurements During System Startup/Shakedown**

- Flow rates at each extraction well
- PID and Gastec readings between blower and carbon filter canister #1
- PID and Gastec readings between carbon filter #1 and #2
- PID and Gastec readings between carbon filter #2 and exhaust stack
- Check moisture separator for liquids

#### **Weekly Measurements for Duration of the Project**

- Flow rates at each extraction well

- PID and Gastec readings between blower and carbon filter canister #1
- PID and Gastec readings between carbon filter #1 and #2
- PID and Gastec readings between carbon filter #2 and exhaust stack
- The actual ROI of each extraction well will be documented weekly by collecting readings at appropriate monitoring points. During this monitoring, VOC samples will be collected at each well using carbon tubes and low volume pumps. These carbon tubes samples will be submitted to an ELAP certified laboratory for analysis via EPA Method 8260.
- Check moisture separator for liquids

### **Week 1 After Shakedown Change to Weekly Sampling**

- Sample between blower and carbon filter #1 using Tedlar air sampling bag
- Sample between carbon filter #2 and exhaust stack using Tedlar air sampling bag
- Check moisture separator for liquids

### **Monthly Measurements for Duration of the Project**

- Sample between blower and carbon filter #1 using Tedlar air sampling bag
- Sample between carbon filter #2 and exhaust stack using Tedlar air sampling bag
- The actual ROI of each extraction well will be documented weekly by collecting readings at appropriate monitoring points. During this monitoring, VOC samples will be collected at each well using carbon tubes and low volume pumps. These carbon tubes samples will be submitted to an ELAP certified laboratory for analysis via EPA Method 8260.

### **Moisture Separator Drum**

- The water level in the drum will be checked at least weekly or more frequently, if warranted. Turn off the power to the blower using the circuit breakers marked in the electric panel, 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.
- 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.

### **Vacuum Relief Valve**

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

### **Carbon Canisters**

- The sampling ports on the intake, between and discharge sides of the carbon canisters will be monitored weekly using a PID, Gastec and/or Sensidyne PCE tubes and the values recorded. Once the meter indicates a potential for a break through 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.

### 5.2.3 Records, Monitoring and Sampling

The following section addresses the sampling methods, record keeping, monitoring and reporting during the SVES operation.

The contents of the monthly reports will include:

- short summary of the Previous Month's Activities
- Present Month's Activities in sufficient detail including:
  - mass removal calculations on a per month basis
  - year to date mass removal calculations
- Operations and Maintenance logs for the month
- Sampling or Test Data received or generated during the month

### Records and Monitoring

Samples of the SVE system operations and maintenance log sheets are attached in Appendix 4. These forms are kept in the remediation equipment shed on a clipboard. The following information should be recorded. The NYSDEC may be petitioned to change the frequency of system monitoring if historical data warrants such a petition.

<u>Information</u>	<u>Frequency</u>
Blower Vacuum	Weekly
Concentration of vapor discharge using PID/Gastec or Sensidyne PCE Tubes	Weekly during system operation

### Sampling

There are two types of samples that must be collected on a periodic basis as discussed above, namely: soil vapor and water.

### Soil Vapor Sampling

- Anson Environmental will collect samples of the extracted soil vapor and screen them in the field on a weekly basis. These samples will be screened using PCE tubes manufactured by Gastec or Sensidyne. Samples collected in Tedlar air sampling bags will be submitted for laboratory analysis on a monthly basis and the frequency will be reduced to a quarterly basis with the NYSDEC approval. The samples will be analyzed for VOCs via EPA Method 8260.

- “Perc” badges will be installed in the areas occupied by the chiropractic center and the convenience store, as well as in other affected structures identified by NYSDOH. Sampling will be performed at these locations on a monthly basis until the concentration of PCE reaches 100 micrograms per cubic meter or less. Once that concentration has been achieved, sampling will be performed on a quarterly basis.

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 of 100 micrograms per cubic meter. 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. To enable concurrent indoor air sampling, AEL will notify NYSDOH well in advance concerning sampling schedules.

- Indoor air sampling inside the buildings at 123, 125, 127 and 129 Post Avenue will be monitored on a monthly basis using “Perc” badges until the concentration of tetrachloroethene reaches a concentration of 100 micrograms per cubic meter or less. Once that concentration has been achieved, sampling will be performed quarterly.

#### **Water Sampling**

Groundwater sampling will be performed periodically after the AS system is installed on-site to operate with the SVE.

- Groundwater water sample collection will be performed using a portable pump. These samples will be performed quarterly and the samples will be analyzed for VOCs including PCE using EPA Method 8260.

#### **Reporting**

The soil vapor, indoor air quality (“Perc” badge data) and water laboratory analytical data will be summarized in quarterly reports that will be submitted to the NYSDEC. The reports will include tables and/or graphs presenting the baseline concentrations measured before startup of the system and the quarterly results acquired thereafter. In addition, estimates will be made of the mass of contaminants that have been removed by the SVE system.

Progress reports will be prepared monthly to demonstrate that the remediation system is operating in compliance with Standards, Criteria and Guidelines (SCG).

The initial report will include “as-built” information describing and illustrating the SVES installation, underground piping and location of other significant on-site structures.

#### **5.3 Groundwater Sampling of the Upper Glacial Aquifer Water**

The initial round of water sampling will occur just prior to the operation of the SVES. Groundwater samples will be collected quarterly following that operation. These data will be included in the “Supplemental Investigation Results Report” and subsequent reports for groundwater sampling that will be performed on a quarterly basis.

Depth to water measurements will be performed on a monthly basis to measure changes in water levels. Each month, based on these measurements, the direction of groundwater flow on-site will be determined.

The groundwater monitoring wells installed into the Upper Glacial Aquifer will be sampled. The analysis of water samples will be by an ELAP CLP laboratory using EPA Method 8260 with ASP Category B deliverables.

#### **5.4 Soil Sampling**

When laboratory analysis of air samples from each of the extraction wells determines that the emissions from the wells are clean, soil and groundwater samples will be collected to determine the effectiveness of the SVES at removing volatile organic contamination from the soils on-site. The soil samples will be collected in the vicinity of extraction wells to determine if the soils in the vicinity have been cleaned to levels that would allow that extraction well to be removed from service. At that time the termination criteria described in Section 5.7.1 will apply.

Samples will be submitted to the ELAP CLP certified laboratory for analysis using EPA Method 8260.

#### **5.5 Indoor Air Quality Sampling**

Prior to beginning operation of the SVES, information will be assembled regarding the heating, ventilating and air conditioning (HVAC) system; vents and ducts at 123 Post Avenue. These systems will be reviewed to determine if they are interconnected on-site. The purpose of this investigation is to identify potential contaminant migratory pathways for VOCs.

The investigation will also identify the locations of air intakes so that the SVES exhaust stack is not located such that its emissions could impact indoor air quality in the of the Westbury Valet Cleaners building. Impacts on indoor air quality are not anticipated, as the effluent from the SVES will be filtered to make sure that its emissions are in compliance with applicable rules and air regulations.

Monthly indoor air quality samples will be collected using "Perc" badges. The initial sampling will occur when the SVES is turned on. "Perc" badges will be placed inside the basement and occupied areas of 123, 125, 127 and 129 Post Avenue as well as in any additional buildings identified as being impacted by the operations of Westbury Valet Cleaners and having concentrations of PCE in the indoor air near or above the NYSDOH guideline of 100 micrograms per cubic meter for PCE.

This sampling schedule will be changed to quarterly once the concentration of PCE reaches 100 micrograms per cubic meter or less.

#### **5.6 Waste Manifests**

Copies of waste manifests for waste media removed from the site will be forwarded to the NYSDEC. Copies of waste manifests associated with the disposal of drill cuttings, carbon from the air filters, and condensate collected from the moisture separator on the SVES will be submitted in monthly reports.

## **5.7 SVES Monitoring and Equipment Termination Criteria**

The following monitoring schedule will be used during the operation of the SVES. The historical data generated during the operation of this equipment will be used to determine when it is appropriate to shut the remediation equipment off and collect soil and water samples to demonstrate compliance with Standards, Criteria and Guidelines (SCG).

The following components of the SVES will be monitored:

1. The intake prior to the first carbon canister, between the two carbon canisters, and the exhaust after the second carbon canister will be monitored with a PID and Gastec and/or Sensidyne PCE tubes at the start of SVES, at the calculated middle of the expected life of the carbon based on the manufacturer's specifications for the carbon, and several days before the calculated end of the life of the carbon. If any effluent sample results indicate an increase in the concentration of VOCs, then the system will be shutdown immediately and this condition will be corrected before the system is restarted. These findings will be reported to the NYSDEC as well as all carbon changes.
2. Condensate that collects in the moisture separator will be sampled via EPA Method 8260 prior to disposal to determine the required disposal method. This condensate will be stored in drums until properly disposed of off-site. The disposal method will be approved by the NYSDEC prior to disposal.

### **5.7.1 SVE Unit Monitoring and Termination Criteria**

As the operation of the SVES progresses, the PID, Gastec/Sensidyne PCE tube and Tedlar air bag laboratory data will be plotted versus time of operation on graphs. Once the levels of total VOCs in the SVES wells decreases to a near constant or asymptotic concentration, continued operation of the system will be reviewed by AEL and DER.

An asymptotic condition will be defined as three consecutive quarterly concentrations with a net decrease of 10-percent or less of total VOCS. Graphs of the concentration of total VOCs versus time will be compiled after each round of monthly monitoring.

The following methodology will be used to evaluate when permanent remedial SVE and AS system shutdown conditions have been reached:

1. When the data shows that the remedial treatment system appears to have achieved asymptotic removal rates, the remedial treatment system is pulsed, i.e., cycled on and off for specified periods, to evaluate the influence that a period of inactivity has on contaminant concentrations, and how quickly the system can equalize to the pre-shutdown concentrations when it is restarted. An increase in concentrations when the remedial treatment system is restarted indicates that the system may continue to be effective in removing contaminants using a pulsing schedule.

If the post -shutdown removal concentrations are the same as the pre-shutdown concentrations, then the system can be considered to longer be removing a significant

level of contaminants and that it may be appropriate for the DER and AEL to consider shutdown of the system.

2. At the point when system performance has reached asymptotic conditions, collection of soil samples from borings drilled at the source area and/or the property lines, and comparison to recommended soil clean-up objectives is required.
3. If the soil recommended clean-up objectives have not been achieved, and evaluation of the site-specific options and possible impacts indicate that further remediation is necessary, the system must continue to run and then additional optimization by be required, e.g. additional wells or other modifications to the current system configuration may be an alternative.
4. AEL may request approval from the DER to shutdown the remedial treatment system if the soil cleanup objectives have been achieved. This request should include a report detailing the basis for permanent system shutdown and include all soil and vapor data and pulsing information generated by the above evaluation. The DER is to be notified when soil sampling will occur and may require duplicate sample(s) for independent analysis. Approval for permanent system shutdown will be provided by the DER if shutdown conditions have been demonstrated.

## **6.0 Project Schedule**

The NYSDEC will be notified ten (10) business days prior to the start of work at 123 Post Avenue. The following preliminary schedule is proposed for the phased work plan:

Approval of IRM work plan by NYSDEC	April 16, 2001
Install SVES system	May 7, 2001
Begin operation of SVES	May 14, 2001
Monthly sampling of emissions from SVES begins	May 30, 2001
Quarterly groundwater sampling next sampling	June 1, 2001
Submission of monthly progress reports begins	June 1, 2001

## **7.0 Health and Safety Plan**

This section of the IRM Work Plan describes the specific Anson Environmental Ltd. (AEL) project health and safety requirements, responsibilities, and procedures to protect workers and the surrounding community during site remediation of Westbury Valet Cleaners. The Health and Safety Plan (HASP) will ensure that all work performed on the project, both on and off-site, is in compliance with Occupational Health and Safety Administration standards, criteria and guidelines.

The purpose of this portion of the remedial investigation is to determine the areas of on-site and off-site contamination. This Health and Safety Plan is designed to protect on-site workers and to mitigate the potential of off-site releases. As part of this plan, access to the areas of concern will be restricted 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.

The exposure pathways for an individual person depend on:

- Source of contamination
- Environmental media contaminated and transport mechanisms
- Point of exposure
- Route of exposure
- Receptor population

Although the exposure pathways may change over time, the pathways that currently exist at the site include ingestion of contaminated groundwater, direct contact with contaminated soils, and inhalation of contaminated indoor air from the intrusion of contaminated soil gas into occupied areas of adjacent buildings. Since the groundwater is not a source of drinking water via private wells, it is unlikely this contaminated water will impact the community. Furthermore, since contaminated soils are at depth and are covered by asphalt and buildings, direct contact exposure to contaminated soils is unlikely to occur.

No known exposure pathways of concern between the contaminated soils and groundwater and flora and fauna exist. It is unlikely that plant and animal species will be exposed to site-related contaminants.

During site remediation, the volatile organic compounds will be removed from the soil and groundwater. These compounds will be filtered from the emissions from these remedial systems. Basically, the installed remedial systems will meet the Clean Air Act Amendments and will not impact workers or surrounding residences.

### **7.1 Requirements**

The requirements for worker health and safety are based on the following:

- The Standard Operating Safety, U.S. Environmental Protection Agency (EPA), Office of Emergency and 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.

## **7.2 Applicability**

The protection of the health and safety of workers, subcontractors and community members and the environment are major concerns during remediation at the Westbury Valet 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 investigation or remediation at this site as described in this work plan. The implementation of this plan will be based on the judgment of the Project Manager as described in the work plan.

## **7.3 Site Specific Information**

The Westbury Valet Cleaners site is a commercial building located in the Village of Westbury, New York. The principal areas of concern are the soil beneath the paved lot and groundwater.

## **7.4 Hazard Characterization/Identification**

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

Each day that fieldwork 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.

The meetings prior to performing fieldwork will include discussions of action levels that are to be used for upgrading personnel protective equipment. Personnel will be informed of concentrations of VOCs that will require changes in the level of personnel protection. For example, if the concentration of total VOCs in ambient air exceeds 5 parts per million work activities will be halted until provisions of a "Vapor Emissions Response Plan" is implemented. The Vapor Emissions Response Plan is contained in Appendix X of this work plan.

## **7.5 Potential Exposures**

The surrounding adjacent businesses could be exposed to contaminants during the vacuuming of the contaminated soils from the onsite drywell and leaching pools. A PID will be used to monitor the total concentration of VOCs in the air downwind from the drywells and leaching pools during the cleanout of each.

To address the fugitive emissions, the procedures described in NYSDEC “TAGM-Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Site” for real time particulate monitoring and VOC monitoring will be performed. This document is in Appendix 5 of this work plan.

The particulates in the ambient air will be monitored continuously downwind, upwind and in the work area. If the downwind particulate level is 150 micrograms per cubic meter or greater than the upwind particulate level, dust suppression procedures will be employed. Particulate monitoring will be performed using a MIE (Monitoring Instruments of the Environment) Airborne Particulate Monitor, Model PDR1000AN. This instrument is factory calibrated annually.

The concentration of total VOCs will be monitored downwind of the work area. This continuous monitoring will determine if the concentration of VOCs exceeds 5 parts per million of total volatiles. If this concentration is reached, work activities will be halted until provisions of a “Vapor Emissions Response Plan” are implemented. This plan is in the Appendix 5 of this work plan.

All readings for the particulate monitoring and VOC monitoring will be recorded and made available for NYSDEC and NYSDOH personnel to review.

#### **7.6 Level of Protection**

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

Potential exposure to contaminants will be considered on a daily basis during the investigation. Therefore, the work area will be secured to prevent unauthorized site access. Also, disposable gloves will be worn during any contact with any medium being sampled on the property.

#### **7.7 Site Personnel**

The project will require the interaction of government agencies (EPA), 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 and procedures during all field activities/sampling phases.

#### **7.8 General Work Practices**

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

1. All personnel working on the site remediation 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 investigation 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 locations.
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 or supervisor of any unusual signs or symptoms that they are experiencing themselves.

### **7.9 Orientation and Training**

Each member of the field investigation team must have 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 will be 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 has 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 will participate in an orientation session prior 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 procedures
- Waste disposal procedures.

### **7.10 Monitoring Equipment**

The principal forms of chemical contamination at the Westbury Cleaners 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, including a particulate meter and PID 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 indicate high hazard potential, operations will be suspended until the situation is evaluated.

### **7.11 Injuries**

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

### **7.12 Levels of Protection**

Four levels of protection (A, B, C and D) will be used as benchmarks for selection of personal protection equipment. The level of protection will be reviewed at each stage of the project to determine if the level of protection should be changed.

Level A Protection requires the highest degree of protection including a fully encapsulating, chemical resistant suit with full face-piece self-contained breathing apparatus (SCBA) or supplied air respirator. No situations are anticipated in this remediation activity 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 on-site 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 this level of protection will be applicable to all investigative and remediation activities both on and off-site.

Should ambient air monitoring during the study indicate a need for higher protection levels than those currently in use, implementation of the appropriate level or cessation of all activities,

which are generating the excessive levels shall be performed. Each level will be identified before the performance of work.

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 a known disease vector, 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.

### **7.13 Personal Protective Equipment**

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

### **7.14 Emergency Information**

This section of the work plan describes the emergency procedures to be implemented in the event of an accident, and lists the directions to the nearest emergency medical facility.

#### **7.14.1 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 (see Figure 7).

Emergency services for the Westbury Cleaners site include:

- The Nearest Emergency Medical Facility:  
Winthrop University Hospital  
295 First Street  
Mineola, NY  
Emergency Room Phone: (516) 663-211

Fire/Emergency Phone: (516) 334-7924

- Local Police Department  
Nassau County Police Department  
Third Precinct  
220 Hillside Avenue, Williston Park  
Emergency Phone: 911

Non-emergency calls: (516) 573-6300

- Poison Control Center

General Area Number: (516) 542-2323

#### **7.14.2 Written Directions to Winthrop University Hospital**

From Westbury Cleaners site on Post Avenue, Westbury

- Take Post Avenue south to Old Country Road
- Make a right turn onto Old Country Road and proceed west
- Make a right turn onto Mineola Blvd and proceed north three blocks
- Make a left onto 2<sup>nd</sup> Street and proceed west directly into the hospital facility

Winthrop University Hospital is located at the end of 2<sup>nd</sup> Street and the emergency entrance is clearly marked.

## **7.15 Community Air Monitoring Plan**

Real-time air monitoring for VOCs and particulate levels at the perimeter of the work area will be performed (Appendix 5). 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, work activities must be halted and monitoring continued under the Vapor Emissions Response Plan. All readings will be recorded and be available for State (DEC and DOH) personnel to review.

This plan will be implemented during the installation of extraction wells as well as during trenching to install the SVES underground piping.

### **7.15.1 Vapor Emission Response Plan**

If the ambient air concentration of organic vapors exceeds 5 ppm above background at the perimeter of the work area, activities will be halted and monitoring continued. If the organic vapor levels decrease below the 5-ppm above background, 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, activities can resume provided the organic vapor level 200-feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm above background.

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

### **7.15.2 Major Vapor Emission**

If total VOC 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 with 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 Emission Response Plan shall automatically be placed in effect if the organic vapor levels are approaching 5 ppm above background.

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

### **7.15.3 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 contacted immediately by the Safety Officer and advised of the situation.
- Frequent air monitoring will be conducted at 30-minute intervals within the 20-Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the safety officer.

### **7.16 Exposure Assessment**

The exposure assessment evaluation will be submitted as a supplemental report.

## **8.0 Quality Assurance Project Plan**

This Quality Assurance Project Plan (QAPP) has been prepared in conjunction with and to accompany the Westbury Valet Cleaners-123 Post Avenue Remediation Work Plan. 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.

### **8.1 Project Background**

The Westbury Valet Cleaners site is located at 123 Post Avenue, Westbury, New York. There has been a dry cleaning operation on-site for at least 30 years. The dry cleaning has ceased and the facility is currently operated as a drop station only. Field investigations to determine the extent of the soil and groundwater contamination have been conducted. This QAPP is designed to facilitate the implementation of the remediation work plan.

### **8.2 Project Description**

The objectives of this Work Plan are to implement remedial alternatives for the on-site soil and groundwater contamination. The remedial alternatives include limited soil removal and installation and monitoring of soil vapor extraction and air sparging systems.

### **8.3 Project Organization and Responsibility**

Ms. Lori A. Beyer of L.A.B. Validation Corp., 14 West Point Drive, East Northport, New York 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.

L.A.B. Validation Corp. qualifications are in Appendix 6.

Mr. Dean Anson II 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. John Tegins will serve as Field Coordinator. Dean Anson will also serve as Health and Safety Officer. In this capacity, his 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.

The contractors and laboratories that will be used on the Westbury Valet Cleaners project are identified below along with their responsibilities on the project.

<u>Contractors Name</u>	<u>Responsibilities</u>
Brookside Environmental	contaminated waste disposal
Aquifer Drilling and Testing or Land, Air Water Environmental Services	install SVES wells
H2M Laboratories	laboratory analysis of soil and groundwater samples
Environmental Testing Laboratories	laboratory analysis of air samples from SVES

Aquifer Drilling and Testing, Land, Air and Water Environmental Services and Brookside Environmental are contractors that have been used to perform work on NYSDEC Inactive Hazardous Waste Disposal Sites and are very qualified to perform their work assignments on the Westbury Valet Cleaners investigation.

H2M Laboratories of Melville, NY, a New York State certified laboratory, would be responsible for performing the soil and groundwater sample analyses. Environmental Testing Laboratories of Farmingdale, NY would be responsible for the analysis of the air samples.

Anson Environmental will construct the SVE systems once the wells are installed. The equipment will be installed by AEL and the electrical connections will be made by a licensed electrician.

Reports and findings of the Westbury Valet Cleaners site investigation will be forwarded to the USEPA, NCDH, NYSDEC and the property owner.

#### **8.4 Data Usage and Data Quality Objectives**

##### **8.4.1 Data Usage**

Data collected for this project will be used to monitor remediation of the on-site contamination.

##### **8.4.2 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 in the field are included in Section 8.5 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. Analytical procedures outlining the QA objectives for laboratory methods to be used will be forwarded to the NYSDEC upon receipt from the laboratories.

### **8.4.3 Data Validation Report (DVR)**

The laboratory analytical data will be reviewed to determine if it meets the project specific criteria for data quality and use. The data will be reviewed by L.A.B. Validation Corp. of East Northport, New York and a full data review of the Category B deliverable package will be performed. Upon completion of that review, the data usability package will be submitted, along with any comments, to the NYSDEC's Division's Quality Assurance Unit.

The DVR will be developed by reviewing and evaluating the laboratory data package for the following:

1. Completeness of the NYSDEC ASP Category B deliverables.
2. Review holding times for each sample.
3. Review of protocols and specifications for the QC data (blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, replicate analyses, laboratory controls and sample data).
4. Evaluation of generated data for compliance with analytical protocols.
5. Evaluation of raw data to determine if it agreed with data summary sheets and QC verification forms.
6. Evaluation of data qualifiers to determine if they are correct.

Once the DVR has been completed, an assessment will be made of the usability of the data by reviewing the data deficiencies, analytical protocol deviations and QC problems. The effect of these deviations on the validity of the data will be made and an assessment made of whether re-sampling or analysis is required.

All data qualification will be documented following the NYSDEC ASP '95Rev. guidelines.

Data validation procedures performed internally by the laboratories are based upon the following document as reference:

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

### **8.5 Sampling and Analytical Procedures and Protocol**

This phase of the project, as fully described in the Work Plan, entails the collection of groundwater and SVES air emission samples. Soil samples will be procured using a split spoon sampler and/or acetate liners with Geoprobe rods, if necessary. Groundwater samples will be collected using dedicated polyethylene bailers and air samples will be collected with Tedlar bags. A description of each sampling method to be used for the collection of samples is addressed in the following sections. A summary sampling program matrix is in Appendix 7.

#### **8.5.1 Soil Sampling/Manual Collection**

Soil samples 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 a depth of 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.
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 sediment sample from the drywell will be collected with a stainless steel hand auger, decontaminated between sampling events and handled in the same technique as outlined 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. A 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.

The soil samples will be analyzed via EPA Method 8260 for volatile organic compounds. The purpose of this analysis is to determine if there are measurable quantities of those organic compounds in the soil, which are known to have been used on-site. 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 field. Calibration procedures from the instrument's instruction manual will be used to determine the frequency of calibration.

### **8.5.2 Groundwater Samples**

A round of groundwater samples will be collected from the three existing monitoring wells. All water 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 water 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 from the monitoring well, purging of the wells is required. The standing water will be purged from the middle of the water column using a Grundfos Redi-Flo2 pump. In general, the water 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 water sample. All water removed during the evacuation process shall be placed in clearly labeled 55-gallon drums and stored on-site pending analysis.
4. Dedicated 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 water samples shall be collected in laboratory cleaned containers on the second bail. Each round of water samples will be analyzed via 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 have been used on-site in the water.

One (1) trip and one (1) field blank QA/QC sample will accompany the water 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 field and back to the laboratory. The field 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 water samples.

Field tests will include temperature, pH, dissolved oxygen, 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 instrument instruction manuals. A mercury thermometer will be used to measure temperature and will be visibly inspected. The above calibration procedures will be performed each day of water sampling.

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

### **8.5.3 Preparation and Preservation of Sample Containers**

Groundwater samples will be placed in a cooler provided with ice packs as soon as they are collected. All samples will be delivered to the laboratory within 24 hours.

The scope of the project necessitates that 40 milliliter vial 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 the preservative hydrochloric acid (HCl).

#### **8.5.4 Groundwater Level Monitoring**

Groundwater levels will be obtained from the three existing 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 above. A licensed land surveyor has surveyed the well casings in order to determine the direction of groundwater flow.

#### **8.5.5 Field Sampling Quality Assurance**

##### **8.5.5.1 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.

##### **8.5.5.2 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

#### **8.5.6 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.

##### **8.5.6.1 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.

##### **8.5.6.2 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.

## **8.6 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.

### **8.6.1 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.

### **8.6.2 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 wither 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 indicate with which facility or agency the samples were split.

### **8.6.3 Laboratory Custody Procedures**

The laboratory utilized will follow a minimum standard operating procedure for documenting receipt, tracking and sample preparation. Sample custody is described briefly below:

#### **8.6.3.1 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.
  - 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.

#### **8.6.3.2 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.

#### **8.6.4 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 project manager. 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.

#### **8.7 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.

#### **8.8 Documentation, Data Reduction, Validation and Reporting**

##### **8.8.1 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

##### **8.8.1.1 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 be 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.

#### **8.8.1.2 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.

### **8.8.2 Laboratory Data**

#### **8.8.2.1 Laboratory Data Documentation**

A complete description of the laboratory's standard operating procedures will be submitted upon receipt from the H2M Laboratories.

#### **8.8.2.2 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. 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.

#### **8.8.2.3 Laboratory Data Reduction**

Laboratory data reduction and analysis of organic analytes involves relating a "peak area" to the mass of a constituent. This is accomplished using digital computers. The computer software and hardware is designed to allow the analysts to create libraries or files of calibration standards and then compare raw data against these libraries to produce a report which contains identification and qualification of constituents present in the sample. The analysts manually check the computer-reduced data. The analyses are typed as reports listing the date the sample was received, date collected and date reported.

## **9.0 Citizens' Participation Plan**

The NYSDEC requires communication with the local citizens regarding activities performed during the cleanup of contaminated properties. The Citizens' Participation Plan for the site will be performed by the NYSDEC with input from representatives of Westbury Valet Cleaners.

## 10.0 Certification

It is hereby certified that the design of the Westbury Valet Cleaners remediation system will be performed as specified in this Interim Remedial Measure Work Plan for the soil vapor extraction system.

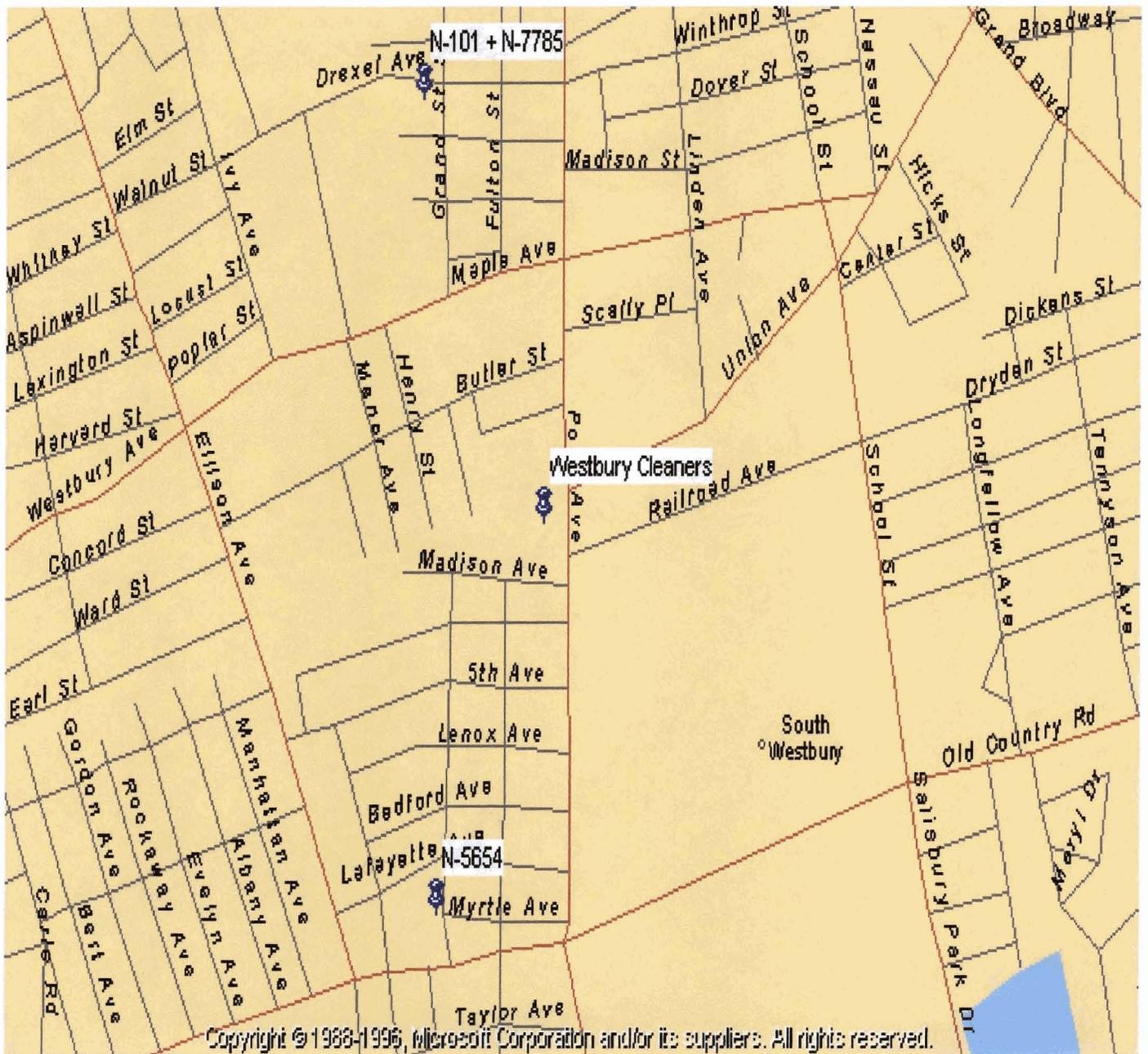
A review of the site conditions and the proposed remedial measures indicates that the proposed remedial measures can achieve the cleanup goals identified in 6NYCRR375-1.10c).

Work will be witnessed by the professional engineer or by a person working under his direction. The New York State licensed professional engineer on this project will be John V. Soderberg, P.E., License Number 49975.



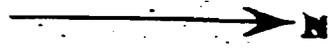
John V. Soderberg, P.E.  
Professional Engineer

4/24/04  
Date



**Figure 1**

**Site Location Map  
 Westbury Valet Cleaners  
 123 Post Avenue  
 Westbury, NY**



Depth below grade	PCE (ppb)
36-40'	16
56-60'	8
76-80'	4

Monitoring Well #2

Year	PCE (ppb)
1999	690
2000	5800

Monitoring Well #3

Year	PCE (ppb)
1999	20,000
2000	16,000

Depth below grade	PCE (ppb)
36-40'	3700
56-60'	24
76-80'	23

Depth below grade	PCE (ppb)
36-40'	64
56-60'	6
76-80'	4

Monitoring Well #1

Year	PCE (ppb)
1999	95
2000	1200

GW #3



GW #2

GW #1



WESTBURY CLEANERS  
123 POST AVENUE

LIRR

POST AVENUE

Figure 2 Groundwater Monitoring Well Locations and Sampling Data  
scale is 1 inch = 20 feet

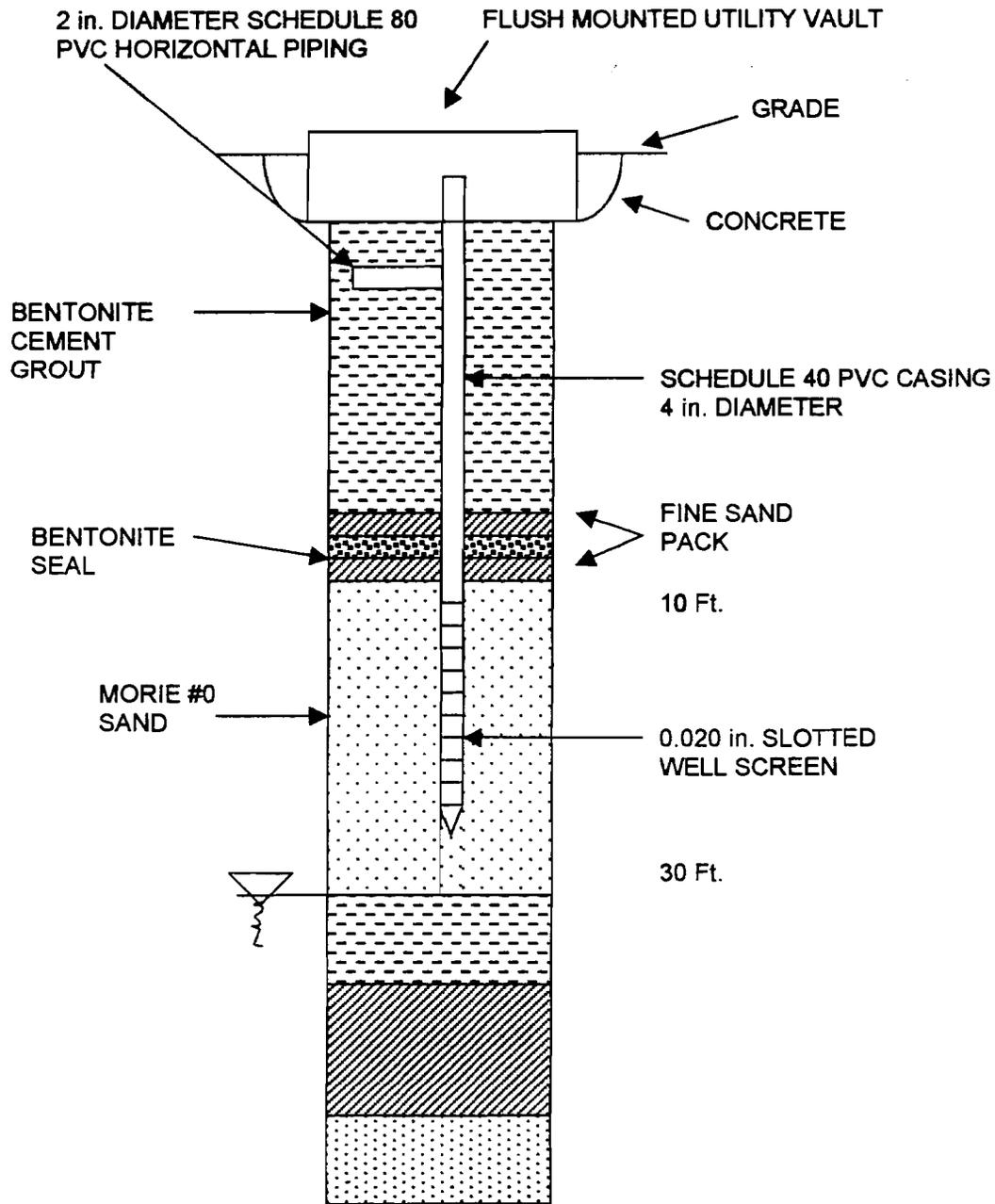


Figure 3 - SVE Well Diagram  
NOT TO SCALE

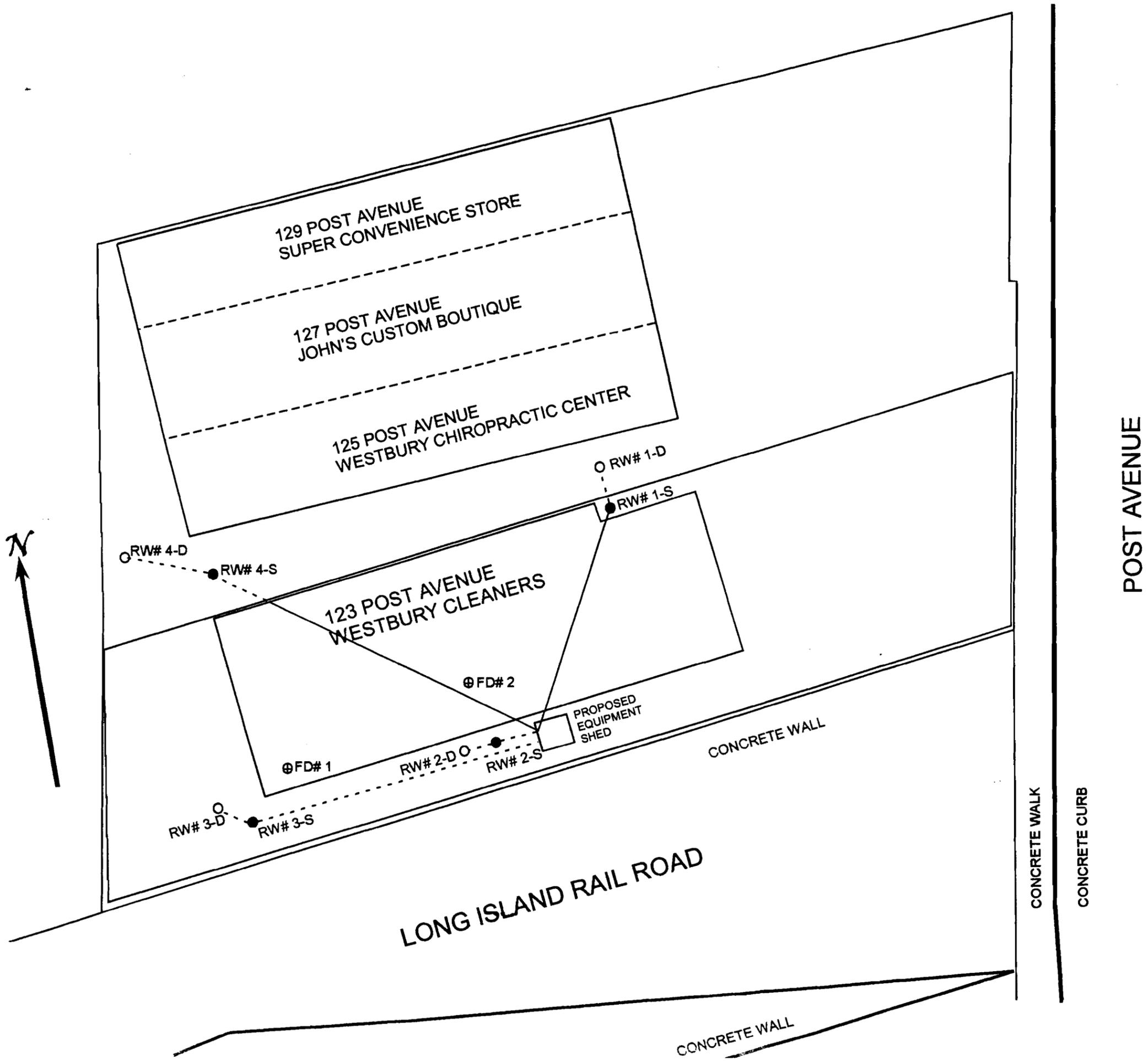


FIGURE 4: Soil Vapor Extraction System

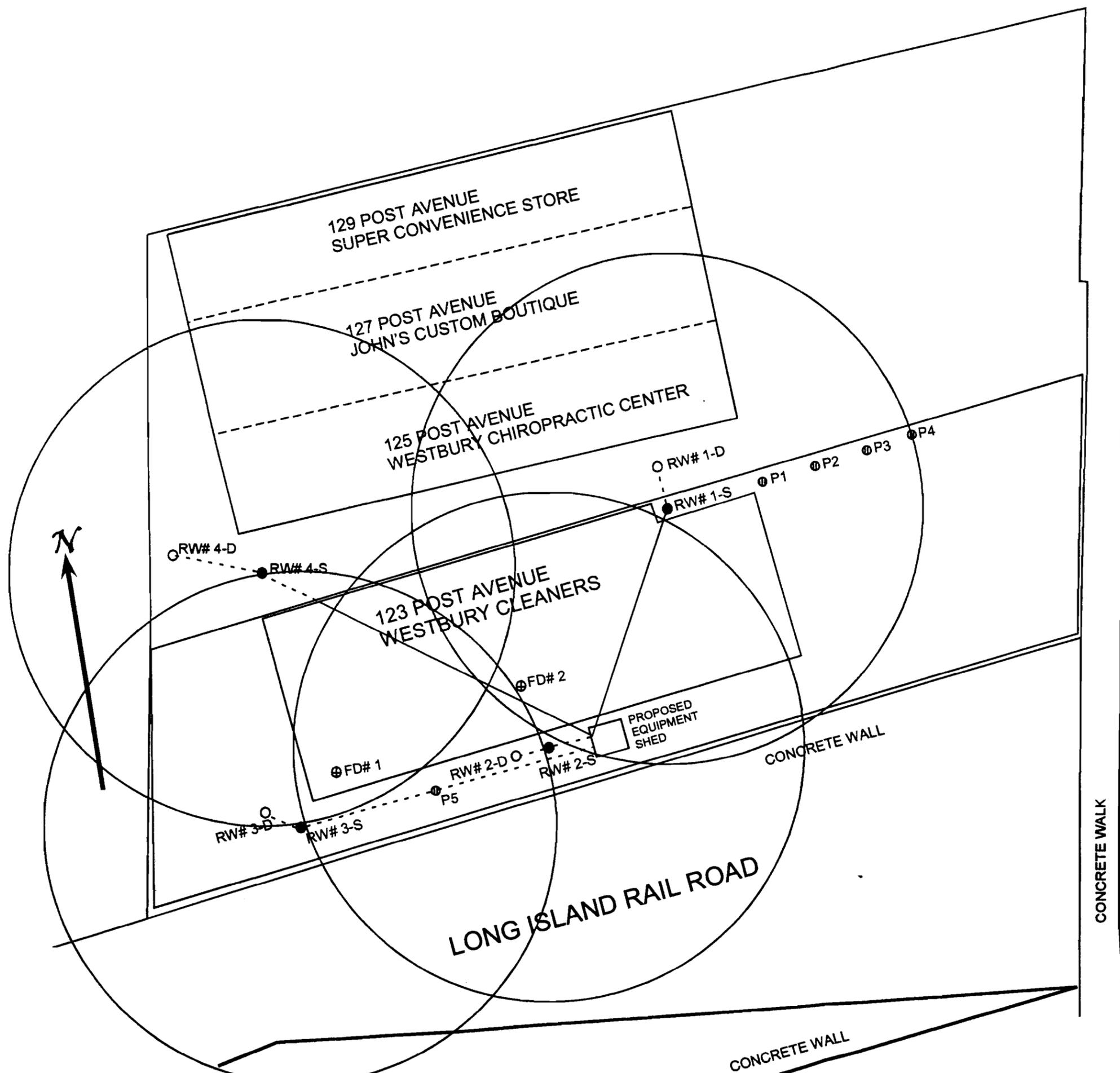
SCALE: 1 inch=20 Feet

LEGEND:

- RW Remediation Well
- FD Floor Drain
- - - Piping Trenches
- Above Ground Piping on Building Roof

NOTES:

Wells Screened from 10- 25 ft. Below Grade



POST AVENUE

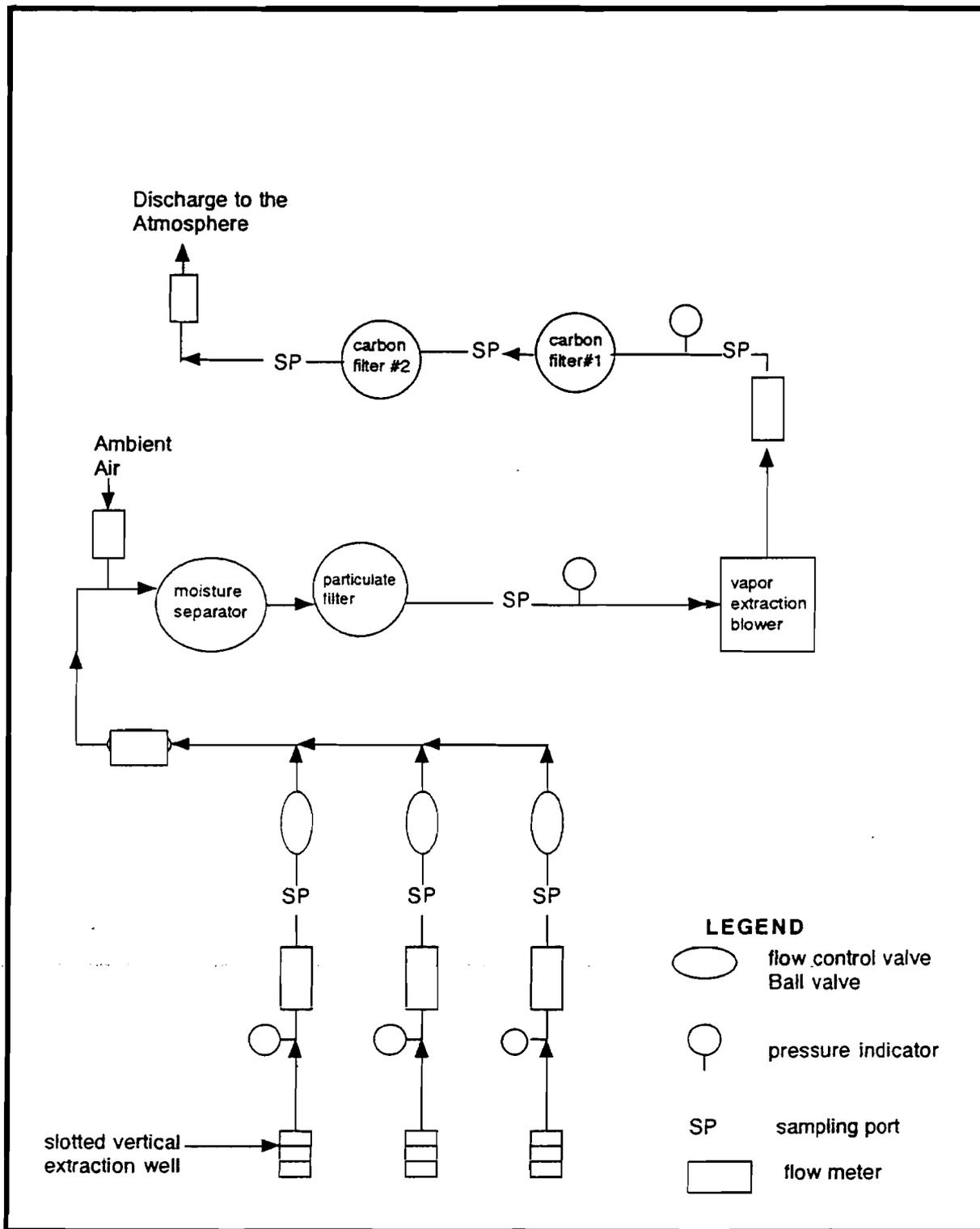
FIGURE 5: Radius of Influence (assuming 50 Feet)

SCALE: 1 inch=20 Feet

LEGEND:

- RW Remediation Well
- FD Floor Drain
- ⊙ Vapor Monitoring Probe
- Radius of Influence
- - - Piping Trenches
- Above Ground Piping on Building Roof

NOTES:  
Wells Screened from 10- 25 ft. Below Grade



**Figure 6 Schematic Diagram of Soil Vapor Extraction System**

not to scale



Figure 7 Map from Westbury Valet Cleaners to Winthrop University Hospital  
not to scale



771 New York Avenue  
Huntington, New York 11743  
631-351-3555  
Fax: 631-351-3615  
[www.AnsonLtd.com](http://www.AnsonLtd.com)

December 18, 2000

Mr. Thomas Gibbons  
Project Manager  
New York State Department of Environmental Conservation  
50 Wolf Road  
Albany, New York 12233

Re: Westbury Valet Cleaners  
123 Post Avenue  
Westbury, New York

Dear Mr. Gibbons:

Enclosed please find a letter report describing the field activities including the collection of subsurface soil and groundwater samples from locations specified in the Revised Remedial Investigation/Feasibility Study Work Plan dated August 30, 2000. The analytical laboratory results have been summarized and are appended at the end of the report.

Please do not hesitate to contact me at (631) 351-3555 X 13 if you have any questions.

Very truly yours,

Fritzi Mazzola Gros-Daillon

*"Your Environmental Partner"*

**Remedial Investigation Report**

**Westbury Cleaners  
123 Post Avenue  
Westbury, New York**

**Prepared for:**

**New York State Department of Environmental Conservation  
50 Wolf Road  
Albany, NY 12233**

**Prepared by:**

**Anson Environmental Ltd.  
771 New York Avenue  
Huntington, New York 11743**

**December 2000**

*"Your Environmental Partner"*

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**Westbury, New York**

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## **Purpose**

The Remedial Investigation/Feasibility Study Work Plan (RI/FS) dated August 30, 2000 was prepared for the purpose of determining the nature and extent of subsurface contamination involving perchloroethene and its breakdown products at Westbury Valet Cleaners, 123 Post Avenue, Westbury, New York herein identified as the subject property (Figure 1).

## **Scope**

This phase of the RI/FS was performed to identify any additional on-site sources of perchloroethene contamination at the subject property prior to the design of the soil vapor extraction system (SVES) and air sparging system. Soil sampling activities were concentrated at the east end of the subject property, the suspected location of the former sanitary system. In addition to soil sampling, groundwater samples were collected from existing monitoring wells on-site and from three hydropunch locations selected at the south section of the subject property (Figure 2).

### **1.0 Soil Sampling Activities**

A total of four soil samples were collected from the east side of the subject property within the vicinity of the former sanitary system suspected to be located in this area. The soil sample locations were identified as SS#1, SS#2, SS#3, and SS#4 (Figure 2). Soil sampling was performed using an all terrain vehicle mounted Geoprobe unit. The first soil sample location was completed at SS#3 where continuous soil sampling was conducted from the ground's surface to approximately 28 feet (ft.) below ground surface (bgs). Soil samples were collected using a macro sampler lined with acetate liners (four ft. in length) until poor recovery was encountered at approximately 28 ft. A large sampler lined with an acetate liner (two ft. in length) was used to collect the deeper samples at 30-32 ft. bgs and from the bottom sample at 33-34 ft. bgs. Soil samples were collected from above the groundwater table, which lies between 31 and 35 ft. bgs at the subject site. Headspace readings were recorded from each sampler and recorded on soil boring logs (Appendix 1). Since there were no elevated headspace readings from the continuous soil sampling conducted at SS#3, discreet soil sampling was conducted at the remaining soil boring locations (SS#1, SS#2, and SS#4) at specified intervals including 16 to 20 ft. bgs, 20 to 24 ft. bgs, 26 to 28 ft. bgs, and 30 to 32 ft. bgs.

A minimum of two soil samples from each boring location were forwarded to Upstate Laboratories, Inc., East Syracuse, NY, for analysis of volatile organic compounds (VOCs) using EPA Method 8260 plus Tentatively Identified Compounds (TICs). The soil samples with the highest headspace readings or the sample superior to the soil/groundwater interface from each borehole were selected for laboratory analysis.

### **2.0 Groundwater Sampling Activities**

Groundwater samples were collected from each on-site groundwater monitoring well (MW-1,

MW-2, MW-3, Figure 2). Prior to groundwater sampling, approximately three well volumes (approximately 15-gallons) of water was purged from each well using a Redi-Flo submersible pump. The purged water was contained in a 55-gallon drum currently stored on-site. Groundwater sampling was conducted with a disposable bailer.

A total of nine groundwater samples were collected from three locations identified as GW-1, GW-2, and GW-3 along the south section of the subject site (Figure 2). The groundwater samples were collected with a Geoprobe unit using the hydropunch method to collect samples from three depths at each location. The depths were selected to represent groundwater conditions at the shallow, medium, and deep depths including: 36-40 ft. bgs (GW-1.3, 2.3 and 3.3), 56-60 ft. bgs (GW-1.2, 2.2 and 3.2), 76-80 ft. bgs (GW-1, GW-2, and GW-3). The only exception is that at the shallow level, hydropunch samples were collected at a depth of 40-44 ft. bgs from GW-2 and GW-3 (GW-2.3 and GW 3.3) instead of at 36-40 ft. bgs as was the depth collected from GW-1 (GW-1.3). Prior to groundwater sampling, approximately one-gallon of water was purged from each hydropunch location using polyvinyl chloride (pvc) tubing and a ball valve. The purged water was contained in a 55-gallon drum currently stored on-site. Each groundwater sample was forwarded to Upstate Laboratories for VOC analysis using EPA Method 8260 plus TICs.

### 3.0 Analytical Results

This section summarizes the analytical results for the soil and groundwater samples collected during this phase of the RI/FS.

#### 3.1 Soil Sample Results

According to the analytical results, no compounds were detected at concentrations that exceed the New York State Department of Environmental Conservation soil standard as described in Table 3.1, with the exception of acetone. The concentration of acetone, exceeded the NYSDEC soil standard of 110 µg/kg from two samples collected from SS-2 at the 16-20 ft. and 30-32 ft. sampling interval.

**Table 3.1 Soil Sample Results - Soil Borings**

COMPOUND (µg/kg)	SAMPLE LOCATION											NYSDEC Soil std
	SS-1			SS-2			SS-3		SS-4			
	16-20'	22-24'	30-32'	16-20'	20-24'	30-32'	30-32'	33-34'	16-20'	20-24'	30-32'	
Methylene Chloride	17	13	22	14	9	15	19	13	18	14	13	100
Acetone	-	-	-	210	25	150	-	-	-	-	-	110
Toluene	-	-	-	-	-	-	12	-	-	-	47	1500
Ethylbenzene	-	-	-	-	-	-	26	-	-	-	-	5500
m-Xylene, o-Xylene	-	-	-	-	-	-	150	-	-	-	-	1200
p-Xylene	-	-	-	-	-	-	56	-	-	-	-	1200

### 3.2 Groundwater Sample Results

According to the analytical results, elevated concentrations of methylene chloride was detected in concentrations that exceed the NYSDEC water standard as described in Table 3.2.1, from groundwater collected from monitoring wells MW-1 (84 µg/l) and MW-2 (210 µg/l). Additionally, concentrations of tetrachloroethene (perc) was detected at elevated concentrations in all three monitoring wells at 1,200, 5,800 and 160,000 µg/l, respectively. The analytical results of the field blank, labeled as MW-4, contained an elevated concentration of acetone. None of the samples collected from the groundwater monitoring wells contained acetone at concentrations above the laboratory detection limit.

**Table 3.2.1 Groundwater Results - Existing Groundwater Monitoring Wells**

COMPOUND (µg/l)	SAMPLE LOCATION				NYSDEC Water Standard (µg/l)
	MW-1	MW-2	MW-3	MW-4 (FB)	
Methylene Chloride	84	210			5
Acetone				650	50
Tetrachloroethene	1,200	5,800	16,000		5

According to the laboratory analytical results, the deep samples (GW-1 and GW-2 and GW-3) contained elevated concentrations of cis-1,2, dichloroethene (8 µg/l) in GW-1 and elevated concentrations of methylene chloride (6 µg/l) and tetrachloroethene (23 µg/l) in were detected in the sample collected from GW-2.

According to the laboratory analytical results, the hydropunch samples collected at the medium depth (GW-1.2, GW-2.2, and GW-3.2) contained elevated concentrations of tetrachloroethene (6 µg/l) in GW-1.2. Elevated concentrations of methylene chloride (6 µg/l) and tetrachloroethene (24 µg/l) in were detected in hydropunch samples collected from GW-2.2. Elevated concentrations of tetrachloroethene (8 µg/l) was detected in the hydropunch sample collected from GW-3.2.

According to the laboratory analytical results, the hydropunch samples collected at the shallow depth (GW-1.3, GW-2.3, and GW-3.3) contained elevated concentrations of tetrachloroethene (64 µg/l) in GW-1.3. Elevated concentrations of methylene chloride (250 µg/l) and tetrachloroethene (3,700 µg/l) in were detected in hydropunch samples collected from GW-2.3. Elevated concentrations of tetrachloroethene (16 µg/l) and o-xylene (8 µg/l) was detected in the hydropunch sample collected from GW-3.3.

**Table 3.2.2 Groundwater Results - Hyrdopunch Samples**

COMPOUND ( $\mu\text{g/l}$ )	SAMPLE LOCATION										NYSDEC Water Standard	
	GW-1	GW-1.2	GW-1.3	GW-2	GW-2.2	GW-2.3	GW-3	GW-3.2	GW-3.3	FB		
Chloroethane	-	-	-	-	-	-	-	-	-	-	50	50
Methylene CHl	-	3	4	6	6	250	-	-	-	-	910	5
Acetone	-	-	-	-	-	-	-	-	22	-	-	50
cis-1, 2-Dichk	8	-	-	-	-	-	-	-	-	-	-	5
Trichloroether	4	-	-	-	-	-	-	-	-	-	-	5
Tetrachloroett	4	6	64	23	24	3700	4	8	16	-	-	5
o-Xylene	-	-	5	-	-	-	-	-	8	-	-	5

## 4.0 Conclusions

AEL had conducted this phase of RI/FS at the subject property at Westbury Cleaners to identify additional sources of perc, that may influence the design of the soil vapor extraction system and sparging system slated to be installed at the subject property. The aforementioned remediation systems will be designed to meet the site-specific requirements to ensure the most effective cleanup results.

Based on the analytical results of the soil samples collected from soil borings SS-1, SS-2, SS-3 and SS-4, tetrachloroethene was not detected in any of the samples analyzed; however, elevated concentrations of acetone was detected from soil samples collected from SS-2, which in this case was deemed a laboratory contaminant. Based on these results, no new source of perc contamination is anticipated from the east section of the subject property.

Based on the analytical results of the groundwater samples collected from the monitoring wells. Concentrations of perc were detected at elevated concentrations in all three monitoring wells. In addition, elevated concentrations of methylene chloride and acetone were deemed a laboratory contaminant.

## 5.0 Remediation System Design/Installation

In accordance with the RI/FS work plan, the soil vapor extraction system and air sparging system design will be prepared for review by January 22, 2001. Upon approval, the system will be installed by February 28, 2001, weather permitting.



# Streets Plus

Figure 1 Site Location Map  
Westbury Valet Cleaners

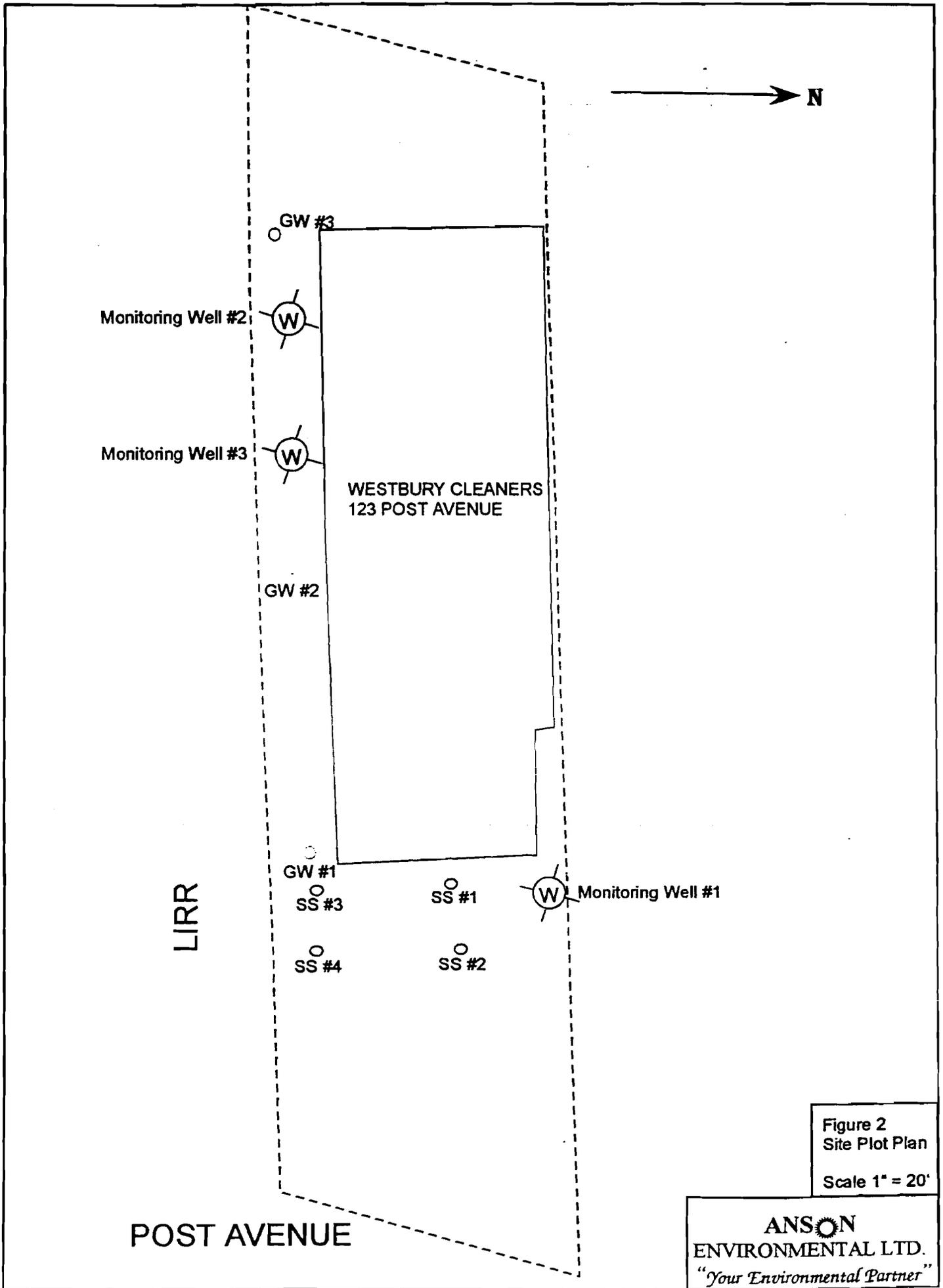


Figure 2  
Site Plot Plan  
Scale 1" = 20'

**ANSON**  
ENVIRONMENTAL LTD.  
*"Your Environmental Partner"*

**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)

**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

# Upstate Laboratories inc.

Shipping: 6034 Corporate Dr. • E. Syracuse, NY 13057-1017 • (315) 437-0255 • Fax (315) 437-1209

Mailing: Box 289 • Syracuse, NY 13206

Albany (518) 459-3134

Binghamton (607) 724-0478

Buffalo (716) 649-2533

Rochester (716) 436-9070

New Jersey (201) 703-1324

October 26, 2000

Mr. Fritzi Gros-Daillon  
Anson Environmental  
771 New York Ave.  
Huntington, NY 11743

Re: Analysis Report #27900130 - 96002 Westbury Cleaners

Dear Mr. Gros-Daillon:

Please find enclosed the results for your samples which were picked up by ULI personnel and received on October 4 and 6, 2000, respectively.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.



Anthony J. Scala  
Director

AJS/jd

Enclosures: report, invoice

cc/encs: N. Scala, ULI  
file

Note: Faxed results were given to your office on 10/25/00. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS SS-3-30-32 10/3 1145H 10/03/00 G

ULI I.D.: 27900130

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	86%	10/06/00		WD2074
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/kg dw	10/09/00		VM3081
Bromomethane	<3ug/kg dw	10/09/00		VM3081
Vinyl Chloride	<2ug/kg dw	10/09/00		VM3081
Chloroethane	<3ug/kg dw	10/09/00		VM3081
Methylene Chloride	19ug/kg dw	10/09/00	44	VM3081
Acetone	<12ug/kg dw	10/09/00		VM3081
Carbon Disulfide	<3ug/kg dw	10/09/00		VM3081
1,1-Dichloroethene	<3ug/kg dw	10/09/00		VM3081
1,1-Dichloroethane	<3ug/kg dw	10/09/00		VM3081
trans-1,2-Dichloroethene	<3ug/kg dw	10/09/00		VM3081
cis-1,2-Dichloroethene	<3ug/kg dw	10/09/00		VM3081
Chloroform	<3ug/kg dw	10/09/00		VM3081
1,2-Dichloroethane	<3ug/kg dw	10/09/00		VM3081
2-Butanone	<12ug/kg dw	10/09/00		VM3081
1,1,1-Trichloroethane	<3ug/kg dw	10/09/00		VM3081
Carbon Tetrachloride	<3ug/kg dw	10/09/00		VM3081
Bromodichloromethane	<3ug/kg dw	10/09/00		VM3081
1,2-Dichloropropane	<3ug/kg dw	10/09/00		VM3081
cis-1,3-Dichloropropene	<3ug/kg dw	10/09/00		VM3081
Trichloroethene	<3ug/kg dw	10/09/00		VM3081
Dibromochloromethane	<3ug/kg dw	10/09/00		VM3081
1,1,2-Trichloroethane	<3ug/kg dw	10/09/00		VM3081
Benzene	<3ug/kg dw	10/09/00		VM3081
trans-1,3-Dichloropropene	<3ug/kg dw	10/09/00		VM3081
Bromoform	<3ug/kg dw	10/09/00		VM3081
4-Methyl-2-pentanone	<12ug/kg dw	10/09/00		VM3081
2-Hexanone	<12ug/kg dw	10/09/00		VM3081
Tetrachloroethene	<3ug/kg dw	10/09/00		VM3081
1,1,2,2-Tetrachloroethane	<3ug/kg dw	10/09/00		VM3081
Toluene	12ug/kg dw	10/09/00		VM3081
Chlorobenzene	<3ug/kg dw	10/09/00		VM3081
Ethylbenzene	26ug/kg dw	10/09/00		VM3081
Styrene	<3ug/kg dw	10/09/00		VM3081
m-Xylene and p-Xylene	150ug/kg dw	10/09/00		VM3081
o-Xylene	56ug/kg dw	10/09/00		VM3081
Tentatively Identifiable Compounds	See Attached	10/09/00		VM3081

dw = Dry weight

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

27900130

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_

Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix: (soil/water) SOIL Lab Sample ID: 27900130

Sample wt/vol: 5.0 (g/ml) G Lab File ID: D3784.D

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: not dec. 14 Date Analyzed: 10/9/00

GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 19

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	6.31	27	JN
2.	unknown hydrocarbon	11.24	30	J
3. 000142-82-5	Heptane	12.06	11	JN
4.	unknown hydrocarbon	14.43	35	J
5. 000560-21-4	Pentane, 2,3,3-trimethyl-	14.67	38	JN
6. 000589-81-1	Heptane, 3-methyl-	15.25	16	JN
7.	unknown hydrocarbon	15.45	26	J
8.	unknown hydrocarbon	17.20	13	J
9.	unknown	18.00	23	J
10. 002216-33-3	Octane, 3-methyl-	18.22	15	JN
11.	unknown hydrocarbon	20.33	21	J
12. 000095-63-6	Benzene, 1,2,4-trimethyl-	21.25	26	JN
13. 000611-14-3	Benzene, 1-ethyl-2-methyl-	21.62	14	JN
14. 000135-98-8	Benzene, (1-methylpropyl)-	22.88	19	JN
15.	unknown hydrocarbon	23.00	34	J
16. 000099-87-6	Benzene, 1-methyl-4-(1-methylet	23.45	17	JN
17. 000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	23.59	15	JN
18. 000535-77-3	Benzene, 1-methyl-3-(1-methylet	24.26	10	JN
19. 000767-58-8	Indan, 1-methyl-	25.02	17	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *O/S*  
QC: *WJF*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS SS-3-33-34 10/3 1210H 10/03/00 G

ULI I.D.: 27900131

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	87%	10/06/00		WD2074
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/kg dw	10/09/00		VM3081
Bromomethane	<3ug/kg dw	10/09/00		VM3081
Vinyl Chloride	<2ug/kg dw	10/09/00		VM3081
Chloroethane	<3ug/kg dw	10/09/00		VM3081
Methylene Chloride	13ug/kg dw	10/09/00	44	VM3081
Acetone	<11ug/kg dw	10/09/00		VM3081
Carbon Disulfide	<3ug/kg dw	10/09/00		VM3081
1,1-Dichloroethene	<3ug/kg dw	10/09/00		VM3081
1,1-Dichloroethane	<3ug/kg dw	10/09/00		VM3081
trans-1,2-Dichloroethene	<3ug/kg dw	10/09/00		VM3081
cis-1,2-Dichloroethene	<3ug/kg dw	10/09/00		VM3081
Chloroform	<3ug/kg dw	10/09/00		VM3081
1,2-Dichloroethane	<3ug/kg dw	10/09/00		VM3081
2-Butanone	<11ug/kg dw	10/09/00		VM3081
1,1,1-Trichloroethane	<3ug/kg dw	10/09/00		VM3081
Carbon Tetrachloride	<3ug/kg dw	10/09/00		VM3081
Bromodichloromethane	<3ug/kg dw	10/09/00		VM3081
1,2-Dichloropropane	<3ug/kg dw	10/09/00		VM3081
cis-1,3-Dichloropropene	<3ug/kg dw	10/09/00		VM3081
Trichloroethene	<3ug/kg dw	10/09/00		VM3081
Dibromochloromethane	<3ug/kg dw	10/09/00		VM3081
1,1,2-Trichloroethane	<3ug/kg dw	10/09/00		VM3081
Benzene	<3ug/kg dw	10/09/00		VM3081
trans-1,3-Dichloropropene	<3ug/kg dw	10/09/00		VM3081
Bromoform	<3ug/kg dw	10/09/00		VM3081
4-Methyl-2-pentanone	<11ug/kg dw	10/09/00		VM3081
2-Hexanone	<11ug/kg dw	10/09/00		VM3081
Tetrachloroethene	<3ug/kg dw	10/09/00		VM3081
1,1,2,2-Tetrachloroethane	<3ug/kg dw	10/09/00		VM3081
Toluene	<3ug/kg dw	10/09/00		VM3081
Chlorobenzene	<3ug/kg dw	10/09/00		VM3081
Ethylbenzene	<3ug/kg dw	10/09/00		VM3081
Styrene	<3ug/kg dw	10/09/00		VM3081
m-Xylene and p-Xylene	<3ug/kg dw	10/09/00		VM3081
o-Xylene	<3ug/kg dw	10/09/00		VM3081
Tentatively Identifiable Compounds	See Attached	10/09/00		VM3081

dw = Dry weight

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

27900131

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_

Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix: (soil/water) SOIL Lab Sample ID: 27900131

Sample wt/vol: 5.0 (g/ml) G Lab File ID: D3785.D

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: not dec. 13 Date Analyzed: 10/9/00

GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KGNumber TICs found: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	6.31	16	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170  
96002 WESTBURY  
CLEANERS SS-4-16-20 10/3 1255H 10/03/00 G

ULI I.D.: 27900132

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	78%	10/06/00		WD2074
TCL Volatiles by EPA Method 8260				
Chloromethane	<4ug/kg dw	10/09/00		VM3081
Bromomethane	<4ug/kg dw	10/09/00		VM3081
Vinyl Chloride	<3ug/kg dw	10/09/00		VM3081
Chloroethane	<4ug/kg dw	10/09/00		VM3081
Methylene Chloride	18ug/kg dw	10/09/00	44	VM3081
Acetone	<13ug/kg dw	10/09/00		VM3081
Carbon Disulfide	<4ug/kg dw	10/09/00		VM3081
1,1-Dichloroethene	<4ug/kg dw	10/09/00		VM3081
1,1-Dichloroethane	<4ug/kg dw	10/09/00		VM3081
trans-1,2-Dichloroethene	<4ug/kg dw	10/09/00		VM3081
cis-1,2-Dichloroethene	<4ug/kg dw	10/09/00		VM3081
Chloroform	<4ug/kg dw	10/09/00		VM3081
1,2-Dichloroethane	<4ug/kg dw	10/09/00		VM3081
2-Butanone	<13ug/kg dw	10/09/00		VM3081
1,1,1-Trichloroethane	<4ug/kg dw	10/09/00		VM3081
Carbon Tetrachloride	<4ug/kg dw	10/09/00		VM3081
Bromodichloromethane	<4ug/kg dw	10/09/00		VM3081
1,2-Dichloropropane	<4ug/kg dw	10/09/00		VM3081
cis-1,3-Dichloropropene	<4ug/kg dw	10/09/00		VM3081
Trichloroethene	<4ug/kg dw	10/09/00		VM3081
Dibromochloromethane	<4ug/kg dw	10/09/00		VM3081
1,1,2-Trichloroethane	<4ug/kg dw	10/09/00		VM3081
Benzene	<4ug/kg dw	10/09/00		VM3081
trans-1,3-Dichloropropene	<4ug/kg dw	10/09/00		VM3081
Bromoform	<4ug/kg dw	10/09/00		VM3081
4-Methyl-2-pentanone	<13ug/kg dw	10/09/00		VM3081
2-Hexanone	<13ug/kg dw	10/09/00		VM3081
Tetrachloroethene	<4ug/kg dw	10/09/00		VM3081
1,1,2,2-Tetrachloroethane	<4ug/kg dw	10/09/00		VM3081
Toluene	<4ug/kg dw	10/09/00		VM3081
Chlorobenzene	<4ug/kg dw	10/09/00		VM3081
Ethylbenzene	<4ug/kg dw	10/09/00		VM3081
Styrene	<4ug/kg dw	10/09/00		VM3081
m-Xylene and p-Xylene	<4ug/kg dw	10/09/00		VM3081
o-Xylene	<4ug/kg dw	10/09/00		VM3081
Tentatively Identifiable Compounds	See Attached	10/09/00		VM3081

dw = Dry weight

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

27900132

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_  
Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_  
Matrix: (soil/water) SOIL Lab Sample ID: 27900132  
Sample wt/vol: 5.0 (g/ml) G Lab File ID: D3786.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. 22 Date Analyzed: 10/9/00  
GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0  
Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

Number TICs found: 1 (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	6.33	22	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS SS-4-20-24 10/3 1310H 10/03/00 G

ULI I.D.: 27900133

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	97%	10/06/00		WD2074
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/kg dw	10/09/00		VM3081
Bromomethane	<3ug/kg dw	10/09/00		VM3081
Vinyl Chloride	<2ug/kg dw	10/09/00		VM3081
Chloroethane	<3ug/kg dw	10/09/00		VM3081
Methylene Chloride	14ug/kg dw	10/09/00	44	VM3081
Acetone	<10ug/kg dw	10/09/00		VM3081
Carbon Disulfide	<3ug/kg dw	10/09/00		VM3081
1,1-Dichloroethene	<3ug/kg dw	10/09/00		VM3081
1,1-Dichloroethane	<3ug/kg dw	10/09/00		VM3081
trans-1,2-Dichloroethene	<3ug/kg dw	10/09/00		VM3081
cis-1,2-Dichloroethene	<3ug/kg dw	10/09/00		VM3081
Chloroform	<3ug/kg dw	10/09/00		VM3081
1,2-Dichloroethane	<3ug/kg dw	10/09/00		VM3081
2-Butanone	<10ug/kg dw	10/09/00		VM3081
1,1,1-Trichloroethane	<3ug/kg dw	10/09/00		VM3081
Carbon Tetrachloride	<3ug/kg dw	10/09/00		VM3081
Bromodichloromethane	<3ug/kg dw	10/09/00		VM3081
1,2-Dichloropropane	<3ug/kg dw	10/09/00		VM3081
cis-1,3-Dichloropropene	<3ug/kg dw	10/09/00		VM3081
Trichloroethene	<3ug/kg dw	10/09/00		VM3081
Dibromochloromethane	<3ug/kg dw	10/09/00		VM3081
1,1,2-Trichloroethane	<3ug/kg dw	10/09/00		VM3081
Benzene	<3ug/kg dw	10/09/00		VM3081
trans-1,3-Dichloropropene	<3ug/kg dw	10/09/00		VM3081
Bromoform	<3ug/kg dw	10/09/00		VM3081
4-Methyl-2-pentanone	<10ug/kg dw	10/09/00		VM3081
2-Hexanone	<10ug/kg dw	10/09/00		VM3081
Tetrachloroethene	<3ug/kg dw	10/09/00		VM3081
1,1,2,2-Tetrachloroethane	<3ug/kg dw	10/09/00		VM3081
Toluene	<3ug/kg dw	10/09/00		VM3081
Chlorobenzene	<3ug/kg dw	10/09/00		VM3081
Ethylbenzene	<3ug/kg dw	10/09/00		VM3081
Styrene	<3ug/kg dw	10/09/00		VM3081
m-Xylene and p-Xylene	<3ug/kg dw	10/09/00		VM3081
o-Xylene	<3ug/kg dw	10/09/00		VM3081
Tentatively Identifiable Compounds	See Attached	10/09/00		VM3081

dw = Dry weight

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

27900133

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_

Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix: (soil/water) SOIL Lab Sample ID: 27900133

Sample wt/vol: 5.0 (g/ml) G Lab File ID: D3787.D

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: not dec. 3 Date Analyzed: 10/9/00

GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	6.33	18	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS SS-4-30-32 10/3 1340H 10/03/00 G

ULI I.D.: 27900134

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	97%	10/06/00		WD2074
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/kg dw	10/10/00		VM3085
Bromomethane	<3ug/kg dw	10/10/00		VM3085
Vinyl Chloride	<2ug/kg dw	10/10/00		VM3085
Chloroethane	<3ug/kg dw	10/10/00		VM3085
Methylene Chloride	13ug/kg dw	10/10/00	44	VM3085
Acetone	47ug/kg dw	10/10/00	44	VM3085
Carbon Disulfide	<3ug/kg dw	10/10/00		VM3085
1,1-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
1,1-Dichloroethane	<3ug/kg dw	10/10/00		VM3085
trans-1,2-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
cis-1,2-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
Chloroform	<3ug/kg dw	10/10/00		VM3085
1,2-Dichloroethane	<3ug/kg dw	10/10/00		VM3085
2-Butanone	<10ug/kg dw	10/10/00		VM3085
1,1,1-Trichloroethane	<3ug/kg dw	10/10/00		VM3085
Carbon Tetrachloride	<3ug/kg dw	10/10/00		VM3085
Bromodichloromethane	<3ug/kg dw	10/10/00		VM3085
1,2-Dichloropropane	<3ug/kg dw	10/10/00		VM3085
cis-1,3-Dichloropropene	<3ug/kg dw	10/10/00		VM3085
Trichloroethene	<3ug/kg dw	10/10/00		VM3085
Dibromochloromethane	<3ug/kg dw	10/10/00		VM3085
1,1,2-Trichloroethane	<3ug/kg dw	10/10/00		VM3085
Benzene	<3ug/kg dw	10/10/00		VM3085
trans-1,3-Dichloropropene	<3ug/kg dw	10/10/00		VM3085
Bromoform	<3ug/kg dw	10/10/00		VM3085
4-Methyl-2-pentanone	<10ug/kg dw	10/10/00		VM3085
2-Hexanone	<10ug/kg dw	10/10/00		VM3085
Tetrachloroethene	<3ug/kg dw	10/10/00		VM3085
1,1,2,2-Tetrachloroethane	<3ug/kg dw	10/10/00		VM3085
Toluene	<3ug/kg dw	10/10/00		VM3085
Chlorobenzene	<3ug/kg dw	10/10/00		VM3085
Ethylbenzene	<3ug/kg dw	10/10/00		VM3085
Styrene	<3ug/kg dw	10/10/00		VM3085
m-Xylene and p-Xylene	<3ug/kg dw	10/10/00		VM3085
o-Xylene	<3ug/kg dw	10/10/00		VM3085
Tentatively Identifiable Compounds	See Attached	10/10/00		VM3085

dw = Dry weight

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

27900134

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_  
Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: VM3085  
Matrix: (soil/water) SOIL Lab Sample ID: 27900134  
Sample wt/vol: 5.0 (g/ml) G Lab File ID: D3795.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. 3 Date Analyzed: 10/10/00  
GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0  
Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 2

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	6.35	20	JN
2. 000091-57-6	Naphthalene, 2-methyl-	18.38	20	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS SS-2-16-20 10/3 1415H 10/03/00 G

ULI I.D.: 27900135

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	94%	10/06/00		WD2074
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/kg dw	10/10/00		VM3085
Bromomethane	<3ug/kg dw	10/10/00		VM3085
Vinyl Chloride	<2ug/kg dw	10/10/00		VM3085
Chloroethane	<3ug/kg dw	10/10/00		VM3085
Methylene Chloride	14ug/kg dw	10/10/00	44	VM3085
Acetone	210ug/kg dw	10/10/00		VM3085
Carbon Disulfide	<3ug/kg dw	10/10/00		VM3085
1,1-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
1,1-Dichloroethane	<3ug/kg dw	10/10/00		VM3085
trans-1,2-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
cis-1,2-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
Chloroform	<3ug/kg dw	10/10/00		VM3085
1,2-Dichloroethane	<3ug/kg dw	10/10/00		VM3085
2-Butanone	<11ug/kg dw	10/10/00		VM3085
1,1,1-Trichloroethane	<3ug/kg dw	10/10/00		VM3085
Carbon Tetrachloride	<3ug/kg dw	10/10/00		VM3085
Bromodichloromethane	<3ug/kg dw	10/10/00		VM3085
1,2-Dichloropropane	<3ug/kg dw	10/10/00		VM3085
cis-1,3-Dichloropropene	<3ug/kg dw	10/10/00		VM3085
Trichloroethene	<3ug/kg dw	10/10/00		VM3085
Dibromochloromethane	<3ug/kg dw	10/10/00		VM3085
1,1,2-Trichloroethane	<3ug/kg dw	10/10/00		VM3085
Benzene	<3ug/kg dw	10/10/00		VM3085
trans-1,3-Dichloropropene	<3ug/kg dw	10/10/00		VM3085
Bromoform	<3ug/kg dw	10/10/00		VM3085
4-Methyl-2-pentanone	<11ug/kg dw	10/10/00		VM3085
2-Hexanone	<11ug/kg dw	10/10/00		VM3085
Tetrachloroethene	<3ug/kg dw	10/10/00		VM3085
1,1,2,2-Tetrachloroethane	<3ug/kg dw	10/10/00		VM3085
Toluene	<3ug/kg dw	10/10/00		VM3085
Chlorobenzene	<3ug/kg dw	10/10/00		VM3085
Ethylbenzene	<3ug/kg dw	10/10/00		VM3085
Styrene	<3ug/kg dw	10/10/00		VM3085
m-Xylene and p-Xylene	<3ug/kg dw	10/10/00		VM3085
o-Xylene	<3ug/kg dw	10/10/00		VM3085
Tentatively Identifiable Compounds	See Attached	10/10/00		VM3085

dw = Dry weight

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

**27900135**

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_  
Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_  
Matrix: (soil/water) SOIL Lab Sample ID: 27900135  
Sample wt/vol: 5.0 (g/ml) G Lab File ID: D3796.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. 6 Date Analyzed: 10/10/00  
GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0  
Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 2

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	3.60	7	J
2. 000110-54-3	Hexane	6.36	23	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS SS-2-20-24 10/3 1435H 10/03/00 G

ULI I.D.: 27900136

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	97%	10/06/00		WD2074
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/kg dw	10/11/00		VM3088
Bromomethane	<3ug/kg dw	10/11/00		VM3088
Vinyl Chloride	<2ug/kg dw	10/11/00		VM3088
Chloroethane	<3ug/kg dw	10/11/00		VM3088
Methylene Chloride	9ug/kg dw	10/11/00	44	VM3088
Acetone	25ug/kg dw	10/11/00	44	VM3088
Carbon Disulfide	<3ug/kg dw	10/11/00		VM3088
1,1-Dichloroethene	<3ug/kg dw	10/11/00		VM3088
1,1-Dichloroethane	<3ug/kg dw	10/11/00		VM3088
trans-1,2-Dichloroethene	<3ug/kg dw	10/11/00		VM3088
cis-1,2-Dichloroethene	<3ug/kg dw	10/11/00		VM3088
Chloroform	<3ug/kg dw	10/11/00		VM3088
1,2-Dichloroethane	<3ug/kg dw	10/11/00		VM3088
2-Butanone	<10ug/kg dw	10/11/00		VM3088
1,1,1-Trichloroethane	<3ug/kg dw	10/11/00		VM3088
Carbon Tetrachloride	<3ug/kg dw	10/11/00		VM3088
Bromodichloromethane	<3ug/kg dw	10/11/00		VM3088
1,2-Dichloropropane	<3ug/kg dw	10/11/00		VM3088
cis-1,3-Dichloropropene	<3ug/kg dw	10/11/00		VM3088
Trichloroethene	<3ug/kg dw	10/11/00		VM3088
Dibromochloromethane	<3ug/kg dw	10/11/00		VM3088
1,1,2-Trichloroethane	<3ug/kg dw	10/11/00		VM3088
Benzene	<3ug/kg dw	10/11/00		VM3088
trans-1,3-Dichloropropene	<3ug/kg dw	10/11/00		VM3088
Bromoform	<3ug/kg dw	10/11/00		VM3088
4-Methyl-2-pentanone	<10ug/kg dw	10/11/00		VM3088
2-Hexanone	<10ug/kg dw	10/11/00		VM3088
Tetrachloroethene	<3ug/kg dw	10/11/00		VM3088
1,1,2,2-Tetrachloroethane	<3ug/kg dw	10/11/00		VM3088
Toluene	<3ug/kg dw	10/11/00		VM3088
Chlorobenzene	<3ug/kg dw	10/11/00		VM3088
Ethylbenzene	<3ug/kg dw	10/11/00		VM3088
Styrene	<3ug/kg dw	10/11/00		VM3088
m-Xylene and p-Xylene	<3ug/kg dw	10/11/00		VM3088
o-Xylene	<3ug/kg dw	10/11/00		VM3088
Tentatively Identifiable Compounds	None Detected	10/11/00		VM3088

dw = Dry weight

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *WJG*  
QC: *WJG*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS SS-2-30-32 10/3 1450H 10/03/00 G

ULI I.D.: 27900137

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	96%	10/06/00		WD2074
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/kg dw	10/10/00		VM3085
Bromomethane	<3ug/kg dw	10/10/00		VM3085
Vinyl Chloride	<2ug/kg dw	10/10/00		VM3085
Chloroethane	<3ug/kg dw	10/10/00		VM3085
Methylene Chloride	15ug/kg dw	10/10/00	44	VM3085
Acetone	150ug/kg dw	10/10/00		VM3085
Carbon Disulfide	<3ug/kg dw	10/10/00		VM3085
1,1-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
1,1-Dichloroethane	<3ug/kg dw	10/10/00		VM3085
trans-1,2-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
cis-1,2-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
Chloroform	<3ug/kg dw	10/10/00		VM3085
1,2-Dichloroethane	<3ug/kg dw	10/10/00		VM3085
2-Butanone	<10ug/kg dw	10/10/00		VM3085
1,1,1-Trichloroethane	<3ug/kg dw	10/10/00		VM3085
Carbon Tetrachloride	<3ug/kg dw	10/10/00		VM3085
Bromodichloromethane	<3ug/kg dw	10/10/00		VM3085
1,2-Dichloropropane	<3ug/kg dw	10/10/00		VM3085
cis-1,3-Dichloropropene	<3ug/kg dw	10/10/00		VM3085
Trichloroethene	<3ug/kg dw	10/10/00		VM3085
Dibromochloromethane	<3ug/kg dw	10/10/00		VM3085
1,1,2-Trichloroethane	<3ug/kg dw	10/10/00		VM3085
Benzene	<3ug/kg dw	10/10/00		VM3085
trans-1,3-Dichloropropene	<3ug/kg dw	10/10/00		VM3085
Bromoform	<3ug/kg dw	10/10/00		VM3085
4-Methyl-2-pentanone	<10ug/kg dw	10/10/00		VM3085
2-Hexanone	<10ug/kg dw	10/10/00		VM3085
Tetrachloroethene	<3ug/kg dw	10/10/00		VM3085
1,1,2,2-Tetrachloroethane	<3ug/kg dw	10/10/00		VM3085
Toluene	<3ug/kg dw	10/10/00		VM3085
Chlorobenzene	<3ug/kg dw	10/10/00		VM3085
Ethylbenzene	<3ug/kg dw	10/10/00		VM3085
Styrene	<3ug/kg dw	10/10/00		VM3085
m-Xylene and p-Xylene	<3ug/kg dw	10/10/00		VM3085
o-Xylene	<3ug/kg dw	10/10/00		VM3085
Tentatively Identifiable Compounds	See Attached	10/10/00		VM3085

dw = Dry weight

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

**27900137**

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_  
Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: VM3085  
Matrix: (soil/water) SOIL Lab Sample ID: 27900137  
Sample wt/vol: 5.0 (g/ml) G Lab File ID: D3798.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. 4 Date Analyzed: 10/10/00  
GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0  
Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 2

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	2.91	8	J
2. 000110-54-3	Hexane	6.35	23	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS SS-1-16-20 10/3 1540H 10/03/00 G

ULI I.D.: 27900138

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	98%	10/06/00		WD2074
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/kg dw	10/10/00		VM3085
Bromomethane	<3ug/kg dw	10/10/00		VM3085
Vinyl Chloride	<2ug/kg dw	10/10/00		VM3085
Chloroethane	<3ug/kg dw	10/10/00		VM3085
Methylene Chloride	17ug/kg dw	10/10/00	44	VM3085
Acetone	<10ug/kg dw	10/10/00		VM3085
Carbon Disulfide	<3ug/kg dw	10/10/00		VM3085
1,1-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
1,1-Dichloroethane	<3ug/kg dw	10/10/00		VM3085
trans-1,2-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
cis-1,2-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
Chloroform	<3ug/kg dw	10/10/00		VM3085
1,2-Dichloroethane	<3ug/kg dw	10/10/00		VM3085
2-Butanone	<10ug/kg dw	10/10/00		VM3085
1,1,1-Trichloroethane	<3ug/kg dw	10/10/00		VM3085
Carbon Tetrachloride	<3ug/kg dw	10/10/00		VM3085
Bromodichloromethane	<3ug/kg dw	10/10/00		VM3085
1,2-Dichloropropane	<3ug/kg dw	10/10/00		VM3085
cis-1,3-Dichloropropene	<3ug/kg dw	10/10/00		VM3085
Trichloroethene	<3ug/kg dw	10/10/00		VM3085
Dibromochloromethane	<3ug/kg dw	10/10/00		VM3085
1,1,2-Trichloroethane	<3ug/kg dw	10/10/00		VM3085
Benzene	<3ug/kg dw	10/10/00		VM3085
trans-1,3-Dichloropropene	<3ug/kg dw	10/10/00		VM3085
Bromoform	<3ug/kg dw	10/10/00		VM3085
4-Methyl-2-pentanone	<10ug/kg dw	10/10/00		VM3085
2-Hexanone	<10ug/kg dw	10/10/00		VM3085
Tetrachloroethene	<3ug/kg dw	10/10/00		VM3085
1,1,2,2-Tetrachloroethane	<3ug/kg dw	10/10/00		VM3085
Toluene	<3ug/kg dw	10/10/00		VM3085
Chlorobenzene	<3ug/kg dw	10/10/00		VM3085
Ethylbenzene	<3ug/kg dw	10/10/00		VM3085
Styrene	<3ug/kg dw	10/10/00		VM3085
m-Xylene and p-Xylene	<3ug/kg dw	10/10/00		VM3085
o-Xylene	<3ug/kg dw	10/10/00		VM3085
Tentatively Identifiable Compounds	See Attached	10/10/00		VM3085

dw = Dry weight

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

27900138

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_  
Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: VM3085  
Matrix: (soil/water) SOIL Lab Sample ID: 27900138  
Sample wt/vol: 5.0 (g/ml) G Lab File ID: D3799.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. 2 Date Analyzed: 10/10/00  
GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0  
Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

Number TICs found: 1

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	6.38	20	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *CJS*  
QC: *WJD*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS SS-1-22-24 10/3 1547H 10/03/00 G

ULI I.D.: 27900139

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	97%	10/06/00		WD2074
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/kg dw	10/10/00		VM3085
Bromomethane	<3ug/kg dw	10/10/00		VM3085
Vinyl Chloride	<2ug/kg dw	10/10/00		VM3085
Chloroethane	<3ug/kg dw	10/10/00		VM3085
Methylene Chloride	13ug/kg dw	10/10/00	44	VM3085
Acetone	<10ug/kg dw	10/10/00		VM3085
Carbon Disulfide	<3ug/kg dw	10/10/00		VM3085
1,1-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
1,1-Dichloroethane	<3ug/kg dw	10/10/00		VM3085
trans-1,2-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
cis-1,2-Dichloroethene	<3ug/kg dw	10/10/00		VM3085
Chloroform	<3ug/kg dw	10/10/00		VM3085
1,2-Dichloroethane	<3ug/kg dw	10/10/00		VM3085
2-Butanone	<10ug/kg dw	10/10/00		VM3085
1,1,1-Trichloroethane	<3ug/kg dw	10/10/00		VM3085
Carbon Tetrachloride	<3ug/kg dw	10/10/00		VM3085
Bromodichloromethane	<3ug/kg dw	10/10/00		VM3085
1,2-Dichloropropane	<3ug/kg dw	10/10/00		VM3085
cis-1,3-Dichloropropene	<3ug/kg dw	10/10/00		VM3085
Trichloroethene	<3ug/kg dw	10/10/00		VM3085
Dibromochloromethane	<3ug/kg dw	10/10/00		VM3085
1,1,2-Trichloroethane	<3ug/kg dw	10/10/00		VM3085
Benzene	<3ug/kg dw	10/10/00		VM3085
trans-1,3-Dichloropropene	<3ug/kg dw	10/10/00		VM3085
Bromoform	<3ug/kg dw	10/10/00		VM3085
4-Methyl-2-pentanone	<10ug/kg dw	10/10/00		VM3085
2-Hexanone	<10ug/kg dw	10/10/00		VM3085
Tetrachloroethene	<3ug/kg dw	10/10/00		VM3085
1,1,2,2-Tetrachloroethane	<3ug/kg dw	10/10/00		VM3085
Toluene	<3ug/kg dw	10/10/00		VM3085
Chlorobenzene	<3ug/kg dw	10/10/00		VM3085
Ethylbenzene	<3ug/kg dw	10/10/00		VM3085
Styrene	<3ug/kg dw	10/10/00		VM3085
m-Xylene and p-Xylene	<3ug/kg dw	10/10/00		VM3085
o-Xylene	<3ug/kg dw	10/10/00		VM3085
Tentatively Identifiable Compounds	See Attached	10/10/00		VM3085

dw = Dry weight

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

27900139

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_  
Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: VM3085  
Matrix: (soil/water) SOIL Lab Sample ID: 27900139  
Sample wt/vol: 5.0 (g/ml) G Lab File ID: D3800.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. 3 Date Analyzed: 10/10/00  
GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0  
Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	6.36	20	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *CJS*  
QC: *WJG*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS SS-1-30-32 10/3 1605H 10/03/00 G

ULI I.D.: 27900140

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	78%	10/06/00		WD2074
TCL Volatiles by EPA Method 8260				
Chloromethane	<4ug/kg dw	10/10/00		VM3085
Bromomethane	<4ug/kg dw	10/10/00		VM3085
Vinyl Chloride	<3ug/kg dw	10/10/00		VM3085
Chloroethane	<4ug/kg dw	10/10/00		VM3085
Methylene Chloride	22ug/kg dw	10/10/00	44	VM3085
Acetone	<13ug/kg dw	10/10/00		VM3085
Carbon Disulfide	<4ug/kg dw	10/10/00		VM3085
1,1-Dichloroethene	<4ug/kg dw	10/10/00		VM3085
1,1-Dichloroethane	<4ug/kg dw	10/10/00		VM3085
trans-1,2-Dichloroethene	<4ug/kg dw	10/10/00		VM3085
cis-1,2-Dichloroethene	<4ug/kg dw	10/10/00		VM3085
Chloroform	<4ug/kg dw	10/10/00		VM3085
1,2-Dichloroethane	<4ug/kg dw	10/10/00		VM3085
2-Butanone	<13ug/kg dw	10/10/00		VM3085
1,1,1-Trichloroethane	<4ug/kg dw	10/10/00		VM3085
Carbon Tetrachloride	<4ug/kg dw	10/10/00		VM3085
Bromodichloromethane	<4ug/kg dw	10/10/00		VM3085
1,2-Dichloropropane	<4ug/kg dw	10/10/00		VM3085
cis-1,3-Dichloropropene	<4ug/kg dw	10/10/00		VM3085
Trichloroethene	<4ug/kg dw	10/10/00		VM3085
Dibromochloromethane	<4ug/kg dw	10/10/00		VM3085
1,1,2-Trichloroethane	<4ug/kg dw	10/10/00		VM3085
Benzene	<4ug/kg dw	10/10/00		VM3085
trans-1,3-Dichloropropene	<4ug/kg dw	10/10/00		VM3085
Bromoform	<4ug/kg dw	10/10/00		VM3085
4-Methyl-2-pentanone	<13ug/kg dw	10/10/00		VM3085
2-Hexanone	<13ug/kg dw	10/10/00		VM3085
Tetrachloroethene	<4ug/kg dw	10/10/00		VM3085
1,1,2,2-Tetrachloroethane	<4ug/kg dw	10/10/00		VM3085
Toluene	<4ug/kg dw	10/10/00		VM3085
Chlorobenzene	<4ug/kg dw	10/10/00		VM3085
Ethylbenzene	<4ug/kg dw	10/10/00		VM3085
Styrene	<4ug/kg dw	10/10/00		VM3085
m-Xylene and p-Xylene	<4ug/kg dw	10/10/00		VM3085
o-Xylene	<4ug/kg dw	10/10/00		VM3085
Tentatively Identifiable Compounds	See Attached	10/10/00		VM3085

dw = Dry weight

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

**27900140**

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_  
Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: VM3085  
Matrix: (soil/water) SOIL Lab Sample ID: 27900140  
Sample wt/vol: 5.0 (g/ml) G Lab File ID: D3801.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. 22 Date Analyzed: 10/10/00  
GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0  
Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

Number TICs found: 1 (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	6.39	28	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *CJS*  
QC: *WJ*  
Lab I.D.: 10170  
96002 WESTBURY  
CLEANERS MW-3 1200H 10/03/00 G

ULI I.D.: 27900141

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<60ug/l	10/11/00	05	VM3088
Bromomethane	<60ug/l	10/11/00	05	VM3088
Vinyl Chloride	<40ug/l	10/11/00	05	VM3088
Chloroethane	<60ug/l	10/11/00	05	VM3088
Methylene Chloride	84ug/l	10/11/00	44	VM3088
Acetone	<200ug/l	10/11/00	05	VM3088
Carbon Disulfide	<60ug/l	10/11/00	05	VM3088
1,1-Dichloroethene	<60ug/l	10/11/00	05	VM3088
1,1-Dichloroethane	<60ug/l	10/11/00	05	VM3088
trans-1,2-Dichloroethene	<60ug/l	10/11/00	05	VM3088
cis-1,2-Dichloroethene	<60ug/l	10/11/00	05	VM3088
Chloroform	<60ug/l	10/11/00	05	VM3088
1,2-Dichloroethane	<60ug/l	10/11/00	05	VM3088
2-Butanone	<200ug/l	10/11/00	05	VM3088
1,1,1-Trichloroethane	<60ug/l	10/11/00	05	VM3088
Carbon Tetrachloride	<60ug/l	10/11/00	05	VM3088
Bromodichloromethane	<60ug/l	10/11/00	05	VM3088
1,2-Dichloropropane	<60ug/l	10/11/00	05	VM3088
cis-1,3-Dichloropropene	<60ug/l	10/11/00	05	VM3088
Trichloroethene	<60ug/l	10/11/00	05	VM3088
Dibromochloromethane	<60ug/l	10/11/00	05	VM3088
1,1,2-Trichloroethane	<60ug/l	10/11/00	05	VM3088
Benzene	<60ug/l	10/11/00	05	VM3088
trans-1,3-Dichloropropene	<60ug/l	10/11/00	05	VM3088
Bromoform	<60ug/l	10/11/00	05	VM3088
4-Methyl-2-pentanone	<200ug/l	10/11/00	05	VM3088
2-Hexanone	<200ug/l	10/11/00	05	VM3088
Tetrachloroethene	1200ug/l	10/11/00		VM3088
1,1,2,2-Tetrachloroethane	<60ug/l	10/11/00	05	VM3088
Toluene	<60ug/l	10/11/00	05	VM3088
Chlorobenzene	<60ug/l	10/11/00	05	VM3088
Ethylbenzene	<60ug/l	10/11/00	05	VM3088
Styrene	<60ug/l	10/11/00	05	VM3088
m-Xylene and p-Xylene	<60ug/l	10/11/00	05	VM3088
o-Xylene	<60ug/l	10/11/00	05	VM3088
Tentatively Identifiable Compounds	None Detected	10/11/00		VM3088

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170  
96002 WESTBURY  
CLEANERS MW-2 1305H 10/03/00 G

ULI I.D.: 27900142

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<150ug/l	10/11/00	05	VM3088
Bromomethane	<150ug/l	10/11/00	05	VM3088
Vinyl Chloride	<100ug/l	10/11/00	05	VM3088
Chloroethane	<150ug/l	10/11/00	05	VM3088
Methylene Chloride	210ug/l	10/11/00	44	VM3088
Acetone	<500ug/l	10/11/00	05	VM3088
Carbon Disulfide	<150ug/l	10/11/00	05	VM3088
1,1-Dichloroethene	<150ug/l	10/11/00	05	VM3088
1,1-Dichloroethane	<150ug/l	10/11/00	05	VM3088
trans-1,2-Dichloroethene	<150ug/l	10/11/00	05	VM3088
cis-1,2-Dichloroethene	<150ug/l	10/11/00	05	VM3088
Chloroform	<150ug/l	10/11/00	05	VM3088
1,2-Dichloroethane	<150ug/l	10/11/00	05	VM3088
2-Butanone	<500ug/l	10/11/00	05	VM3088
1,1,1-Trichloroethane	<150ug/l	10/11/00	05	VM3088
Carbon Tetrachloride	<150ug/l	10/11/00	05	VM3088
Bromodichloromethane	<150ug/l	10/11/00	05	VM3088
1,2-Dichloropropane	<150ug/l	10/11/00	05	VM3088
cis-1,3-Dichloropropene	<150ug/l	10/11/00	05	VM3088
Trichloroethene	<150ug/l	10/11/00	05	VM3088
Dibromochloromethane	<150ug/l	10/11/00	05	VM3088
1,1,2-Trichloroethane	<150ug/l	10/11/00	05	VM3088
Benzene	<150ug/l	10/11/00	05	VM3088
trans-1,3-Dichloropropene	<150ug/l	10/11/00	05	VM3088
Bromoform	<150ug/l	10/11/00	05	VM3088
4-Methyl-2-pentanone	<500ug/l	10/11/00	05	VM3088
2-Hexanone	<500ug/l	10/11/00	05	VM3088
Tetrachloroethene	5800ug/l	10/11/00		VM3088
1,1,2,2-Tetrachloroethane	<150ug/l	10/11/00	05	VM3088
Toluene	<150ug/l	10/11/00	05	VM3088
Chlorobenzene	<150ug/l	10/11/00	05	VM3088
Ethylbenzene	<150ug/l	10/11/00	05	VM3088
Styrene	<150ug/l	10/11/00	05	VM3088
m-Xylene and p-Xylene	<150ug/l	10/11/00	05	VM3088
o-Xylene	<150ug/l	10/11/00	05	VM3088
Tentatively Identifiable Compounds	None Detected	10/11/00		VM3088

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS MW-1 1350H 10/03/00 G

ULI I.D.: 27900143

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<600ug/l	10/12/00	05	VM3090
Bromomethane	<600ug/l	10/12/00	05	VM3090
Vinyl Chloride	<400ug/l	10/12/00	05	VM3090
Chloroethane	<600ug/l	10/12/00	05	VM3090
Methylene Chloride	<600ug/l	10/12/00	05	VM3090
Acetone	<2000ug/l	10/12/00	05	VM3090
Carbon Disulfide	<600ug/l	10/12/00	05	VM3090
1,1-Dichloroethene	<600ug/l	10/12/00	05	VM3090
1,1-Dichloroethane	<600ug/l	10/12/00	05	VM3090
trans-1,2-Dichloroethene	<600ug/l	10/12/00	05	VM3090
cis-1,2-Dichloroethene	<600ug/l	10/12/00	05	VM3090
Chloroform	<600ug/l	10/12/00	05	VM3090
1,2-Dichloroethane	<600ug/l	10/12/00	05	VM3090
2-Butanone	<2000ug/l	10/12/00	05	VM3090
1,1,1-Trichloroethane	<600ug/l	10/12/00	05	VM3090
Carbon Tetrachloride	<600ug/l	10/12/00	05	VM3090
Bromodichloromethane	<600ug/l	10/12/00	05	VM3090
1,2-Dichloropropane	<600ug/l	10/12/00	05	VM3090
cis-1,3-Dichloropropene	<600ug/l	10/12/00	05	VM3090
Trichloroethene	<600ug/l	10/12/00	05	VM3090
Dibromochloromethane	<600ug/l	10/12/00	05	VM3090
1,1,2-Trichloroethane	<600ug/l	10/12/00	05	VM3090
Benzene	<600ug/l	10/12/00	05	VM3090
trans-1,3-Dichloropropene	<600ug/l	10/12/00	05	VM3090
Bromoform	<600ug/l	10/12/00	05	VM3090
4-Methyl-2-pentanone	<2000ug/l	10/12/00	05	VM3090
2-Hexanone	<2000ug/l	10/12/00	05	VM3090
Tetrachloroethene	16,000ug/l	10/12/00		VM3090
1,1,2,2-Tetrachloroethane	<600ug/l	10/12/00	05	VM3090
Toluene	<600ug/l	10/12/00	05	VM3090
Chlorobenzene	<600ug/l	10/12/00	05	VM3090
Ethylbenzene	<600ug/l	10/12/00	05	VM3090
Styrene	<600ug/l	10/12/00	05	VM3090
m-Xylene and p-Xylene	<600ug/l	10/12/00	05	VM3090
o-Xylene	<600ug/l	10/12/00	05	VM3090
Tentatively Identifiable Compounds	None Detected	10/12/00		VM3090

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL:   
QC:   
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS MW-4 1420H 10/03/00 G

ULI I.D.: 27900144

Matrix: Water

PARAMETERS

RESULTS

DATE ANAL.

KEY

FILE#

TCL Volatiles by EPA Method 8260

Chloromethane	<30ug/l	10/11/00	05	VM3088
Bromomethane	<30ug/l	10/11/00	05	VM3088
Vinyl Chloride	<20ug/l	10/11/00	05	VM3088
Chloroethane	<30ug/l	10/11/00	05	VM3088
Methylene Chloride	<30ug/l	10/11/00	05	VM3088
Acetone	650ug/l	10/11/00	05	VM3088
Carbon Disulfide	<30ug/l	10/11/00	05	VM3088
1,1-Dichloroethene	<30ug/l	10/11/00	05	VM3088
1,1-Dichloroethane	<30ug/l	10/11/00	05	VM3088
trans-1,2-Dichloroethene	<30ug/l	10/11/00	05	VM3088
cis-1,2-Dichloroethene	<30ug/l	10/11/00	05	VM3088
Chloroform	<30ug/l	10/11/00	05	VM3088
1,2-Dichloroethane	<30ug/l	10/11/00	05	VM3088
2-Butanone	<100ug/l	10/11/00	05	VM3088
1,1,1-Trichloroethane	<30ug/l	10/11/00	05	VM3088
Carbon Tetrachloride	<30ug/l	10/11/00	05	VM3088
Bromodichloromethane	<30ug/l	10/11/00	05	VM3088
1,2-Dichloropropane	<30ug/l	10/11/00	05	VM3088
cis-1,3-Dichloropropene	<30ug/l	10/11/00	05	VM3088
Trichloroethene	<30ug/l	10/11/00	05	VM3088
Dibromochloromethane	<30ug/l	10/11/00	05	VM3088
1,1,2-Trichloroethane	<30ug/l	10/11/00	05	VM3088
Benzene	<30ug/l	10/11/00	05	VM3088
trans-1,3-Dichloropropene	<30ug/l	10/11/00	05	VM3088
Bromoform	<30ug/l	10/11/00	05	VM3088
4-Methyl-2-pentanone	<100ug/l	10/11/00	05	VM3088
2-Hexanone	<100ug/l	10/11/00	05	VM3088
Tetrachloroethene	<30ug/l	10/11/00	05	VM3088
1,1,2,2-Tetrachloroethane	<30ug/l	10/11/00	05	VM3088
Toluene	<30ug/l	10/11/00	05	VM3088
Chlorobenzene	<30ug/l	10/11/00	05	VM3088
Ethylbenzene	<30ug/l	10/11/00	05	VM3088
Styrene	<30ug/l	10/11/00	05	VM3088
m-Xylene and p-Xylene	<30ug/l	10/11/00	05	VM3088
o-Xylene	<30ug/l	10/11/00	05	VM3088

Tentatively Identifiable Compounds

None Detected

10/11/00

VM3088

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *ajs*  
QC: *WJG*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS GW 1.2 1000H 10/04/00 G

ULI I.D.: 27900145

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/l	10/10/00		VM3085
Bromomethane	<3ug/l	10/10/00		VM3085
Vinyl Chloride	<2ug/l	10/10/00		VM3085
Chloroethane	<3ug/l	10/10/00		VM3085
Methylene Chloride	3ug/l	10/10/00	44	VM3085
Acetone	<10ug/l	10/10/00		VM3085
Carbon Disulfide	<3ug/l	10/10/00		VM3085
1,1-Dichloroethene	<3ug/l	10/10/00		VM3085
1,1-Dichloroethane	<3ug/l	10/10/00		VM3085
trans-1,2-Dichloroethene	<3ug/l	10/10/00		VM3085
cis-1,2-Dichloroethene	<3ug/l	10/10/00		VM3085
Chloroform	<3ug/l	10/10/00		VM3085
1,2-Dichloroethane	<3ug/l	10/10/00		VM3085
2-Butanone	<10ug/l	10/10/00		VM3085
1,1,1-Trichloroethane	<3ug/l	10/10/00		VM3085
Carbon Tetrachloride	<3ug/l	10/10/00		VM3085
Bromodichloromethane	<3ug/l	10/10/00		VM3085
1,2-Dichloropropane	<3ug/l	10/10/00		VM3085
cis-1,3-Dichloropropene	<3ug/l	10/10/00		VM3085
Trichloroethene	<3ug/l	10/10/00		VM3085
Dibromochloromethane	<3ug/l	10/10/00		VM3085
1,1,2-Trichloroethane	<3ug/l	10/10/00		VM3085
Benzene	<3ug/l	10/10/00		VM3085
trans-1,3-Dichloropropene	<3ug/l	10/10/00		VM3085
Bromoform	<3ug/l	10/10/00		VM3085
4-Methyl-2-pentanone	<10ug/l	10/10/00		VM3085
2-Hexanone	<10ug/l	10/10/00		VM3085
Tetrachloroethene	6ug/l	10/10/00		VM3085
1,1,2,2-Tetrachloroethane	<3ug/l	10/10/00		VM3085
Toluene	<3ug/l	10/10/00		VM3085
Chlorobenzene	<3ug/l	10/10/00		VM3085
Ethylbenzene	<3ug/l	10/10/00		VM3085
Styrene	<3ug/l	10/10/00		VM3085
m-Xylene and p-Xylene	<3ug/l	10/10/00		VM3085
o-Xylene	<3ug/l	10/10/00		VM3085
Tentatively Identifiable Compounds	See Attached	10/10/00		VM3085

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

27900145

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_  
Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: VM3085  
Matrix: (soil/water) WATER Lab Sample ID: 27900145, anson, v  
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: D3803.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/10/00  
GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0  
Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 2

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000768-00-3	Benzene, (1-methyl-1-propenyl)-,	23.91	7	JN
2. 000091-20-3	Naphthalene	25.98	13	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *WJF*  
QC: *WJF*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS GW 1.3 1020H 10/04/00 G

ULI I.D.: 27900146

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/l	10/10/00		VM3085
Bromomethane	<3ug/l	10/10/00		VM3085
Vinyl Chloride	<2ug/l	10/10/00		VM3085
Chloroethane	<3ug/l	10/10/00		VM3085
Methylene Chloride	4ug/l	10/10/00	44	VM3085
Acetone	<10ug/l	10/10/00		VM3085
Carbon Disulfide	<3ug/l	10/10/00		VM3085
1,1-Dichloroethene	<3ug/l	10/10/00		VM3085
1,1-Dichloroethane	<3ug/l	10/10/00		VM3085
trans-1,2-Dichloroethene	<3ug/l	10/10/00		VM3085
cis-1,2-Dichloroethene	<3ug/l	10/10/00		VM3085
Chloroform	<3ug/l	10/10/00		VM3085
1,2-Dichloroethane	<3ug/l	10/10/00		VM3085
2-Butanone	<10ug/l	10/10/00		VM3085
1,1,1-Trichloroethane	<3ug/l	10/10/00		VM3085
Carbon Tetrachloride	<3ug/l	10/10/00		VM3085
Bromodichloromethane	<3ug/l	10/10/00		VM3085
1,2-Dichloropropane	<3ug/l	10/10/00		VM3085
cis-1,3-Dichloropropene	<3ug/l	10/10/00		VM3085
Trichloroethene	<3ug/l	10/10/00		VM3085
Dibromochloromethane	<3ug/l	10/10/00		VM3085
1,1,2-Trichloroethane	<3ug/l	10/10/00		VM3085
Benzene	<3ug/l	10/10/00		VM3085
trans-1,3-Dichloropropene	<3ug/l	10/10/00		VM3085
Bromoform	<3ug/l	10/10/00		VM3085
4-Methyl-2-pentanone	<10ug/l	10/10/00		VM3085
2-Hexanone	<10ug/l	10/10/00		VM3085
Tetrachloroethene	64ug/l	10/10/00		VM3085
1,1,2,2-Tetrachloroethane	<3ug/l	10/10/00		VM3085
Toluene	<3ug/l	10/10/00		VM3085
Chlorobenzene	<3ug/l	10/10/00		VM3085
Ethylbenzene	<3ug/l	10/10/00		VM3085
Styrene	<3ug/l	10/10/00		VM3085
m-Xylene and p-Xylene	<3ug/l	10/10/00		VM3085
o-Xylene	5ug/l	10/10/00		VM3085
Tentatively Identifiable Compounds	See Attached	10/10/00		VM3085

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

27900146

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_

Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: VM3085

Matrix: (soil/water) WATER Lab Sample ID: 27900146

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: D3804.D

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/10/00

GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/LNumber TICs found: 13

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000098-82-8	Benzene, (1-methylethyl)-	20.40	15	JN
2. 000103-65-1	Benzene, propyl-	21.05	9	JN
3. 000611-14-3	Benzene, 1-ethyl-2-methyl-	21.67	24	JN
4. 000108-67-8	Benzene, 1,3,5-trimethyl-	21.90	38	JN
5.	unknown hydrocarbon	23.06	11	J
6. 000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	23.65	6	JN
7. 000768-00-3	Benzene, (1-methyl-1-propenyl)-,	23.91	20	JN
8. 000095-93-2	Benzene, 1,2,4,5-tetramethyl-	24.21	9	JN
9. 000824-22-6	1H-Indene, 2,3-dihydro-4-methyl-	24.83	5	JN
10. 000535-77-3	Benzene, 1-methyl-3-(1-methylet	24.96	5	JN
11. 000824-22-6	1H-Indene, 2,3-dihydro-4-methyl-	25.06	14	JN
12.	unknown hydrocarbon	25.50	5	J
13. 000091-20-3	Napthalene	25.98	32	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS GW 2 10/04/00 G

ULI I.D.: 27900147

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/l	10/10/00		VM3085
Bromomethane	<3ug/l	10/10/00		VM3085
Vinyl Chloride	<2ug/l	10/10/00		VM3085
Chloroethane	<3ug/l	10/10/00		VM3085
Methylene Chloride	6ug/l	10/10/00	44	VM3085
Acetone	<10ug/l	10/10/00		VM3085
Carbon Disulfide	<3ug/l	10/10/00		VM3085
1,1-Dichloroethene	<3ug/l	10/10/00		VM3085
1,1-Dichloroethane	<3ug/l	10/10/00		VM3085
trans-1,2-Dichloroethene	<3ug/l	10/10/00		VM3085
cis-1,2-Dichloroethene	<3ug/l	10/10/00		VM3085
Chloroform	<3ug/l	10/10/00		VM3085
1,2-Dichloroethane	<3ug/l	10/10/00		VM3085
2-Butanone	<10ug/l	10/10/00		VM3085
1,1,1-Trichloroethane	<3ug/l	10/10/00		VM3085
Carbon Tetrachloride	<3ug/l	10/10/00		VM3085
Bromodichloromethane	<3ug/l	10/10/00		VM3085
1,2-Dichloropropane	<3ug/l	10/10/00		VM3085
cis-1,3-Dichloropropene	<3ug/l	10/10/00		VM3085
Trichloroethene	<3ug/l	10/10/00		VM3085
Dibromochloromethane	<3ug/l	10/10/00		VM3085
1,1,2-Trichloroethane	<3ug/l	10/10/00		VM3085
Benzene	<3ug/l	10/10/00		VM3085
trans-1,3-Dichloropropene	<3ug/l	10/10/00		VM3085
Bromoform	<3ug/l	10/10/00		VM3085
4-Methyl-2-pentanone	<10ug/l	10/10/00		VM3085
2-Hexanone	<10ug/l	10/10/00		VM3085
Tetrachloroethene	23ug/l	10/10/00		VM3085
1,1,2,2-Tetrachloroethane	<3ug/l	10/10/00		VM3085
Toluene	<3ug/l	10/10/00		VM3085
Chlorobenzene	<3ug/l	10/10/00		VM3085
Ethylbenzene	<3ug/l	10/10/00		VM3085
Styrene	<3ug/l	10/10/00		VM3085
m-Xylene and p-Xylene	<3ug/l	10/10/00		VM3085
o-Xylene	<3ug/l	10/10/00		VM3085
Tentatively Identifiable Compounds	None Detected	10/10/00		VM3085

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *C/S*  
QC: *WTR*  
Lab I.D. 10170

96002 WESTBURY  
CLEANERS GW 2.2 10/04/00 G

ULI I.D.: 27900148

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/l	10/10/00		VM3085
Bromomethane	<3ug/l	10/10/00		VM3085
Vinyl Chloride	<2ug/l	10/10/00		VM3085
Chloroethane	<3ug/l	10/10/00		VM3085
Methylene Chloride	6ug/l	10/10/00	44	VM3085
Acetone	<10ug/l	10/10/00		VM3085
Carbon Disulfide	<3ug/l	10/10/00		VM3085
1,1-Dichloroethene	<3ug/l	10/10/00		VM3085
1,1-Dichloroethane	<3ug/l	10/10/00		VM3085
trans-1,2-Dichloroethene	<3ug/l	10/10/00		VM3085
cis-1,2-Dichloroethene	<3ug/l	10/10/00		VM3085
Chloroform	<3ug/l	10/10/00		VM3085
1,2-Dichloroethane	<3ug/l	10/10/00		VM3085
2-Butanone	<10ug/l	10/10/00		VM3085
1,1,1-Trichloroethane	<3ug/l	10/10/00		VM3085
Carbon Tetrachloride	<3ug/l	10/10/00		VM3085
Bromodichloromethane	<3ug/l	10/10/00		VM3085
1,2-Dichloropropane	<3ug/l	10/10/00		VM3085
cis-1,3-Dichloropropene	<3ug/l	10/10/00		VM3085
Trichloroethene	<3ug/l	10/10/00		VM3085
Dibromochloromethane	<3ug/l	10/10/00		VM3085
1,1,2-Trichloroethane	<3ug/l	10/10/00		VM3085
Benzene	<3ug/l	10/10/00		VM3085
trans-1,3-Dichloropropene	<3ug/l	10/10/00		VM3085
Bromoform	<3ug/l	10/10/00		VM3085
4-Methyl-2-pentanone	<10ug/l	10/10/00		VM3085
2-Hexanone	<10ug/l	10/10/00		VM3085
Tetrachloroethene	24ug/l	10/10/00		VM3085
1,1,2,2-Tetrachloroethane	<3ug/l	10/10/00		VM3085
Toluene	<3ug/l	10/10/00		VM3085
Chlorobenzene	<3ug/l	10/10/00		VM3085
Ethylbenzene	<3ug/l	10/10/00		VM3085
Styrene	<3ug/l	10/10/00		VM3085
m-Xylene and p-Xylene	<3ug/l	10/10/00		VM3085
o-Xylene	<3ug/l	10/10/00		VM3085
Tentatively Identifiable Compounds	See Attached	10/10/00		VM3085

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

**27900148**

Lab Name: UPSTATE LABS INC. Contract: \_\_\_\_\_  
Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: VM3085  
Matrix: (soil/water) WATER Lab Sample ID: 27900148  
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: D3806.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/10/00  
GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0  
Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 3

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000096-14-0	Pentane, 3-methyl-	5.78	8	JN
2. 000767-58-8	Indan, 1-methyl-	23.92	25	JN
3. 000091-20-3	Naphthalene	25.99	21	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *WJF*  
QC: *WJF*  
Lab I.D.: 10170  
96002 WESTBURY  
CLEANERS GW 2.3 10/04/00 G

ULI I.D.: 27900149

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<150ug/l	10/11/00	05	VM3088
Bromomethane	<150ug/l	10/11/00	05	VM3088
Vinyl Chloride	<100ug/l	10/11/00	05	VM3088
Chloroethane	<150ug/l	10/11/00	05	VM3088
Methylene Chloride	250ug/l	10/11/00	44	VM3088
Acetone	<500ug/l	10/11/00	05	VM3088
Carbon Disulfide	<150ug/l	10/11/00	05	VM3088
1,1-Dichloroethene	<150ug/l	10/11/00	05	VM3088
1,1-Dichloroethane	<150ug/l	10/11/00	05	VM3088
trans-1,2-Dichloroethene	<150ug/l	10/11/00	05	VM3088
cis-1,2-Dichloroethene	<150ug/l	10/11/00	05	VM3088
Chloroform	<150ug/l	10/11/00	05	VM3088
1,2-Dichloroethane	<150ug/l	10/11/00	05	VM3088
2-Butanone	<500ug/l	10/11/00	05	VM3088
1,1,1-Trichloroethane	<150ug/l	10/11/00	05	VM3088
Carbon Tetrachloride	<150ug/l	10/11/00	05	VM3088
Bromodichloromethane	<150ug/l	10/11/00	05	VM3088
1,2-Dichloropropane	<150ug/l	10/11/00	05	VM3088
cis-1,3-Dichloropropene	<150ug/l	10/11/00	05	VM3088
Trichloroethene	<150ug/l	10/11/00	05	VM3088
Dibromochloromethane	<150ug/l	10/11/00	05	VM3088
1,1,2-Trichloroethane	<150ug/l	10/11/00	05	VM3088
Benzene	<150ug/l	10/11/00	05	VM3088
trans-1,3-Dichloropropene	<150ug/l	10/11/00	05	VM3088
Bromoform	<150ug/l	10/11/00	05	VM3088
4-Methyl-2-pentanone	<500ug/l	10/11/00	05	VM3088
2-Hexanone	<500ug/l	10/11/00	05	VM3088
Tetrachloroethene	3700ug/l	10/11/00		VM3088
1,1,2,2-Tetrachloroethane	<150ug/l	10/11/00	05	VM3088
Toluene	<150ug/l	10/11/00	05	VM3088
Chlorobenzene	<150ug/l	10/11/00	05	VM3088
Ethylbenzene	<150ug/l	10/11/00	05	VM3088
Styrene	<150ug/l	10/11/00	05	VM3088
m-Xylene and p-Xylene	<150ug/l	10/11/00	05	VM3088
o-Xylene	<150ug/l	10/11/00	05	VM3088
Tentatively Identifiable Compounds	None Detected	10/11/00		VM3088

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170  
96002 WESTBURY CLEANERS  
ULI TRIP BLANK 10/04/00

ULI I.D.: 27900150

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/l	10/11/00		VM3088
Bromomethane	<3ug/l	10/11/00		VM3088
Vinyl Chloride	<2ug/l	10/11/00		VM3088
Chloroethane	<3ug/l	10/11/00		VM3088
Methylene Chloride	3ug/l	10/11/00	44	VM3088
Acetone	<10ug/l	10/11/00		VM3088
Carbon Disulfide	<3ug/l	10/11/00		VM3088
1,1-Dichloroethene	<3ug/l	10/11/00		VM3088
1,1-Dichloroethane	<3ug/l	10/11/00		VM3088
trans-1,2-Dichloroethene	<3ug/l	10/11/00		VM3088
cis-1,2-Dichloroethene	<3ug/l	10/11/00		VM3088
Chloroform	<3ug/l	10/11/00		VM3088
1,2-Dichloroethane	<3ug/l	10/11/00		VM3088
2-Butanone	<10ug/l	10/11/00		VM3088
1,1,1-Trichloroethane	<3ug/l	10/11/00		VM3088
Carbon Tetrachloride	<3ug/l	10/11/00		VM3088
Bromodichloromethane	<3ug/l	10/11/00		VM3088
1,2-Dichloropropane	<3ug/l	10/11/00		VM3088
cis-1,3-Dichloropropene	<3ug/l	10/11/00		VM3088
Trichloroethene	<3ug/l	10/11/00		VM3088
Dibromochloromethane	<3ug/l	10/11/00		VM3088
1,1,2-Trichloroethane	<3ug/l	10/11/00		VM3088
Benzene	<3ug/l	10/11/00		VM3088
trans-1,3-Dichloropropene	<3ug/l	10/11/00		VM3088
Bromoform	<3ug/l	10/11/00		VM3088
4-Methyl-2-pentanone	<10ug/l	10/11/00		VM3088
2-Hexanone	<10ug/l	10/11/00		VM3088
Tetrachloroethene	<3ug/l	10/11/00		VM3088
1,1,2,2-Tetrachloroethane	<3ug/l	10/11/00		VM3088
Toluene	<3ug/l	10/11/00		VM3088
Chlorobenzene	<3ug/l	10/11/00		VM3088
Ethylbenzene	<3ug/l	10/11/00		VM3088
Styrene	<3ug/l	10/11/00		VM3088
m-Xylene and p-Xylene	<3ug/l	10/11/00		VM3088
o-Xylene	<3ug/l	10/11/00		VM3088
Tentatively Identifiable Compounds	None Detected	10/11/00		VM3088

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170

96002 WESTBURY CLEANERS  
GW 1 0950H 10/04/00

ULI I.D.: 27900151

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/l	10/12/00		VM3090
Bromomethane	<3ug/l	10/12/00		VM3090
Vinyl Chloride	<2ug/l	10/12/00		VM3090
Chloroethane	<3ug/l	10/12/00		VM3090
Methylene Chloride	<3ug/l	10/12/00		VM3090
Acetone	<10ug/l	10/12/00		VM3090
Carbon Disulfide	<3ug/l	10/12/00		VM3090
1,1-Dichloroethene	<3ug/l	10/12/00		VM3090
1,1-Dichloroethane	<3ug/l	10/12/00		VM3090
trans-1,2-Dichloroethene	<3ug/l	10/12/00		VM3090
cis-1,2-Dichloroethene	8ug/l	10/12/00		VM3090
Chloroform	<3ug/l	10/12/00		VM3090
1,2-Dichloroethane	<3ug/l	10/12/00		VM3090
2-Butanone	<10ug/l	10/12/00		VM3090
1,1,1-Trichloroethane	<3ug/l	10/12/00		VM3090
Carbon Tetrachloride	<3ug/l	10/12/00		VM3090
Bromodichloromethane	<3ug/l	10/12/00		VM3090
1,2-Dichloropropane	<3ug/l	10/12/00		VM3090
cis-1,3-Dichloropropene	<3ug/l	10/12/00		VM3090
Trichloroethene	4ug/l	10/12/00		VM3090
Dibromochloromethane	<3ug/l	10/12/00		VM3090
1,1,2-Trichloroethane	<3ug/l	10/12/00		VM3090
Benzene	<3ug/l	10/12/00		VM3090
trans-1,3-Dichloropropene	<3ug/l	10/12/00		VM3090
Bromoform	<3ug/l	10/12/00		VM3090
4-Methyl-2-pentanone	<10ug/l	10/12/00		VM3090
2-Hexanone	<10ug/l	10/12/00		VM3090
Tetrachloroethene	4ug/l	10/12/00		VM3090
1,1,2,2-Tetrachloroethane	<3ug/l	10/12/00		VM3090
Toluene	<3ug/l	10/12/00		VM3090
Chlorobenzene	<3ug/l	10/12/00		VM3090
Ethylbenzene	<3ug/l	10/12/00		VM3090
Styrene	<3ug/l	10/12/00		VM3090
m-Xylene and p-Xylene	<3ug/l	10/12/00		VM3090
o-Xylene	<3ug/l	10/12/00		VM3090
Tentatively Identifiable Compounds	None Detected	10/12/00		VM3090

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D. 10170  
96002 WESTBURY CLEANERS  
GW 4 10/04/00 G

ULI I.D.: 27900153

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<30ug/l	10/11/00	05	VM3088
Bromomethane	<30ug/l	10/11/00	05	VM3088
Vinyl Chloride	<20ug/l	10/11/00	05	VM3088
Chloroethane	50ug/l	10/11/00	44	VM3088
Methylene Chloride	910ug/l	10/11/00		VM3088
Acetone	<30ug/l	10/11/00	05	VM3088
Carbon Disulfide	<30ug/l	10/11/00	05	VM3088
1,1-Dichloroethene	<30ug/l	10/11/00	05	VM3088
1,1-Dichloroethane	<30ug/l	10/11/00	05	VM3088
trans-1,2-Dichloroethene	<30ug/l	10/11/00	05	VM3088
cis-1,2-Dichloroethene	<30ug/l	10/11/00	05	VM3088
Chloroform	<30ug/l	10/11/00	05	VM3088
1,2-Dichloroethane	<30ug/l	10/11/00	05	VM3088
2-Butanone	<100ug/l	10/11/00	05	VM3088
1,1,1-Trichloroethane	<30ug/l	10/11/00	05	VM3088
Carbon Tetrachloride	<30ug/l	10/11/00	05	VM3088
Bromodichloromethane	<30ug/l	10/11/00	05	VM3088
1,2-Dichloropropane	<30ug/l	10/11/00	05	VM3088
cis-1,3-Dichloropropene	<30ug/l	10/11/00	05	VM3088
Trichloroethene	<30ug/l	10/11/00	05	VM3088
Dibromochloromethane	<30ug/l	10/11/00	05	VM3088
1,1,2-Trichloroethane	<30ug/l	10/11/00	05	VM3088
Benzene	<30ug/l	10/11/00	05	VM3088
trans-1,3-Dichloropropene	<30ug/l	10/11/00	05	VM3088
Bromoform	<30ug/l	10/11/00	05	VM3088
4-Methyl-2-pentanone	<100ug/l	10/11/00	05	VM3088
2-Hexanone	<100ug/l	10/11/00	05	VM3088
Tetrachloroethene	<30ug/l	10/11/00	05	VM3088
1,1,2,2-Tetrachloroethane	<30ug/l	10/11/00	05	VM3088
Toluene	<30ug/l	10/11/00	05	VM3088
Chlorobenzene	<30ug/l	10/11/00	05	VM3088
Ethylbenzene	<30ug/l	10/11/00	05	VM3088
Styrene	<30ug/l	10/11/00	05	VM3088
m-Xylene and p-Xylene	<30ug/l	10/11/00	05	VM3088
o-Xylene	<30ug/l	10/11/00	05	VM3088
Tentatively Identifiable Compounds	None Detected	10/11/00		VM3088

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS GW 3 0930H 10/05/00 G

ULI I.D.: 28000171

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/l	10/12/00		VM3090
Bromomethane	<3ug/l	10/12/00		VM3090
Vinyl Chloride	<2ug/l	10/12/00		VM3090
Chloroethane	<3ug/l	10/12/00		VM3090
Methylene Chloride	<3ug/l	10/12/00		VM3090
Acetone	<10ug/l	10/12/00		VM3090
Carbon Disulfide	<3ug/l	10/12/00		VM3090
1,1-Dichloroethene	<3ug/l	10/12/00		VM3090
1,1-Dichloroethane	<3ug/l	10/12/00		VM3090
trans-1,2-Dichloroethene	<3ug/l	10/12/00		VM3090
cis-1,2-Dichloroethene	<3ug/l	10/12/00		VM3090
Chloroform	<3ug/l	10/12/00		VM3090
1,2-Dichloroethane	<3ug/l	10/12/00		VM3090
2-Butanone	<10ug/l	10/12/00		VM3090
1,1,1-Trichloroethane	<3ug/l	10/12/00		VM3090
Carbon Tetrachloride	<3ug/l	10/12/00		VM3090
Bromodichloromethane	<3ug/l	10/12/00		VM3090
1,2-Dichloropropane	<3ug/l	10/12/00		VM3090
cis-1,3-Dichloropropene	<3ug/l	10/12/00		VM3090
Trichloroethene	<3ug/l	10/12/00		VM3090
Dibromochloromethane	<3ug/l	10/12/00		VM3090
1,1,2-Trichloroethane	<3ug/l	10/12/00		VM3090
Benzene	<3ug/l	10/12/00		VM3090
trans-1,3-Dichloropropene	<3ug/l	10/12/00		VM3090
Bromoform	<3ug/l	10/12/00		VM3090
4-Methyl-2-pentanone	<10ug/l	10/12/00		VM3090
2-Hexanone	<10ug/l	10/12/00		VM3090
Tetrachloroethene	4ug/l	10/12/00		VM3090
1,1,2,2-Tetrachloroethane	<3ug/l	10/12/00		VM3090
Toluene	<3ug/l	10/12/00		VM3090
Chlorobenzene	<3ug/l	10/12/00		VM3090
Ethylbenzene	<3ug/l	10/12/00		VM3090
Styrene	<3ug/l	10/12/00		VM3090
m-Xylene and p-Xylene	<3ug/l	10/12/00		VM3090
o-Xylene	<3ug/l	10/12/00		VM3090
Tentatively Identifiable Compounds	None Detected	10/12/00		VM3090

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D. V 10170

96002 WESTBURY  
CLEANERS GW 3.2 1000H 10/05/00 G

ULI I.D.: 28000172

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/l	10/12/00		VM3090
Bromomethane	<3ug/l	10/12/00		VM3090
Vinyl Chloride	<2ug/l	10/12/00		VM3090
Chloroethane	<3ug/l	10/12/00		VM3090
Methylene Chloride	<3ug/l	10/12/00		VM3090
Acetone	<10ug/l	10/12/00		VM3090
Carbon Disulfide	<3ug/l	10/12/00		VM3090
1,1-Dichloroethene	<3ug/l	10/12/00		VM3090
1,1-Dichloroethane	<3ug/l	10/12/00		VM3090
trans-1,2-Dichloroethene	<3ug/l	10/12/00		VM3090
cis-1,2-Dichloroethene	<3ug/l	10/12/00		VM3090
Chloroform	<3ug/l	10/12/00		VM3090
1,2-Dichloroethane	<3ug/l	10/12/00		VM3090
2-Butanone	<10ug/l	10/12/00		VM3090
1,1,1-Trichloroethane	<3ug/l	10/12/00		VM3090
Carbon Tetrachloride	<3ug/l	10/12/00		VM3090
Bromodichloromethane	<3ug/l	10/12/00		VM3090
1,2-Dichloropropane	<3ug/l	10/12/00		VM3090
cis-1,3-Dichloropropene	<3ug/l	10/12/00		VM3090
Trichloroethene	<3ug/l	10/12/00		VM3090
Dibromochloromethane	<3ug/l	10/12/00		VM3090
1,1,2-Trichloroethane	<3ug/l	10/12/00		VM3090
Benzene	<3ug/l	10/12/00		VM3090
trans-1,3-Dichloropropene	<3ug/l	10/12/00		VM3090
Bromoform	<3ug/l	10/12/00		VM3090
4-Methyl-2-pentanone	<10ug/l	10/12/00		VM3090
2-Hexanone	<10ug/l	10/12/00		VM3090
Tetrachloroethene	8ug/l	10/12/00		VM3090
1,1,2,2-Tetrachloroethane	<3ug/l	10/12/00		VM3090
Toluene	<3ug/l	10/12/00		VM3090
Chlorobenzene	<3ug/l	10/12/00		VM3090
Ethylbenzene	<3ug/l	10/12/00		VM3090
Styrene	<3ug/l	10/12/00		VM3090
m-Xylene and p-Xylene	<3ug/l	10/12/00		VM3090
o-Xylene	<3ug/l	10/12/00		VM3090
Tentatively Identifiable Compounds	See Attached	10/12/00		VM3090

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

28000172

Lab Name: UPSTATE LABS Contract: \_\_\_\_\_

Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: VM3090

Matrix: (soil/water) WATER Lab Sample ID: 28000172

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C6372.D

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/12/00

GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/LNumber TICs found: 2

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000098-82-8	Benzene, (1-methylethyl)-	20.57	10	JN
2. 027831-13-6	Benzene, 4-ethenyl-1,2-dimethyl-	24.77	32	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *[Signature]*  
QC: *[Signature]*  
Lab I.D.: 10170

96002 WESTBURY  
CLEANERS GW 3.3 1030H 10/05/00 G

ULI I.D.: 28000173

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/l	10/12/00		VM3090
Bromomethane	<3ug/l	10/12/00		VM3090
Vinyl Chloride	<2ug/l	10/12/00		VM3090
Chloroethane	<3ug/l	10/12/00		VM3090
Methylene Chloride	<3ug/l	10/12/00		VM3090
Acetone	22ug/l	10/12/00	44	VM3090
Carbon Disulfide	<3ug/l	10/12/00		VM3090
1,1-Dichloroethene	<3ug/l	10/12/00		VM3090
1,1-Dichloroethane	<3ug/l	10/12/00		VM3090
trans-1,2-Dichloroethene	<3ug/l	10/12/00		VM3090
cis-1,2-Dichloroethene	<3ug/l	10/12/00		VM3090
Chloroform	<3ug/l	10/12/00		VM3090
1,2-Dichloroethane	<3ug/l	10/12/00		VM3090
2-Butanone	<10ug/l	10/12/00		VM3090
1,1,1-Trichloroethane	<3ug/l	10/12/00		VM3090
Carbon Tetrachloride	<3ug/l	10/12/00		VM3090
Bromodichloromethane	<3ug/l	10/12/00		VM3090
1,2-Dichloropropane	<3ug/l	10/12/00		VM3090
cis-1,3-Dichloropropene	<3ug/l	10/12/00		VM3090
Trichloroethene	<3ug/l	10/12/00		VM3090
Dibromochloromethane	<3ug/l	10/12/00		VM3090
1,1,2-Trichloroethane	<3ug/l	10/12/00		VM3090
Benzene	<3ug/l	10/12/00		VM3090
trans-1,3-Dichloropropene	<3ug/l	10/12/00		VM3090
Bromoform	<3ug/l	10/12/00		VM3090
4-Methyl-2-pentanone	<10ug/l	10/12/00		VM3090
2-Hexanone	<10ug/l	10/12/00		VM3090
Tetrachloroethene	16ug/l	10/12/00		VM3090
1,1,2,2-Tetrachloroethane	<3ug/l	10/12/00		VM3090
Toluene	<3ug/l	10/12/00		VM3090
Chlorobenzene	<3ug/l	10/12/00		VM3090
Ethylbenzene	<3ug/l	10/12/00		VM3090
Styrene	<3ug/l	10/12/00		VM3090
m-Xylene and p-Xylene	<3ug/l	10/12/00		VM3090
o-Xylene	8ug/l	10/12/00		VM3090
Tentatively Identifiable Compounds	See Attached	10/12/00		VM3090

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

28000173

Lab Name: UPSTATE LABS Contract: \_\_\_\_\_

Lab Code: 10170 Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: VM3090

Matrix: (soil/water) WATER Lab Sample ID: 28000173, ANSON

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: C6373.D

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/12/00

GC Column: RTX-VO ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/LNumber TICs found: 19

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000107-83-5	Pentane, 2-methyl-	4.09	19	JN
2. 000096-37-7	Cyclopentane, methyl-	6.35	29	JN
3. 000110-82-7	Cyclohexane	8.30	23	JN
4. 000108-87-2	Cyclohexane, methyl-	12.29	35	JN
5. 000098-82-8	Benzene, (1-methylethyl)-	20.57	35	JN
6. 000526-73-8	Benzene, 1,2,3-trimethyl-	21.68	19	JN
7. 000611-14-3	Benzene, 1-ethyl-2-methyl-	22.10	95	JN
8.	unknown hydrocarbon	23.71	87	J
9. 000933-98-2	Benzene, 1-ethyl-2,3-dimethyl-	24.28	25	JN
10. 002870-04-4	Benzene, 2-ethyl-1,3-dimethyl-	24.49	66	JN
11. 000824-90-8	1-Phenyl-1-butene	24.61	17	JN
12. 027831-13-6	Benzene, 4-ethenyl-1,2-dimethyl-	24.77	91	JN
13. 000527-53-7	Benzene, 1,2,3,5-tetramethyl-	25.17	27	JN
14. 000874-35-1	1H-Indene, 2,3-dihydro-5-methyl-	25.91	58	JN
15. 000488-23-3	Benzene, 1,2,3,4-tetramethyl-	26.09	22	JN
16. 027831-13-6	Benzene, 4-ethenyl-1,2-dimethyl-	26.21	97	JN
17. 004489-84-3	Benzene, (3-methyl-2-butenyl)-	26.80	23	JN
18. 004912-92-9	1H-Indene, 2,3-dihydro-1,1-dimet	27.07	20	JN
19. 000091-20-3	Naphthalene	27.26	13	JN

DATE: 10/26/00

Upstate Laboratories, Inc.  
Analysis Results  
Report Number: 27900130  
Client I.D.: ANSON ENVIRONMENTAL  
Sampled by: Client

APPROVAL: *OJS*  
QC: *WMS*  
Lab I.D.: 10170

96002 WESTBURY CLEANERS  
ULI TRIP BLANK 10/05/00

ULI I.D.: 28000174

Matrix: Water

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/l	10/12/00		VM3090
Bromomethane	<3ug/l	10/12/00		VM3090
Vinyl Chloride	<2ug/l	10/12/00		VM3090
Chloroethane	<3ug/l	10/12/00		VM3090
Methylene Chloride	<3ug/l	10/12/00		VM3090
Acetone	<10ug/l	10/12/00		VM3090
Carbon Disulfide	<3ug/l	10/12/00		VM3090
1,1-Dichloroethene	<3ug/l	10/12/00		VM3090
1,1-Dichloroethane	<3ug/l	10/12/00		VM3090
trans-1,2-Dichloroethene	<3ug/l	10/12/00		VM3090
cis-1,2-Dichloroethene	<3ug/l	10/12/00		VM3090
Chloroform	<3ug/l	10/12/00		VM3090
1,2-Dichloroethane	<3ug/l	10/12/00		VM3090
2-Butanone	<10ug/l	10/12/00		VM3090
1,1,1-Trichloroethane	<3ug/l	10/12/00		VM3090
Carbon Tetrachloride	<3ug/l	10/12/00		VM3090
Bromodichloromethane	<3ug/l	10/12/00		VM3090
1,2-Dichloropropane	<3ug/l	10/12/00		VM3090
cis-1,3-Dichloropropene	<3ug/l	10/12/00		VM3090
Trichloroethene	<3ug/l	10/12/00		VM3090
Dibromochloromethane	<3ug/l	10/12/00		VM3090
1,1,2-Trichloroethane	<3ug/l	10/12/00		VM3090
Benzene	<3ug/l	10/12/00		VM3090
trans-1,3-Dichloropropene	<3ug/l	10/12/00		VM3090
Bromoform	<3ug/l	10/12/00		VM3090
4-Methyl-2-pentanone	<10ug/l	10/12/00		VM3090
2-Hexanone	<10ug/l	10/12/00		VM3090
Tetrachloroethene	<3ug/l	10/12/00		VM3090
1,1,2,2-Tetrachloroethane	<3ug/l	10/12/00		VM3090
Toluene	<3ug/l	10/12/00		VM3090
Chlorobenzene	<3ug/l	10/12/00		VM3090
Ethylbenzene	<3ug/l	10/12/00		VM3090
Styrene	<3ug/l	10/12/00		VM3090
m-Xylene and p-Xylene	<3ug/l	10/12/00		VM3090
o-Xylene	<3ug/l	10/12/00		VM3090
Tentatively Identifiable Compounds	None Detected	10/12/00		VM3090

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS  
2 MATRIX INTERFERENCE  
3 PRESENT IN BLANK  
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE  
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS  
6 BLANK CORRECTED  
7 HEAD SPACE PRESENT IN SAMPLE  
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE  
9 QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.  
10 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID  
11 ADL(AVERAGE DETECTION LIMITS)  
12 PQL(PRACTICAL QUANTITATION LIMITS)  
13 SAMPLE ANALYZED OVER HOLDING TIME  
14 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM  
15 THE FILTERING PROCEDURE  
16 SAMPLED BY ULI  
17 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE  
18 WITHIN EXPERIMENTAL ERROR  
19 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS  
20 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING  
21 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL  
22 INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.  
23 CALCULATION BASED ON DRY WEIGHT  
24 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION  
25 LIMITS  
26 UG/KG AS REC.D / UG/KG DRY WT  
27 MG/KG AS REC.D / MG/KG DRY WT  
28 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS  
29 SAMPLE DILUTED/BLANK CORRECTED  
30 ND(NON-DETECTED)  
31 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED  
32 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE  
33 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL  
34 LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL  
35 ANALYZED BY METHOD OF STANDARD ADDITIONS  
36 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)  
37 FIELD MEASURED PARAMETER TAKEN BY CLIENT  
38 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED  
39 NON-POTABLE WATER SOURCE  
40 VOLATILE ASP CODES  
-----  
41 (B) POSSIBLE/PROBABLE BLANK CONTAMINATION (D) ALL COMPOUNDS IDENTIFIED AT A  
42 SECONDARY DILUTION FACTOR (J) DETECTED BELOW THE CRQL  
43 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON  
44 PETROLEUM DISTILLATES  
45 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY  
46 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY  
47 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS)  
48 PER DAY OF CL2  
49 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY  
50 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS)  
51 PER DAY LAS  
52 RESULTS ARE REPORTED ON AN AS REC.D BASIS  
53 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED  
54 TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20,  
55 CREATING A THEORETICAL TCLP VALUE  
56 METAL BY CONCENTRATION PROCEDURE  
57 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

10/19

Client	Client Project # / Project Name		Time	Matrix	Grab or ULI Internal Use Only	No. of Containers	No.							Special Turnaround Time (Lab Notification required)	Remarks
	Client Contact	Site Location (city/state)					1)	2)	3)	4)	5)	6)	7)		
Anson Environmental Ltd.	96002	Westbury Cleaners													
Fritzi Gros-dailion	123 Post Ave., Westbury, NY														
Sample Location:															
SS-3	30-32	10/3/00	11:30	soil	Grab	27900	130								
SS-3	33-34	10/3/00	12:10				131								
SS-4	16-20	10/3/00	12:55				132								
SS-4	20-24	10/03	13:10				133								
SS4	30-32	10/3/00	13:40				134								
SS2	16-20	10/03	14:15				135								
SS2	20-24	10/03	14:35				136								
SS2	30-32	10/03	14:50				137								
SS1	16-20	10/03	15:40				138								
SS1	22-24	10/03	15:47				139								
parameter and method				sample bottle:	type	size	pres.	Sampled by: (Please Print)							ULI Internal Use Only
1) 8260 plus 10 TICs								Ellen Martin							Delivery (check one):
2) (% Solids) etc								Anson Environmental							<input type="checkbox"/> ULI Sampled
								Relinquished by: (Signature)							<input checked="" type="checkbox"/> Pickup
								Date 10/4/00							<input checked="" type="checkbox"/> Dropoff
								Time 2:25							Received by: (Signature)
								Relinquished by: (Signature)							Boyz weginhardt
								Date 10/4/00							Received by: (Signature)
								Time 7:30 PM							Received by: (Signature)
								Relinquished by: (Signature)							Received by: (Signature)
								Date 10/3/00							Rec'd for Lab by: (Signature)
								Time 0830							K. Camp

Note: The numbered columns above cross-reference with the numbered columns in the upper right-hand corner.



**Chain of Custody Record**

10/19

Client	Client Project # / Project Name		Date	Time	Matrix	Grab or Comp.	ULLI Internal Use Only	No. of Containers	3	4	5	6	7	8	9	10	Special Turnaround Time (Lab Notification required)	Remarks	
	Phone #	Site Location (city/state)																	
Client: Anson Environmental Ltd.	96002	Westbury Cleaners																	
Client Contact: Fritz's Gross-dailon	(631) 351-3555	123 PostAve., Westbury, NY																	
Sample Location: GW # 1	10/4/00	950	Water	Grab	27900/45	151	X												
GW # 1.2	10/4/00	1020	Water	G	146	147	X												
GW # 1.3	10/4/00			G	148	149	X												
GW # 2				G	150	151	X												
GW # 2.2				G	152	153	X												
GW # 2.3				G	154	155	X												
GW # 3				G															
GW # 3.2				G															
GW # 3.3				G															
GW # 4				G															
parameter and method																			
1) 8260 plus 10TIGS																			
2)																			
3)																			
4)																			
5)																			
6)																			
7)																			
8)																			
9)																			
10)																			

Sampled by: (Please Print) Michael DeLuca  
 Company: Anson Environmental Ltd.

ULLI Internal Use Only Delivery (check one):  
 ULI Sampled  
 Pickup  Dropoff  
 GC

Relinquished by: (Signature) M. DeLuca Date 10/4/00 Time 2:25  
 Relinquished by: (Signature) Russell Parats Date 10/4/00 Time 7:30pm  
 Relinquished by: (Signature) Date Time  
 Relinquished by: (Signature) Date Time

Received by: (Signature) R. G. ...  
 Received by: (Signature)  
 Received by: (Signature)

Rec'd for Lab by: (Signature) R. G. ...

Note: The numbered columns above cross-reference with the numbered columns in the upper right-hand corner.





# Oilless Regenerative Blowers, Motor Mounted



## REGENAIR® R6 Series



### MODEL R6150J-2

95" H<sub>2</sub>O MAX. PRESSURE, 210 cfm OPEN FLOW  
85" H<sub>2</sub>O MAX. VACUUM

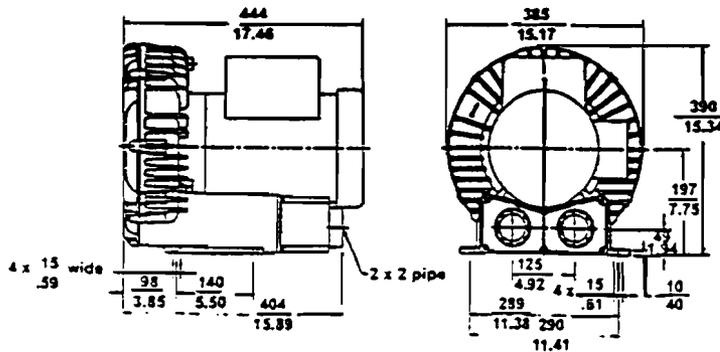
#### PRODUCT FEATURES

- Oilless operation
- UL and CSA approved open, drip proof motor with permanently sealed ball bearings. Class F insulation
- CE compliant - Declaration of Conformity on file
- Automatic restart thermal protection
- Can be mounted in any plane

#### RECOMMENDED ACCESSORIES

- Pressure gauge AE133
- Inlet filter (pressure) AJ126F
- Vacuum gauge AE134
- Muffler AJ121F
- Inline filter (vacuum) AJ151G
- Pressure/vacuum relief valve AG258

(mm) (Inches)



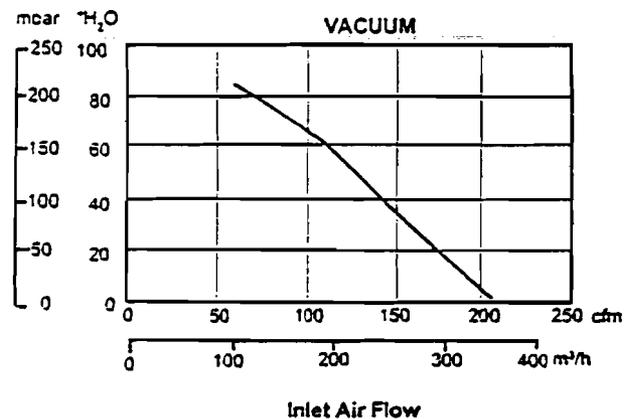
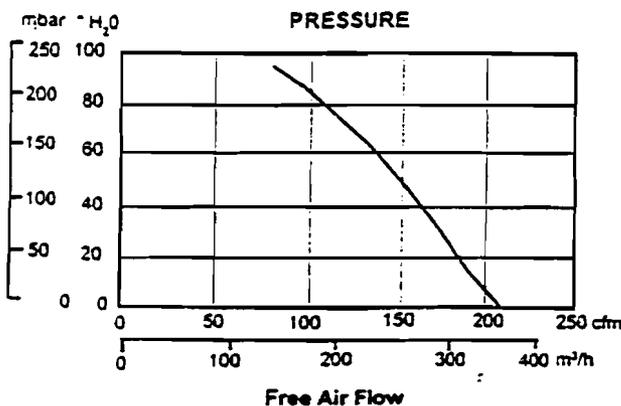
#### Product Specifications

Recommended NEMA starter size for motor -2

Specifications subject to change without notice.

Model Number	Motor Specs	Full Load Amps	Locked Rotor Amps	Hp	kW	RPM	Max. Vacuum "H <sub>2</sub> O	Max. Pressure "H <sub>2</sub> O	Max. Flow cfm	Max. Flow m <sup>3</sup> /h	Net Wt. lbs.	Net Wt. kg		
R6150J-2	230-60-1	22.3	96	5	3.7	3450	85	212	95	237	210	357	112	50.8

#### Product Performance (Metric, U.S.)



Pressure vs. Air Temp Rise Over Ambient (°F)

In. H <sub>2</sub> O	60 Hz
0	15
20	25
40	37
60	52
80	75
90	83
95	96

Pressure vs. K Watts Input

In. H <sub>2</sub> O	60 Hz
0	1.6
20	2.1
40	2.6
60	3.2
80	3.8
90	4.1
95	4.3

Vacuum vs. Air Temp Rise Over Ambient (°F)

In. H <sub>2</sub> O	60 Hz
0	17
20	25
40	35
60	52
80	91
85	105

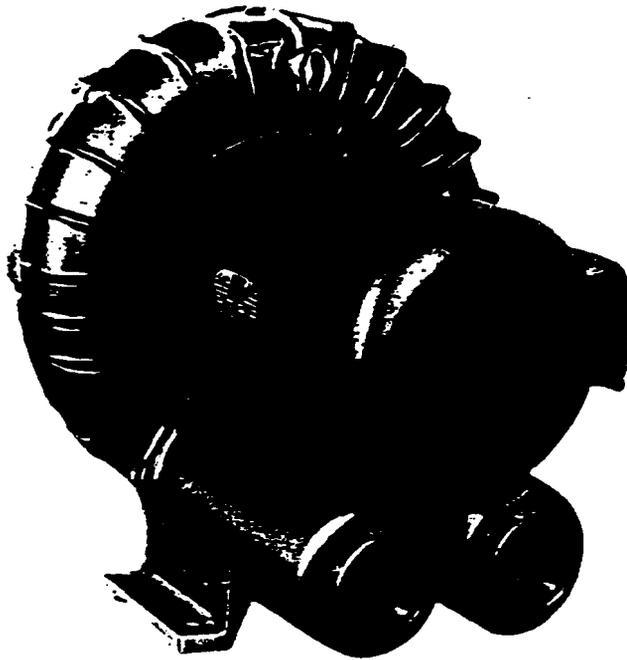
Vacuum vs. K Watts Input

In. H <sub>2</sub> O	60 Hz
0	1.7
20	2.0
40	2.4
60	2.9
80	3.5
85	3.6

# Oilless Regenerative Blower, Motor Mounted to 290 cfm



## REGENAIR® R6P Series



### MODEL R6P335A

30" H<sub>2</sub>O MAX. PRESSURE, 285 CFM OPEN FLOW  
35" H<sub>2</sub>O MAX. VACUUM, 270 CFM OPEN FLOW

### MODEL R6P350A

60" H<sub>2</sub>O MAX. PRESSURE, 290 CFM OPEN FLOW  
70" H<sub>2</sub>O MAX. VACUUM, 270 CFM OPEN FLOW

### MODEL R6P355A

110" H<sub>2</sub>O MAX. PRESSURE, 280 CFM OPEN FLOW  
90" H<sub>2</sub>O MAX. VACUUM, 260 CFM OPEN FLOW

### PRODUCT FEATURES

- Oilless operation
- TEFC motor mounted
- Can be mounted in any plane
- Rugged construction/low maintenance
- Class F insulation on motors

### COMMON MOTOR OPTIONS

- 208-230/460V, 60 Hz; 190-220/380-415V, 50 Hz, three phase

### RECOMMENDED ACCESSORIES

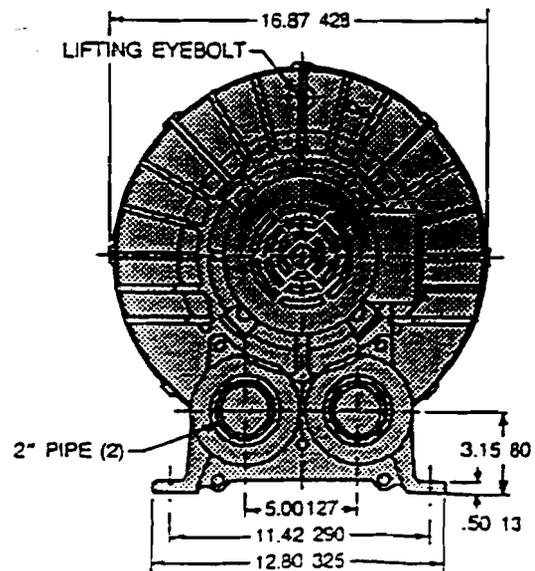
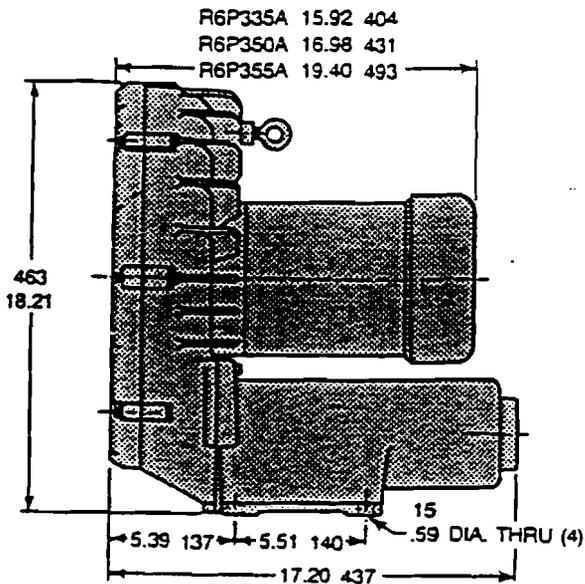
- Pressure gauge AE133
- Filter AJ126F (pressure)
- Vacuum gauge AE134
- In-line filter AJ151G (vacuum)
- Muffler AJ121F
- Relief valve AG258
- Nema motor starter size – 0/0 (R6P335A), 1/0 (R6P350A, R6P355A), for 60 Hz operation
- Moisture separator RMS300 (vacuum)

Various brand name motors are used on any model at the discretion of Gast Mfg. Corp.

### Important Notice:

Pictorial, performance and dimensional data is subject to change without notice.

### Product Dimensions Metric (mm) U.S. Imperial (inches)



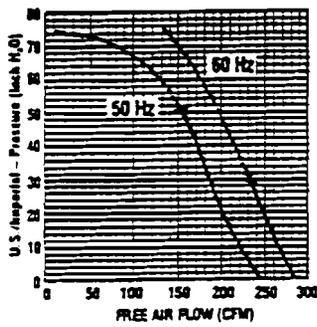
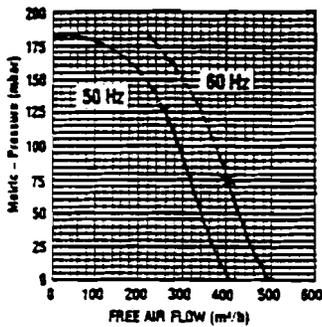
## Product Specifications

Model Number	Motor Specs	Full Load Amps	Locked Rotor Amps	HP	RPM	Max Vac		Max Pressure		Max Flow		Net WL	
						H <sub>2</sub> O	mbar	H <sub>2</sub> O	mbar	cfm	m <sup>3</sup> /h	lbs.	kg
R6P335A	190-220/380-415-50-3	8-8/4-3.9	50 @ 460V	2.5	2850	60	149	50	125	245	416	150	68
	208-230/460-60-3	9.7-8.8/4.4		3.5	3450	35	87	30	75	285	484		
R6P350A	190-220/380-415-50-3	14.4-13.4/7.2-6.8	125 @ 230V	4.8	2850	70	174	70	174	245	416	176	80
	208-230/460-60-3	13.0-12.0/6.0		5	3450	70	174	60	149	290	493		
R6P355A	190-220/380-415-50-3	14.2-13.4/7.1	83 @ 460V	5	2850	70	174	85	212	235	399	215	98
	208-230/460-60-3	19.5-18.2/9.1		5.5	3450	90	224	110	274	280	476		

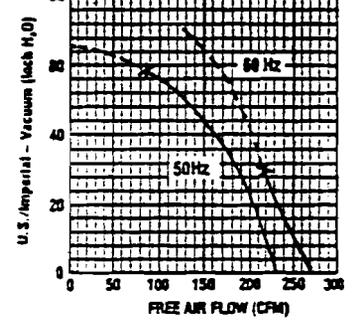
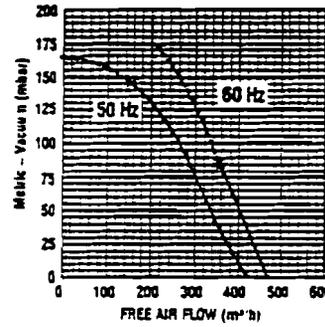
## Product Performance (Metric U.S. Imperial)

### R6P335A

#### Pressure

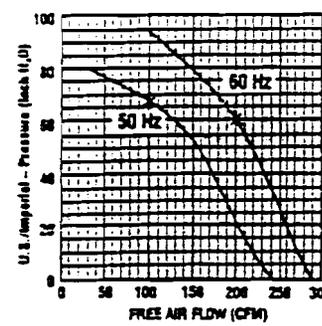
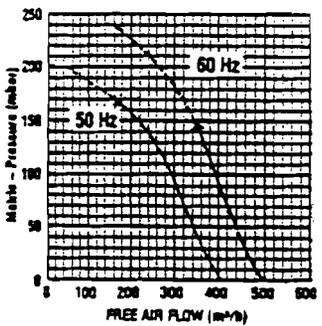


#### Vacuum

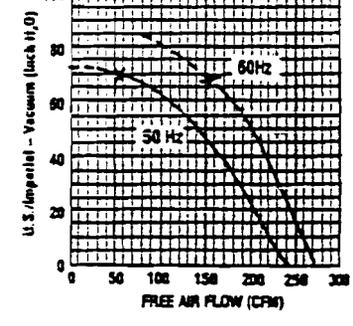
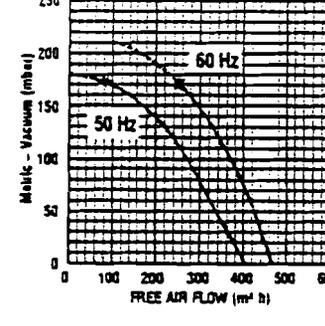


### R6P350A

#### Pressure

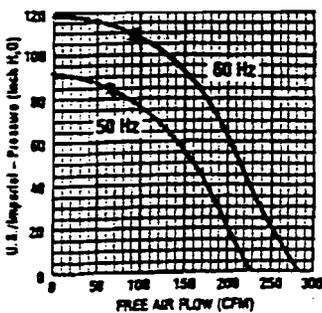
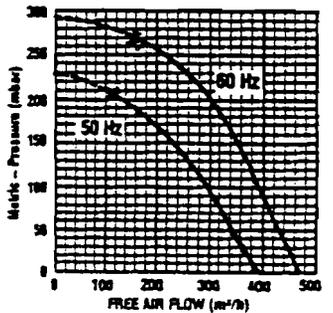


#### Vacuum

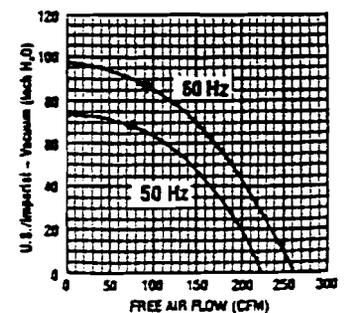
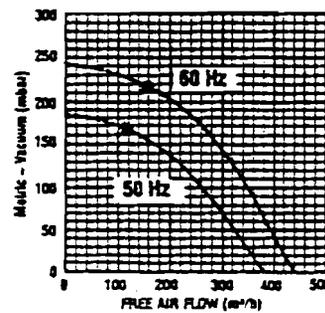


### R6P355A

#### Pressure



#### Vacuum





ROTRON TECHNICAL MOTOR DIVISION  
REGENERATIVE BLOWER GROUP

75 North Street  
Saugerties, New York 12477  
Phone: (914) 246-3401  
Fax: (914) 246-3802

OPERATION & MAINTENANCE MANUAL

## Air Flow Meter

Thank you for purchasing an AMETEK Rotron Flow Meter. When matched with the correct Rotron blower, and properly installed and maintained, this meter will quickly and accurately measure the pipe flow. To ensure good results, please take the time to read these instructions before starting the installation of your air flow meter.

### Sizing for Optimal Efficiency

CURRENT MODELS		MODELS FOR RELEASE JUNE '97		FLOW RANGE (SCFM)	THREADS	LENGTH	WIDTH	GAUGE PART #	BODY STYLE
MODEL	PART #	MODEL	PART #						
FM20A030Q	550312	FM20C030Q	550599	6-30	2 0"	6.94"	5.49"	550321	A
FM20A045Q	550313	FM20C045Q	550600	9-45				550322	
FM20A065Q	550314	FM20C065Q	550601	13-65				550323	
FM20A125Q	550256	FM20C125Q	550602	25-125		5.34"	550290	B	
FM20A175Q	550255	FM20C175Q	550603	35-175			550291		
FM20A225Q	550254	FM20C225Q	550604	45-225			550292		
FM30A250Q	550259	FM30C250Q	550605	50-250	3.0"	7.38"	7.62"	550293	C
FM30A350Q	550258	FM30C350Q	550606	70-350				550294	
FM30A475Q	550257	FM30C475Q	550607	95-475				550295	
FM40A450Q	550252	FM40C450Q	550608	90-450	4.0"	7.68"	8.62"	550296	D
FM40A600Q	550251	FM40C600Q	550609	120-600				550297	
FM40A850Q	550250	FM40C850Q	550610	170-850				550298	

### Installation

1. **Unpacking** – Open box carefully. Do not cut box open. Lift top packing material off. The air flow meter is placed between the two foam materials for protection.
2. **Piping** – The flow meter should be installed horizontally on the inlet side of the blower. Since this device is directional, please observe the flow direction arrow. Rotron suggests using a length of straight pipe equivalent to three to five pipe diameters prior to the meter for any elbows, valves, etc., unless there is a tee. If there is a tee, the suggested equivalent length is eight to ten pipe diameters. The flow meter should have two pipe diameters of straight pipe after the flow exits the meter before any elbows, tees, valves, etc.
3. **Continuous Service** – Moisture and debris should not be allowed to enter the tubes leading into the gauge, as it may affect the gauge. Orient the gauge between 10 o'clock and 2 o'clock when viewed from end. (See Figure 1).

If the gauge does not read zero, gently press down on gauge cover while turning counterclockwise to remove cover. Zero the gauge with the allen wrench and reattach cover.

INSTALL GAUGE  
10 O'CLOCK TO 2 O'CLOCK

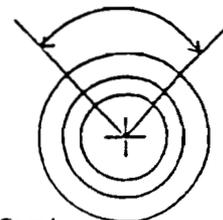
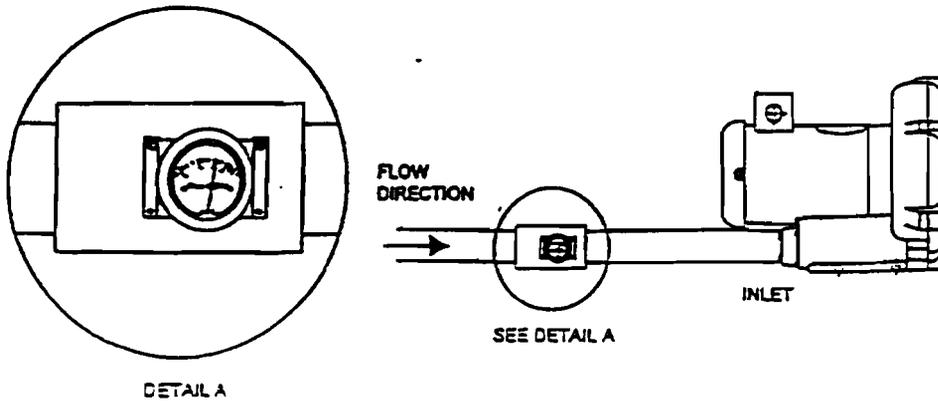


Figure 1

4. **Interchangeability** - Gauges are interchangeable within body styles, e.g., gauge 550321 and 550323. Gauges from different body styles are not interchangeable, e.g., gauge 550321 and 550290 or 550321 and 550293. Note the proper hose connections as shown in detail B.

**Typical Arrangement**



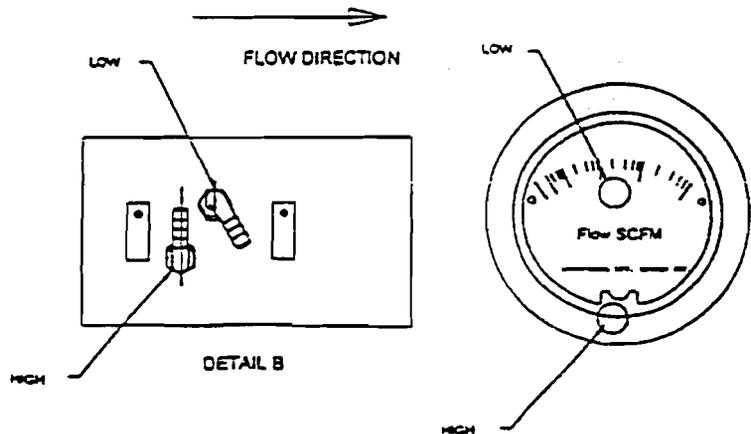
**Operation**

Rotron's Flow Meter is a venturi style design. After air enters the inlet, the pressure is measured in the high pressure tap. The second tap measures the pressure at the throat. The differential between the taps registers across a specially calibrated gauge to provide accurate readings. The throat is then expanded back to the original size to keep pressure loss to under 2-4 IWG.

**Maintenance**

This air flow meter has been designed to require minimal maintenance. During normal operation, little maintenance is required. Care should be taken to ensure no debris enters the meter.

If the tubes become plugged, remove and clean. Do not switch the low and high hoses. Note proper orientation of hoses.



If you have any questions regarding this product, contact your local sales representative or our Application Engineering Department at the factory.



ROTRON TECHNICAL MOTOR DIVISION  
REGENERATIVE BLOWER GROUP

75 North Street  
Saugerties, New York 12477  
Phone: (914) 246-3401  
Fax: (914) 246-3802

## OPERATION & MAINTENANCE MANUAL

# Rotron Moisture Separator

Thank you for purchasing an AMETEK Rotron MS series moisture separator. When matched with the correct Rotron blower, and properly installed and maintained, this separator will effectively and efficiently remove moisture from the air stream. To ensure good results, please take the time to read these instructions before starting the installation of your moisture separator.

### Sizing for Optimal Efficiency

Separator	Max. CFM	Max. Vac	Capacity	Blowers
MS200P(S)	200	12" IHg	7 gal.	EN101-EN555, EN513, EN523, EN623
MS200D(S)	200	22 IHg	10 gal.	EN101-EN555, EN513, EN523, EN623
MS300P(S)	300	12" IHg	7 gal.	EN606, EN6, EN707, EN823
MS300D(S)	300	22 IHg	10 gal.	EN606, EN6, EN707, EN823
MS350B(S)	350	22 IHg	40 gal.	EN808, EN1223
MS500B(S)	500	22 IHg	40 gal.	EN858
MS600B(S)	600	22 IHg	40 gal.	EN909
MS1000B(S)	1000	22 IHg	65 gal.	EN14

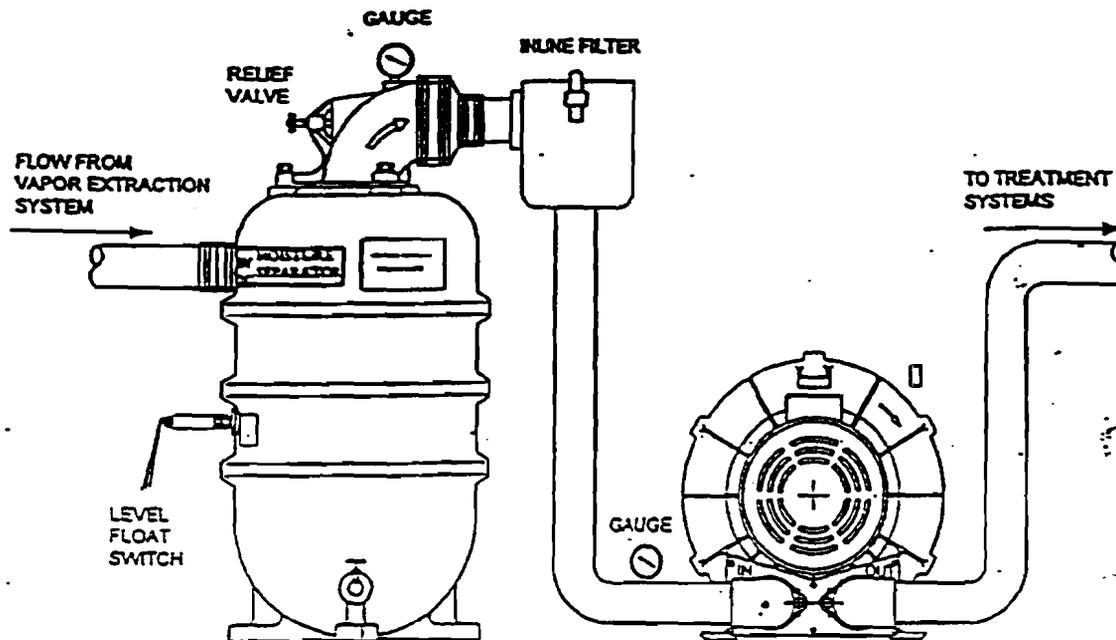
Note: "S" suffix denotes presence of XP high level switch.  
\* Special Construction with 20 IHg capability available.

### Installation

1. **Unpacking** - For MS200/300, remove drain valve taped to packing material and box containing liquid level switch, if so equipped. For MS350/500/600, remove box containing valve hardware as well as box containing liquid level switch (if so equipped) and remove internal cardboard packaging and cable ties from screen assembly.
2. **Bolt Down (w/ feet included)** - For MS200/300 models, built-in feet or a mounting ring is included. It is recommended that these units be bolted in place. All models will only work in an upright position.
3. **Piping** - Attach to system piping with flexible couplings to minimize stress incurred by rigid system piping. The connections should be airtight but not sealed with an adhesive for ease of disassembly during routine maintenance. Install drain valve, using teflon tape on threads.
4. **Installation and Wiring of Liquid Level Switch** - Remove plug from the bulkhead fitting. Thread the switch by hand until snug with index arrow pointing down. Wire in accordance with the nameplate wiring schematic. Typically, the wiring is connected back to the starter to shut down the system but can be used for other purposes.
5. **Install/Adjust Relief Valve** - For MS500/600, first install the relief valve with teflon tape on threads. Use a wrench, but tighten only enough to prevent leakage. Next step for all MS units, back off the relief valve adjuster relaxing spring pressure. Then block the moisture separator inlet while measuring the motor current. Adjust the valve until the motor current is 90% of the max. nameplate blower amps.
6. **Continuous Service** - For cold weather service, appropriate steps should be taken to prevent freezing. Also, the maximum vacuum ratings are based on 115°F maximum. Consult factory for higher potential ambients.

**Note:** A moisture separator is not a substitute for an inline air filter. A Rotron inline filter should be used to remove particles that pass through the separator.

### Typical Vapor Extraction System



### Operation

Moisture-laden air enters the separator through the tangential inlet. Cyclonic action removes free moisture from the air stream and allows the air to discharge through the top of the separator. When the separator is full, the float valve shuts off the air flow through the separator, and the relief valve opens to limit the vacuum of the blower.

To drain the separator, turn off the blower and open the drain valve at the bottom of the separator. **Caution:** The liquid contained in the separator should be analyzed before it is released back into the environment. It may be considered hazardous waste in certain geographical areas and require special treatment/disposal. Once the liquid is drained, the unit can be reset by turning the blower back on.

Automatic draining options are at the discretion of the customer.

### Maintenance

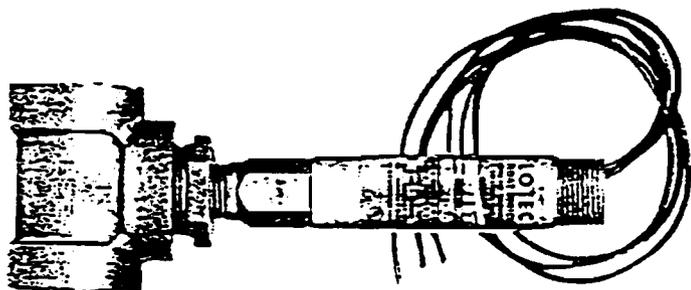
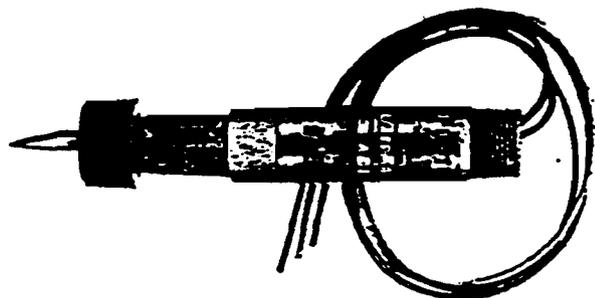
This MS series moisture separator has been designed to require minimal maintenance. During normal operation a layer of sludge may build up on the bottom of the separator. As necessary, the top assembly of the moisture separator should be removed and the inside cleaned out with water. Keeping the inside clean will prevent the valve from becoming clogged with sediment. The relief valve should be inspected upon emptying the separator and readjusted (per installation instruction 5) upon restart.

If you have any questions regarding this product, contact your local sales representative or our Application Engineering Department at the factory.



# FLOTECT. MODEL L-6 FLOAT SWITCH

## Installation and Operating Instructions



**Explosion-Proof; U.L. and C.S.A. Listed - Class I, Groups A, B, C & D**  
**Class II, Groups E, F & G**  
**CENELEC: EExd IIC T6 (T amb=75°C)**  
 \*(Group A, stainless steel body only)

### PHYSICAL DATA

Temperature Limit: 220°F (105°C) maximum  
 Maximum Pressure: See chart below  
 Switches: One or two SPDT snap switches  
 Electrical Rating: U.L.: 5A @ 125/250 VAC.  
 C.S.A. and CENELEC: 5A @ 125/250 VAC, 5A resistive, 3A inductive @ 30 VDC.  
 Optional ratings: MV option—Gold contacts for dry circuits.  
 Rated 0.1A @ 125 VAC MT option: 400°F (205°C) 5A @ 125/250 VAC (not listed).

Wiring Connections: 3-18" (460mm) wire leads, 18 ga.  
 CENELEC models only: push-in type terminal blocks  
 Black = common, blue = N.O., red = N.C.

Minimum Specific Gravity:  
 Polypropylene float - 0.9  
 Round SS float - 0.7  
 Cylindrical SS float - 0.5

Switch Body: Brass 3/4" NPT conduit connection.  
 For SS switch body, change model no. to L6EPS.

Piping/Mounting Connection: 1" NPT

Installation: Horizontal, index arrow pointing down.

Weight: 1 lb. (.5 KG); w/external chamber 1-3/4 lb. (.8 KG)

### WETTED MATERIALS CHART

Model	Brass	Bronze	Ceramic	Polypropylene	301SS	303SS	304SS
B-S-3-A	X		X		X		X
B-S-3-B	X	X	X	X	X		
B-S-3-C	X		X		X		X
B-S-3-H	X	X	X		X		X
B-S-3-O	X		X	X	X		
S-S-3-A			X	X	X		X
S-S-3-C			X		X	X	X
S-S-3-L			X		X	X	X
S-S-3-O			X	X	X	X	
S-S-3-S			X	X	X	X	

### MAXIMUM PRESSURE CHART

Model Number	Float	Pressure Rating PSIG (KG/CM <sup>2</sup> )
L6EPB-B-S-3-A	Cylindrical SS	200 (14)
L6EPB-B-S-3-B	Polypropylene	250 (18)
L6EPB-B-S-3-C	Round SS	350 (25)
L6EPB-B-S-3-H	Round SS	250 (18)
L6EPB-B-S-3-O	Polypropylene	1000 (70)
L6EPB-S-S-3-A	Cylindrical SS	200 (14)
L6EPB-S-S-3-C	Round SS	350 (25)
L6EPB-S-S-3-L	Round SS	350 (25)
L6EPB-S-S-3-O	Polypropylene	2000 (140)
L6EPB-S-S-3-S	Polypropylene	2000 (140)

### INSTALLATION:

Unpack switch and remove any packing material found inside lower housing or float chamber.

Switch must be installed with body in a horizontal plane and arrow on side pointing down.

If switch has an external float chamber (tee), connect it to vertical sections of 1" NPT pipe installed outside vessel walls at appropriate levels.

If unit has no external float chamber, it must be mounted in a 1" NPT half coupling welded to the vessel wall. The coupling must extend through the wall.

Inspect and clean wetted parts at regular intervals.

### ELECTRICAL CONNECTIONS:

Connect wire leads in accordance with local electrical codes and switch action required. N.O. contacts will close and N.C. contacts will open when liquid level causes float to rise. They will return to "normal" condition on decreasing liquid level. Black = common, Blue = N.O. and Red = N.C.

For units supplied with both internal and external grounds, the ground screw inside the housing must be used to ground the control. The

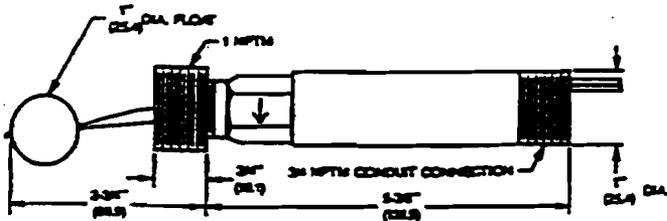
external ground screw is for supplementary bonding when allowed or required by local code. Some CSA listed models are furnished with a separate green ground wire. Such units must be equipped with a junction box, not supplied but available on special order.

CENELEC certified models include a junction box. Cable should enter enclosure through an approved EX cable gland, not supplied. Push stripped and tinned leads into appropriate openings in terminal block(s). To connect fine stranded leads or to remove any wire, depress spring release with small screwdriver first.

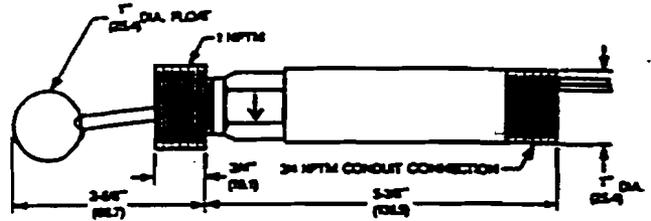
All wiring, conduit and enclosures must meet applicable codes for hazardous areas. Conduits and enclosures must be properly sealed. For outdoor or other locations where temperatures vary widely, precautions should be taken to prevent condensation inside switch or enclosure. Electrical components must be kept dry at all times. CAUTION: To prevent ignition of hazardous atmospheres, disconnect the device from the supply circuit before opening. Keep assembly tightly closed when in use.

Dimensions on reverse

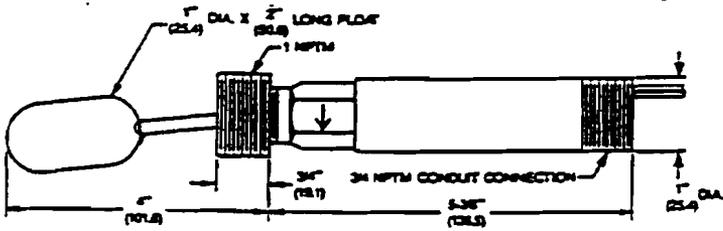
# FLOTECT. MODEL L-6 FLOAT SWITCH — DIMENSION DRAWINGS



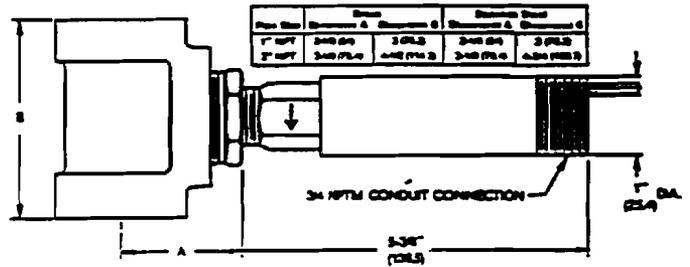
Polypropylene Float



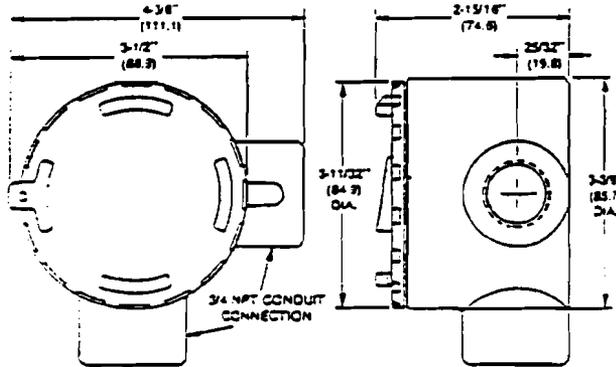
Round Stainless Steel Float



Cylindrical Stainless Steel Float



With External Float Chamber (Tee)



CSA, CENELEC Conduit Enclosure

**Limited Warranty:** The Seller warrants all Dwyer instruments and equipment to be free from defects in workmanship or material under normal use and service for a period of one year from date of shipment. Liability under this warranty is limited to repair or replacement F.O.B. factory of any parts which prove to be defective within that time or repayment of the purchase price at the Seller's option provided the instruments have been returned, transportation prepaid, within one year from the date of purchase. All technical advice, recommendations and services are based on technical data and information which the Seller believes to be reliable and are intended for use by persons having skill and knowledge of the business, at their own discretion. In no case is Seller liable beyond replacement of equipment F.O.B. factory or the full purchase price. This warranty does not apply if the maximum ratings label is removed or if the instrument or equipment is abused, altered, used at ratings above the maximum specified, or otherwise misused in any way.

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**Buyers Remedies:** THE BUYER'S EXCLUSIVE AND SOLE REMEDY ON ACCOUNT OF OR IN RESPECT TO THE FURNISHING OF NONCONFORMING OR DEFECTIVE MATERIAL SHALL BE TO SECURE REPLACEMENT THEREOF AS AFORESAID. THE SELLER SHALL NOT IN ANY EVENT BE LIABLE FOR THE COST OF ANY LABOR EXPENDED ON ANY SUCH MATERIAL OR FOR ANY SPECIAL, DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES TO ANYONE BY REASON OF THE FACT THAT IT SHALL HAVE BEEN NON-CONFORMING OR DEFECTIVE.

**READ THESE INSTRUCTIONS THOROUGHLY BEFORE STARTUP.**  
**IMPROPER STARTUP COULD RESULT IN AN UNSAFE CONDITION.**

**INSTALLATION & OPERATING INSTRUCTIONS**  
**CARBOTROL<sup>®</sup> VAPOR PHASE CANISTERS**

**CANISTER PREPARATION**

When vapors contact activated carbon, the bed temperature may increase due to water vapor and contaminant chemical heat of adsorption.

Where organic contaminant concentrations above 500 ppmv are expected, contact Carbtrol Corp. for evaluation of the potential for heat buildup.

When the Carbtrol canister is initially installed, maintain a continuous air flow through the canister for the first 24 hours of operation, and monitor the effluent gas temperature. A rise in the gas temperature of greater than 50°F is an indication of excessive heat generation. Under these conditions, the unit should be removed from service and the cause of the excessive heat generation should be determined.

Where the reaction of the contaminated gas stream with activated carbon is unknown, Carbtrol recommends thoroughly wetting the carbon with water prior to startup. The following procedure is recommended for wetting the carbon bed:

Remove the plastic shipping plugs from the inlet and outlet ports. Insert a hose into the outlet port and fill the canister with water. The filled canister must be allowed to stand for at least one hour.

Remove the water before the canister is put into service using the 3/4" drain bung located in the lower side of the canister. Close the 3/4" drain bung before putting the canister into operation.

**INSTALLATION**

To put the Carbtrol canister into service, place the canister in an accessible area, preferably close to the exhaust vent to be treated. Connect a full size process exhaust vent hose to the canister inlet port. Where required, a full sized vent line can be connected to the canister outlet port to direct treated gases from the immediate area.

Carbtrol canisters are not to be used for explosive gas applications. Where upset conditions may cause exceedence of the LEL (lower explosive limit), flame arresters and/or nitrogen blanketing of the process should be considered.

## OPERATION

As the contaminated process exhaust gas passes through the canister, the granular activated carbon adsorbs the impurities while the purified process gas is discharged from the canister. After continued use, the carbon will become saturated with impurities and will require replacement.

Gas discharging from the canister should be tested regularly to determine when the carbon bed is nearing saturation. Properly scheduled testing of the discharge gas will indicate when breakthrough has occurred and the canister should be changed. To insure that additional canisters are immediately available, a replacement Carbtrol canister should be kept in stock.

The capacity of the activated carbon varies with the type and concentration of impurities in the gases handled. Therefore, the determination of effective canister life for a specific use will come with the practical experience of using it under a specific set of operating conditions.

Operating pressure for Carbtrol canisters should not exceed 10 psig.

Install appropriate shipping plugs and follow all State and Federal EPA Regulations when regenerating or disposing of spent carbon canisters.

### **WARNING:**

- A. Activated carbon can react adversely with some contaminants, which can cause excessive heat buildup. If the effect of the contaminant you wish to treat on activated carbon is unknown, then it must first be tested.
- B. The initial heat of adsorption that occurs when vapors first contact activated carbon causes a rise of temperature in the carbon bed. As recommended above, maintained air flow or wetting of the carbon bed will minimize the initial heat buildup.
- C. Carbtrol canisters should not be used with flammable vapors or flammable gas mixtures.
- D. Activated carbon depletes oxygen in enclosed spaces. Follow NIOSH guidelines for safety in enclosed spaces.

## WARRANTY

This product is designed to remove toxic pollutants from air. However, there is no assurance of its capacity. SELLER WARRANTS THAT THE GOODS ARE AS DESCRIBED. BUT NO OTHER IS GIVEN, WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Seller will not be liable for loss or damage to property or any incidental or consequential loss or expense from property damage due directly or indirectly from the use of the product.

**READ THESE INSTRUCTIONS THOROUGHLY BEFORE STARTUP.**  
**IMPROPER STARTUP COULD RESULT IN AN UNSAFE CONDITION.**

**INSTALLATION AND OPERATING INSTRUCTIONS**  
**G-6 VAPOR PHASE CARBTROL® ADSORBERS**

**ADSORBER PREPARATION**

When vapors contact activated carbon, the bed temperature may increase due to water vapor and contaminant chemical heat of adsorption.

Where organic concentrations above 500 ppmv are expected, contact Carbtrol Corp. for evaluation of the potential for heat buildup.

When the Carbtrol adsorber is initially installed, maintain a continuous air flow through the adsorber for the first 24 hours of operation, and monitor the effluent gas temperature. A rise in the gas temperature of greater than 50°F is an indication of excessive heat generation. Under these conditions, the unit should be removed from service and the cause of the excessive heat generation should be determined.

Where the reaction of the contaminated gas stream with activated carbon is unknown, Carbtrol recommends thoroughly wetting the carbon with water prior to startup. The following procedure is recommended for wetting the carbon bed:

Remove the plastic shipping plugs from the inlet and outlet ports. Insert a hose into the outlet port and fill the adsorber with water. The filled adsorber must be allowed to stand for at least one hour.

Remove the water before the adsorber is put into service using the 1" bottom drain coupling. Replace the 3/4" drain plug before putting the adsorber into operation.

**INSTALLATION**

To put the Carbtrol G-6 Adsorber into service, place the adsorber on a well drained, level grade or concrete pad in an accessible area, preferably close to the exhaust vent to be treated. Connect a full size pipe or hose from the process exhaust to the inlet port. Where required, a full sized vent line can be connected to the adsorber outlet port to direct treated gases from the immediate area.

Before operating the G-6 Adsorber, a minimum size 8 AWG copper grounding cable should be connected between the cable clamp provided on the adsorber support steel, and the building electrical grounding system. If a grounding system is not available, this grounding cable should be connected to a suitably driven ground rod. (See N.E.C. Section 250.83).

Carbtrol adsorbers are not to be used for explosive gas applications. Where upset conditions may cause exceedence of the LEL (lower explosive limit), flame arresters and/or nitrogen blanketing of the process should be considered.

### OPERATION

As the contaminated process exhaust gas passes through the adsorber, the granular activated carbon adsorbs the impurities while the purified process gas is discharged from the adsorber. After continued use, the carbon will become saturated with impurities and will require replacement.

Gas discharging from the G-6 Adsorber should be tested regularly to determine when the carbon bed is nearing saturation. Properly scheduled testing of the discharge gas will indicate when breakthrough has occurred and the adsorber should be changed.

The capacity of the activated carbon varies with the type and concentration of impurities in the gases handled. Therefore, the determination of effective adsorber life for a specific use will come with the practical experience of using it under a specific set of operating conditions.

It is recommended that an additional G-6 Adsorber be kept on site, so that when breakthrough of the on-line adsorber occurs, a replacement unit is readily available.

If it is required that the spare G-6 Adsorber should be arranged as a fully piped and ready stand-by unit to allow immediate use, a pipe and valve assembly can be provided to accomplish this switchover and adsorber changeout. Contact the factory for details.

Operating pressure for CARBTROL G-6 Adsorbers should not exceed 9 psig.

Install appropriate shipping plugs and follow all State and Federal EPA regulations when re-shipping spent carbon adsorbers.

**WARNING:**

- A. Activated carbon can react adversely with some contaminants, which can cause excessive heat buildup. If the effect of the contaminant you wish to treat on activated carbon is unknown, then it must first be tested.
- B. The initial heat of adsorption that occurs when vapors first contact activated carbon causes a rise of temperature in the carbon bed. As recommended above, maintained air flow or wetting of the carbon bed will minimize the initial heat buildup.
- C. Carbtrol adsorbers should not be used with flammable vapors or flammable gas mixtures.
- D. Activated carbon depletes oxygen in enclosed spaces. Follow NIOSH guidelines for safety in enclosed spaces.

WARRANTY

This product is designed to remove toxic pollutants from air. However, there is no assurance of its capacity. SELLER WARRANTS THAT THE GOODS ARE AS DESCRIBED. BUT NO OTHER WARRANTY IS GIVEN, WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Seller will not be liable for loss or damage to property or any incidental or consequential loss or expense from property damage due directly or indirectly from the use of the product.

INSTALLATION AND OPERATING INSTRUCTIONS  
CARBOTROL® VAPOR PHASE CANISTERS  
WITH  
POTASSIUM HYDROXIDE IMPREGNATED CARBON

## CANISTER PREPARATION

When vapors first contact the impregnated carbon, the bed temperature may increase due to the initial heat of adsorption. Maintaining a continuous air flow through the canister for the first 24 hours of canister use will diffuse any heat buildup. If it is not possible to maintain air flow through the canister for the initial 24 hours of operation, consult Carbtrol for specific startup recommendations.

## INSTALLATION

To put the Carbtrol canister into service, place the canister in an accessible area, preferably close to the exhaust vent to be treated. Connect a full size process exhaust vent hose to the canister inlet port. Where required, a full sized vent line can be connected to the canister outlet port to direct treated gases from the immediate area.

## OPERATION

As the contaminated process exhaust gas passes through the canister, the impregnated granular activated carbon adsorbs the impurities while the purified process gas is discharged from the canister. After continued use, the impregnated carbon will become saturated with impurities and will require replacement.

Gas discharging from the canister should be tested regularly to determine when the carbon bed is nearing saturation. Properly scheduled testing of the discharge gas will indicate when breakthrough has occurred and the canister should be changed. To insure that additional canisters are immediately available, a replacement Carbtrol canister should be kept in stock.

The capacity of the impregnated activated carbon varies with the type and concentration of impurities in the gases handled. Therefore, the determination of effective canister life for a specific use will come with the practical experience of using it under a specific set of operating conditions.

Operating pressure for CARBTROL® canisters should not exceed 10 psig.

Install appropriate shipping plugs and follow all State and Federal EPA Regulations when disposing of spent carbon canisters.

## **WARNING:**

- A. Activated carbon has been known to react adversely with some contaminants. If the effect of the contaminant you wish to treat on activated carbon is unknown, then it must first be tested.
- B. The initial heat of adsorption that occurs when vapors first contact impregnated activated carbon causes a rise of temperature in the carbon bed. As recommended above, maintained air flow will minimize the initial heat buildup.
- C. Wet impregnated activated carbon can cause skin burns.
- D. Carbtrol plastic canisters are not recommended for use with flammable vapors or flammable gas mixtures.
- E. Activated carbon depletes oxygen in enclosed spaces. Follow NIOSH guidelines for safety in enclosed spaces.

## WARRANTY

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## **Carbtról Carbon Filter Information**

<u>Model #</u>	<u>Design Flow Maximum</u>	<u>Carbon Weight</u>	<u>Inlet/Outlet</u>	<u>Availability From Carbtról</u>
G-2	300 cfm	170 lbs.	4"/4"	2 days
G-3S	500 cfm	140 lbs	4"/4"	2 days
G-10/400	250 cfm	400 lbs.	4"/4"	4-6 weeks

## PRODUCT DESCRIPTION

**ACTIVATED CARBON CANISTER  
VAPOR PHASE FOR VOC REMOVAL**

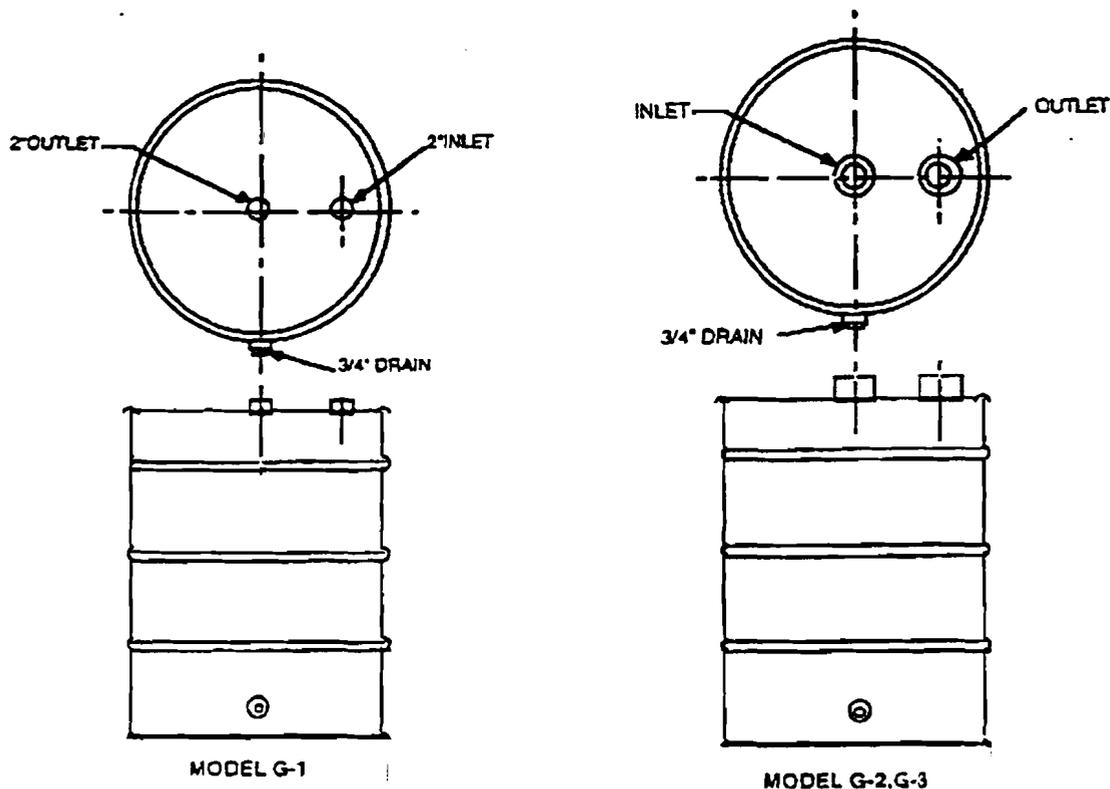
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Model:	G-1S	G-2S	G-3S
Design Flow (CFM):	100	300	500
Design Features:			
Pressure Drop at Design Flow (in. w.c.):	3.5	4.25	5.0
Carbon Weight (lbs.):	200	170	140
Carbon	Vapor phase carbon activated carbon, 4 X 8 mesh, high activity.		
Canister:	24"Ø X 34" high epoxy lined carbon steel drum. PVC internal piping. Acceptable for transport of hazardous spent carbon.		
Maximum Operating Pressure	10 psi	10 psi	10 psi
Connections:	Inlet and outlet couplings located in lid. 3/4" side bung drain.		
Inlet & Outlet Size:	2" FPT	4" FPT	4" FPT
Shipping Weight (lbs.):	240	210	180
Availability:	2 days		
Drawing Number:	S-1113	S-1114	S-1115

# CARBOTROL®

## AIR PURIFICATION CANISTERS 140-200 LB. ACTIVATED CARBON

G-1  
G-2  
G-3



### SPECIFICATIONS

<u>MODEL</u>	<u>DIAMETER/HEIGHT</u>	<u>CARBON WEIGHT</u>	<u>INLET/OUTLET</u>	<u>MAXIMUM RATED FLOW</u>	<u>APPROXIMATE SHIP WEIGHT</u>
G-1*	24"/36"	200 lbs.	2"/2"	100 CFM	240 lbs.
G-2*	24"/36"	170 lbs.	4"/4"	300 CFM	210 lbs.
G-3P	24"/36"	140 lbs.	6"/6"	500 CFM	180 lbs.
G-3S	24"/34"	140 lbs.	4"/4"	500 CFM	180 lbs.

\* Specify: Polyethylene (P) or Epoxy Lined Steel (S)

#### SAFETY

Certain chemical compounds in the presence of activated carbon may oxidize, decompose or polymerize. This could result in temperature increases sufficient to cause ignition of the activated carbon or adsorbed material. If a compounds reaction with activated carbon is unknown, appropriate tests should be considered.

**CARBOTROL®**  
CORPORATION

51 Riverside Avenue  
Westport, CT 06880

1-800-242-1150 • Fax # (203) 226-5322  
Web Address: <http://www.carbtrol.com>

# CARBOTROL®

## AIR PURIFICATION CANISTERS 140-200 LB. ACTIVATED CARBON

G-1  
G-2  
G-3



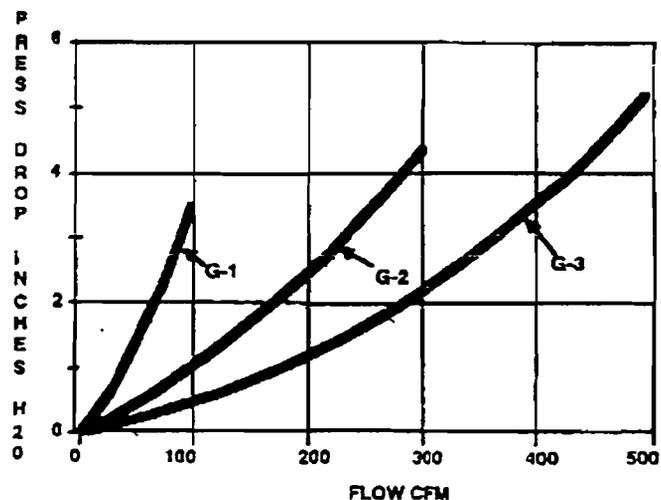
The CARBTROL "G" Canisters handles flows up to 500 CFM.

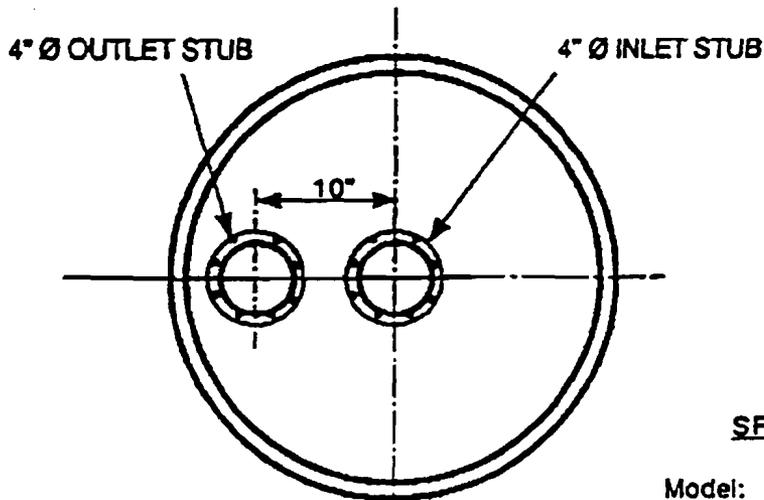
### FEATURES

- High activity carbon.
- Epoxy lined steel or polyethylene construction.
- Acceptable for transport of hazardous spent carbon.
- Side drain for removal of accumulated condensate.
- Low pressure drop.
- PVC internal piping.
- High temperature (180°F) steel units available.

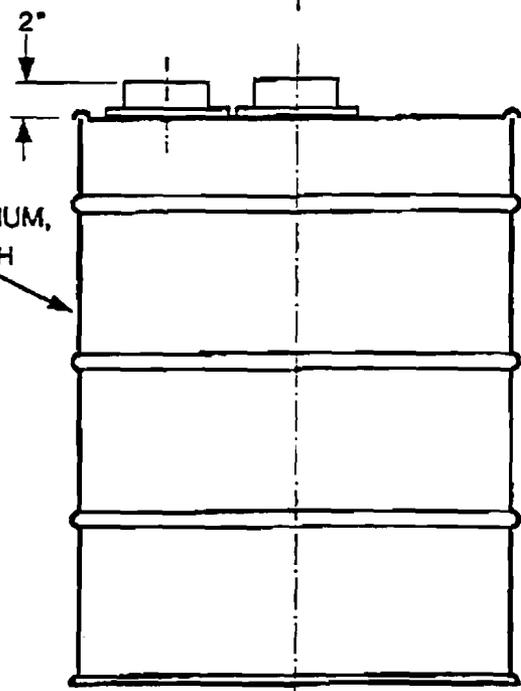
### APPLICATIONS

- Soil vapor remediation
- Air stripper exhausts
- Tank vents
- Exhaust hoods
- Work area purification
- Sewage plant odor control





110 GALLON DRUM,  
32" DIA. x 43" HIGH



**SPECIFICATIONS**

Model: G-10/400  
 Design flow - max.: 250 CFM  
 Design Features:  
 Pressure Drop: 7" w.c. @ 250 CFM  
 Operating Pressure: 5 psi  
 Carbon: 400 lbs vapor phase carbon 4 x 8 mesh  
 Canister: 32" Dia. x 43" steel drum, PVC internals  
 Connections: Inlet-4" Ø Sch 40 PVC pipe stub in cover  
 Outlet-4" Ø Sch 40 PVC pipe stub in cover  
 Shipping Weight: 500 lbs  
 Availability: 4-6 weeks

**CARBOTROL®**  
CORPORATION

51 RIVERSIDE AVENUE  
WESTPORT CONN. 06880  
(203) 226-5842

SCALE -----

BY BGM

DATE 11-9-00

REV

**G-10/400 VAPOR PHASE ADSORBER**  
400 LBS 4 X 8 GAC

ARRANGEMENT

S DWG 4382/0

# O&M CHECKLIST FOR SVE/AIR SPARGE SYSTEM

Date \_\_\_\_\_

Inspected By: \_\_\_\_\_

Control Panel	Arrival	Departure
System	On / Off	On / Off

SVE SYSTEM INSIDE TRAILER	
Observe Moisture Separator Operational	Yes / No
Was Moisture Separator Emptied?	Yes / No
Moisture Disposal Drum	F / 75 / 50 / 25 / E
SVE Relief Valve	Open / Closed

SVE WELL READINGS (INSIDE TRAILER)				
SVE WELL #	Flow	PID Readings	Vacuum	Ball Valve
RW-1	cfm	ppm	inches of Water	F / 75 / 50 / 25 / E
RW-2	cfm	ppm	inches of Water	F / 75 / 50 / 25 / E
RW-3	cfm	ppm	inches of Water	F / 75 / 50 / 25 / E
	cfm	ppm	inches of Water	F / 75 / 50 / 25 / E
	cfm	ppm	inches of Water	F / 75 / 50 / 25 / E
	cfm	ppm	inches of Water	F / 75 / 50 / 25 / E
	cfm	ppm	inches of Water	F / 75 / 50 / 25 / E

SVE SYSTEM FLOW				
	Pre-Blower	Post Blower	Exhaust	Moisture Separ.
Vacuum				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	
Pressure	psi	psi	psi	



## **New York State Department of Health Generic Community Air Monitoring Plan**

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 volatile organic compounds (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 NYSDEC/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. 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.

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

All 15-minute readings must be recorded and be available for State (DEC and DOH) 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.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter ( $\text{mcg}/\text{m}^3$ ) 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  $150 \text{ mcg}/\text{m}^3$  above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than  $150 \text{ mcg}/\text{m}^3$  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  $150 \text{ mcg}/\text{m}^3$  of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

June 20, 2000

HA Southern gCAMP r1.doc

New York State Department of Environmental Conservation

MEMORANDUM

TO: Regional Hazardous Waste Remediation Engrs., Bur. Directors & Section Chiefs  
FROM: Michael J. O'Toole, Jr., Director, Division of Hazardous Waste Remediation  
SUBJECT: DIVISION TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM--FUGITIVE DUST  
DATE: SUPPRESSION AND PARTICULATE MONITORING PROGRAM AT INACTIVE HAZARDOUS WASTE SITES

OCT 27 1989



1. Introduction

Fugitive dust suppression, particulate monitoring, and subsequent action levels for such must be used and applied consistently during remedial activities at hazardous waste sites. This guidance provides a basis for developing and implementing a fugitive dust suppression and particulate monitoring program as an element of a hazardous waste site's health and safety program.

2. Background

Fugitive dust is particulate matter--a generic term for a broad class of chemically and physically diverse substances that exist as discrete particles, liquid droplets or solids, over a wide range of sizes--which becomes airborne and contributes to air quality as a nuisance and threat to human health and the environment.

On July 1, 1987, the United States Environmental Protection Agency (USEPA) revised the ambient air quality standard for particulates so as to reflect direct impact on human health by setting the standard for particulate matter less than ten microns in diameter ( $PM_{10}$ ); this involves fugitive dust whether contaminated or not. Based upon an examination of air quality composition, respiratory tract deposition, and health effects,  $PM_{10}$  is considered conservative for the primary standard--that requisite to protect public health with an adequate margin of safety. The primary standards are  $150 \mu g/m^3$  over a 24-hour averaging time and  $50 \mu g/m^3$  over an annual averaging time. Both of these standards are to be averaged arithmetically.

There exists real-time monitoring equipment available to measure  $PM_{10}$  and capable of integrating over a period of six seconds to ten hours. Combined with an adequate fugitive dust suppression program, such equipment will aid in preventing the off-site migration of contaminated soil. It will also protect both on-site personnel from exposure to high levels of dust and the public around the site from any exposure to any dust. While specifically intended for the protection of on-site personnel as well as the public, this program is not meant to replace long-term monitoring which may be required given the contaminants inherent to the site and its air quality.

### 3. Guidance

A program for suppressing fugitive dust and monitoring particulate matter at hazardous waste sites can be developed without placing an undue burden on remedial activities while still being protective of health and environment. Since the responsibility for implementing this program ultimately will fall on the party performing the work, these procedures must be incorporated into appropriate work plans. The following fugitive dust suppression and particulate monitoring program will be employed at hazardous waste sites during construction and other activities which warrant its use:

- (1) Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.
- (2) Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Such activities shall also include the excavation, grading, or placement of clean fill, and control measures therefore should be considered.
- (3) Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns ( $PM_{10}$ ) with the following minimum performance standards:

Object to be measured: Dusts, Mists, Aerosols

Size range: <0.1 to 10 microns

Sensitivity: 0.001 mg/m<sup>3</sup>

Range: 0.001 to 10 mg/m<sup>3</sup>

Overall Accuracy:  $\pm 10\%$  as compared to gravimetric analysis of stearic acid or reference dust

Operating Conditions:

Temperature: 0 to 40°C

Humidity: 10 to 99% Relative Humidity

Power: Battery operated with a minimum capacity of eight hours continuous operation

Automatic alarms are suggested.

Particulate levels will be monitored immediately downwind at the working site and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task; the P-5 Digital Dust Indicator as manufactured by MDA Scientific, Inc. or similar is appropriate.

- (4) In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the entity operating the equipment to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

(5) The action level will be established at  $150 \text{ ug/m}^3$  over the integrated period not to exceed 15 minutes. While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of  $150 \text{ ug/m}^3$ , the upwind background level must be measured immediately using the same portable monitor. If the working site particulate measurement is greater than  $100 \text{ ug/m}^3$  above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see Paragraph 7). Should the action level of  $150 \text{ ug/m}^3$  be exceeded, the Division of Air Resources must be notified in writing within five working days; the notification shall include a description of the control measures implemented to prevent further exceedences.

(6) It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure  $\text{PM}_{10}$  at or above the action level. Since this situation has the potential to migrate contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

(7) The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

1. Applying water on haul roads.
2. Wetting equipment and excavation faces.
3. Spraying water on buckets during excavation and dumping.
4. Hauling materials in properly tarped or watertight containers.
5. Restricting vehicle speeds to 10 mph.
6. Covering excavated areas and material after excavation activity ceases.
7. Reducing the excavation size and/or number of excavations.

Experience has shown that utilizing the above-mentioned dust suppression techniques, within reason as not to create excess water which would result in unacceptable wet conditions, the chance of exceeding the  $150 \text{ ug/m}^3$  action level at hazardous waste site remediations is remote. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

- (8) If the dust suppression techniques being utilized at the site do not lower particulates to an acceptable level (that is, below 150 ug/m<sup>3</sup> and no visible dust), work must be suspended until appropriate corrective measures are approved to remedy the situation. Also, the evaluation of weather conditions will be necessary for proper fugitive dust control--when extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended.

There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require appropriate toxics monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

cc: E. Sullivan  
D. Markell  
A. DeBarbieri  
C. Goddard  
R. Tramontano  
E. McCandless  
A. Fossa  
J. Kelleher  
J. Colquhoun  
M. Keenan  
D. Ritter  
Regional Directors  
Regional Engineers  
RSHWE  
Reg. Citizen Participation Specs.

**LORI A. BEYER**  
**14 WEST POINT DRIVE**  
**EAST NORTHPORT, NY 11731**  
**(516) 757-0511**

**SUMMARY**

General Manager/Laboratory Director with a solid technical background combined with Management experience in environmental testing industry. Outstanding organizational, leadership, communication and technical skills. Customer focused, quality oriented professional with consistently high marks in customer/employee satisfaction.

**PROFESSIONAL EXPERIENCE**

**Nytest Environmental, Inc. (NEI); Port Washington, New York** 1986-1998

**General Manager/Laboratory Director** 1996-1998

Responsible for controlling the operation of an 18,000 square foot facility to meet NEI's financial and operational performance standards.

- \*Management of 65 FTEs including Sales and Operations
- \*Ensures that all operations are in compliance with NEI's QA procedures
- \*Ensures that productivity indicators, staffing levels and other cost factors are held within established guidelines
- \*Maintains a quantified model of laboratory's capacity and uses this model as the basis for controlling the flow of work into and through the lab so as to ensure that customer requirements and lab's revenue and contribution targets are achieved

**Technical Project Manager** 1994-1996

Responsible for the coordination and implementation of environmental testing program requirements between NEI and their customers.

- \*Supervise Customer Service Department
- \*Assist in the development of major proposals
- \*Complete management of all Federal and State Contracts and assigned commercial contracts
- \*Provide technical assistance to the customer, including data validation and interpretation
- \*Review and implement Project specific QAPPs

**Corporate QA/QC Officer** 1995-1996

Responsible for the implementation of QA practices as required in the NJDEP X26174 and X22651 Contracts.

- \*Primary contact for NJDEP QA/QC issues including SOP preparation, review and approval
- \*Responsible for review, verification and adherence to the Contract requirements and NEI QA Plan

**Data Review Manager** 1992-1994

Responsible for the accurate compilation, review and delivery of analytical data to the company's customers. Directly and effectively supervised a department of 22 personnel.

- \*Managed activities of the data processing software including method development, form creation, and production
- \*Implement new protocol requirements for report and data management formats
- \*Maintained control of data storage/archival areas as EPA/CLP document control officer
- \*Responsible for technical writing and review functions and clerical/word processing areas

**Data Review Specialist** 1987-1991

Responsible for the review of GC, GC/MS, Metals and Wet Chemistry data in accordance with regulatory requirements.

- \*Proficient with USEPA, NYSDEC, NJDEP and NEESA requirements
- \*Review data generated in accordance with SW846, NYSDEC ASP, EPA/CLP and 40 CFR Methodologies

**GC/MS VOA Analyst** 1986-1987

Responsible for all aspects of volatile data acquisition.

- \*Analyzed environmental samples according to USEPA CLP, SW846 and NYSDEC ASP Methodologies
- \*Operated both Finnigan and Hewlett Packard Gas Chromatographs and Mass Spectrometers

**EDUCATION**

1982-1985 1981-1982 5/8/91 8/92 9/93	State University of New York at Stony Brook, New York; B.S. Biochemistry University of Delaware; Biology/Chemistry. Rutgers University; Mass Spectral Data Interpretation Course, GC/MS Training Westchester Community College; 40 hour Organic Data Validation Course (99%) Westchester Community College; 40 hour Inorganic Data Validation Course (93%)
--------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

References available upon request



The Professional  
Development Center  
AT  
WESTCHESTER COMMUNITY COLLEGE

914 285-6619

October 2, 1992

Ms. Lori Beyer  
3 sparkill Drive  
East Northport, NY 11731

Dear Ms. Beyer:

Congratulations upon successful completion of the Organic Data Validation course held August 17 - 21, 1992, through Westchester Community College, Professional Development Center. This course has been deemed by New York State Department of Environmental Conservation as equivalent to EPA's Organic Data Validation Course.

Enclosed is your Certificate. Holders of this Certificate are deemed competent to perform organic data validation for the New York State DEC Division of Hazardous Waste Remediation.

The Professional Development Center at Westchester Community College plans to continue to offer courses and seminars which will be valuable to environmental engineers, chemists and related personnel. Current plans include a TCLP seminar on November 17th and a conference on Environmental Monitoring Regulations on November 18th.

We look forward to seeing you again soon at another environmental program or event. Again, congratulations.

Very truly yours,

Passing Grade is 70%  
Your Grade is 99%

Elaine Sall  
Program Coordinator

ES/bf

# Westchester Community College Professional Development Center

Awards this Certificate of Achievement To

\_\_\_\_\_  
LORI BEYER

for Successfully Completing

\_\_\_\_\_  
INORGANIC DATA VALIDATION

Instructor: Dale Boshart

Date MARCH 1993

\_\_\_\_\_  
Rick Elliot  
Assistant Dean  
Professional Development Center

\_\_\_\_\_  
Jill  
President



The Professional  
Development Center

# Westchester Community College Professional Development Center

Awards this Certificate of Achievement To

LORI BEYER

for Successfully Completing

ORGANIC DATA VALIDATION COURSE (35 HOURS)

Dr. John Samuelian

Date AUGUST 1992

Assistant Dean  
Professional Development Center

President



The Professional  
Development Center



The Professional  
Development Center  
AT  
WESTCHESTER COMMUNITY COLLEGE

914 285-6619

June 21, 1993

Dear Ms. Beyer:

Enclosed is your graded final examination in the Inorganic Data Validation course you completed this past March. A score of 70% was required in order to receive a certificate of satisfactory completion. Persons holding this certificate are deemed acceptable to perform Inorganic Data Validation for the New York State Department of Environmental Conservation, Division of Hazardous Waste Remediation.

I am also enclosing a course evaluation for you to complete if you have not already done so. The information you provide will greatly aid us in structuring further courses. We wish to make these course offerings as relevant, targeted and comprehensive as possible. Your evaluation is vital to that end.

Congratulations on your achievement. I look forward to seeing you again at another professional conference or course. We will be co-sponsoring an environmental monitoring conference on October 21, 1993 with the New York Water Pollution Control Association, Lower Hudson Chapter, at IBM's Yorktown Heights, NY site. Information regarding this event will be going out in August.

Very truly yours,

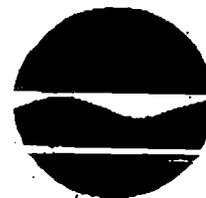
Elaine Sall  
Program Coordinator

ES/bf

Enclosures

**New York State Department of Environmental Conservation**

) Wolf Road, Albany, New York 12233

**Thomas C. Jorling**  
Commissioner

July 8, 1992

Ms. Elaine Sall  
Program Coordinator  
Westchester Community College  
Valhalla, NY 10595-1698

Dear Elaine,

Thank you for your letter of June 29, 1992. I have reviewed the course outline for organic data validation, qualifications for teachers and qualifications for students. The course that you propose to offer would be deemed equivalent to that which is offered by EPA. The individuals who successfully complete the course and pass the final written exam would be acceptable to perform the task of organic data validation for the Department of Environmental Conservation, Division of Hazardous Waste Remediation.

As we have discussed in our conversation of July 7, 1992, you will forward to me prior to the August course deadline, the differences between the EPA SOW/90 and the NYSDEC ASP 12/91. You stated these differences will be compiled by Mr. John Samulian.

I strongly encourage you to offer an inorganic data validation course. I anticipate the same list of candidates would be interested in an inorganic validation course as well, since most of the data to be validated consists of both organic and inorganic data.

Thank you for your efforts and please contact me if I can be of any further assistance.

Sincerely,

Maureen P. Serafini  
Environmental Chemist II,  
Division of Hazardous Waste  
Remediation

**Summary of Sampling Program  
Westbury Valet Cleaners  
123 Post Avenue  
Westbury, New York**

<b>Matrix</b>	<b>No. Samples</b>	<b>Analytical Methods</b>	<b>Data Reporting Levels</b>	<b>Comments</b>
Soil	to be determined	CLP - EPA method 8260	1,400 ppb	Samples collected on-site to determine if soils are remediated
Upper Glacial Aquifer groundwater monitoring wells	3 samples per event	CLP - EPA method 8260	5 µg/L	Quarterly sampling following startup of SVES
Indoor air quality sampling - Perc Badges	to be determined	NYSDOH method 311-9	100 µg/m <sup>3</sup>	Monthly sampling will be performed until indoor air quality meets NYSDOH standard of 100 µg/m <sup>3</sup> then quarterly sampling. Locations to be determined by NYSDOH
Air sampling of emissions from SVES	3 samples per event	CLP - EPA method 8260		Tedlar bag samples from before, between and after carbon canisters.
Air sampling of vapors from each extraction well	to be determined	CLP - EPA method 8260	to be determined	Charcoal tubes will be used with low volume pumps to collect periodic samples from extraction wells before emissions reach carbon canisters.