

SITE MANAGEMENT PLAN
FOR USE AFTER
VOLUNTARY CLEANUP
OF
THE PROPERTY AT
1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208
SITE # V00582

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REVISED MAY 10, 2007

1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

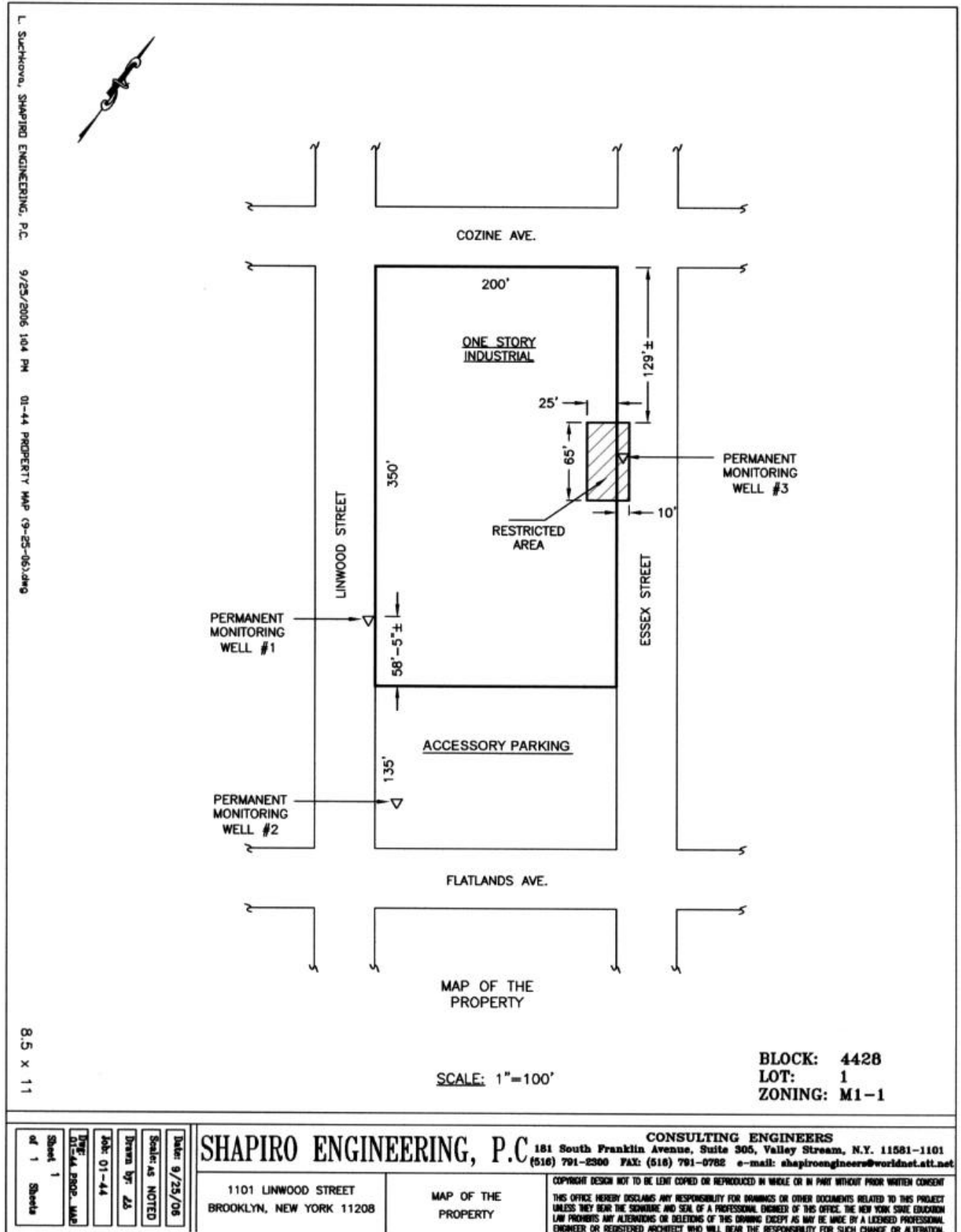


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1.0 INTRODUCTION AND PURPOSE:**1.1 OVERVIEW AND OBJECTIVES**

The site is a 2.23-acre industrial property currently owned by SHSFLATLANDS LLC. The location of the property is shown on the Property Map (see page i). The site has been characterized during several previous investigations. The user should refer to the previous investigation reports for more detail, as needed.

The objective of this Site Management Plan (SMP) is to set guidelines for management of soil material during any future activities, which would breach the cover system at the site within the restricted area. The restricted area is limited to a 65 by 35 feet rectangular shape area approximately 130 feet south of the northeast corner of the building (see Property Map dwg.). This SMP addresses environmental concerns related to soil management and has been reviewed and approved by the New York State Department of Environmental Conservation (NYSDEC) as shown in Exhibit 1 (see Appendix "A").

1.2 SITE HISTORY

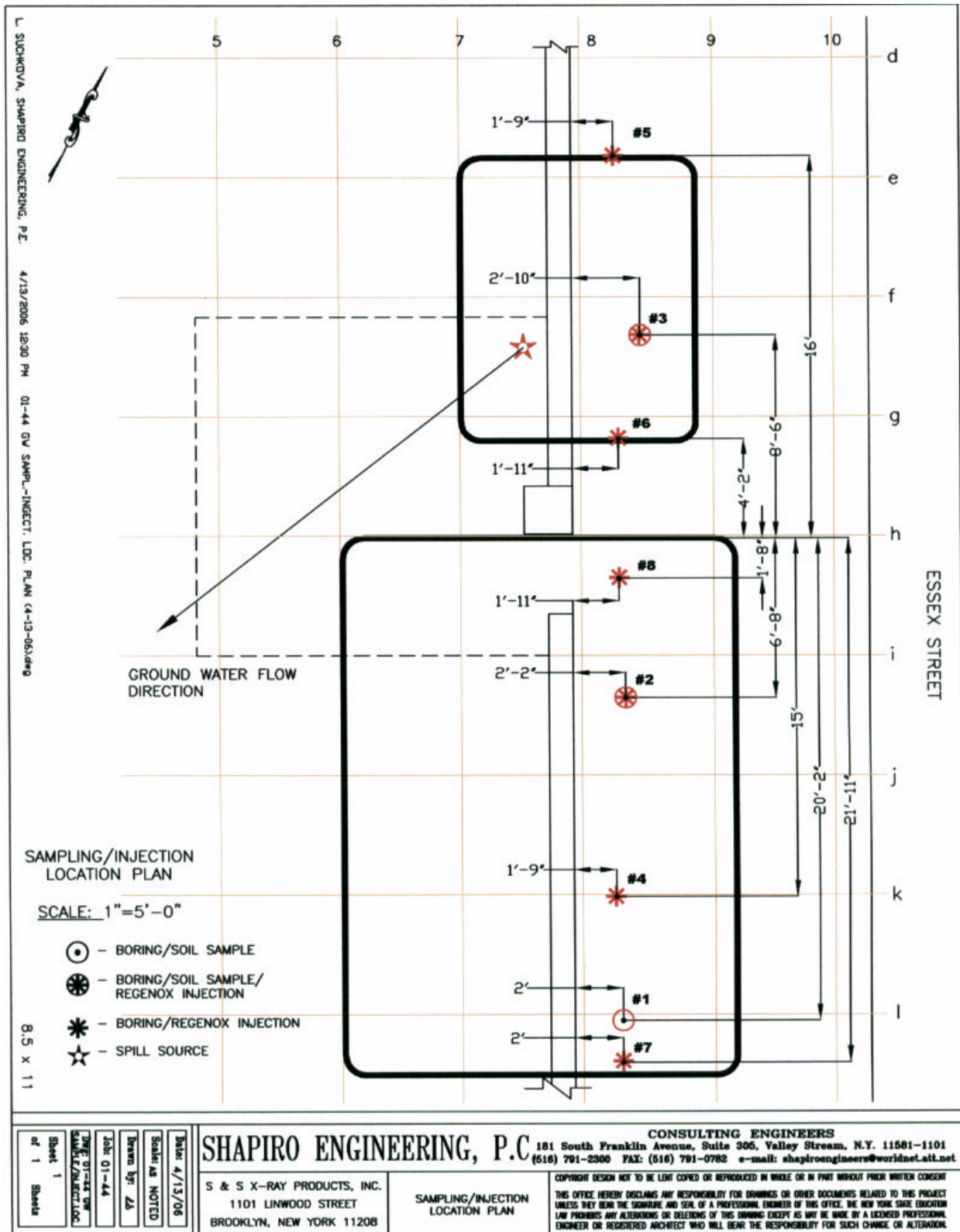
In 2001, a solvent spill and two 550-gallon underground storage tanks were discovered on the property. Based on the specifics of manufacturing processes being used on the property, it was determined that the solvent spill occurred before 1986 and that the probable source of contamination was from a broken fill pipe located near the building's exterior wall. An interim follow-up spill report was submitted to NYSDEC on 1/22/02.

2.0 NATURE AND EXTENT OF CONTAMINATION:

Based on data obtained from previous investigations and the remediation done at the site, a Final Remedial Report for 1101 Linwood Street, Brooklyn, NY 11208 dated February 28, 2006 was developed by Shapiro Engineering, P.C. Soil sample results showed elevated levels of BTEX compounds in three soil sampling locations at approximately 12-foot depth below grade. The groundwater sample analysis at the down gradient monitoring well indicated no presence of BTEX compounds (see summary tables and a drawing in the end of this section).

The constituents of potential concern (COPC) for soil and groundwater are primarily ethylbenzene and xylene.

The Volatile Organic Compounds (VOCs) of concern are ethylbenzene and xylene. These contaminants might pose a future risk by their intrusion through possible future cracks in the building floor.



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TABLE #1							
PERMANENT DOWN GRADIENT MONITORING WELL							
GROUNDWATER SUMMARY							
CLIENT: SHSFLATLANDS LLC				JOB NO.: 01-44			
ADDRESS: 80 FAHY AVENUE, STATEN ISLAND, NY 10314							
SAMPLING ADDRESS: 1101 LINWOOD STREET, BROOKLYN, NEW YORK 11208							
SAMPLE LOCATION	SAMPLE DATE	ANALYTICAL PARAMETERS (ug/L) PPB					
		MTBE	BENZENE	TOLUENE	ETHYLEBENZE	XYLENE	
GWP - 1	02/08/2006	< 5	< 0.7	< 5	< 5	< 5	
QUALIFIERS FOR ORGANICS DATA < = INDICATES COMPOUND WAS ANALYZED FOR BUT NOT DETECTED AT QUANTIFICATION LIMIT INDICATED J = INDICATES AN ESTIMATED VALUE LESS THEN THE QUANTIFICATION LIMIT BUT GREATER THEN ZERO ANALYTICAL DATA WAS OBTAINED FROM H2M LABS, INC. SEE H2M LABS' RESULTS IN APPENDIX "C".							
				LARRY ZEMAN			
				SIGNATURE		DATE	

SHAPIRO ENGINEERING, P.C. 181 SOUTH FRANKLIN AVENUE, SUITE 305, VALLEY STREAM, N.Y. 11581 E-MAIL: shapiroengineers@worldnet.att.net									
(516) 791-2300		FAX: (516) 791-0782							
TABLE #2 RESULTS OF SOIL SAMPLES AT LOCATIONS #1, 2 & 3									
CLIENT: SHSFLATLANDS LLC				JOB NO.: 01-44					
ADDRESS: 80 FAHY AVENUE, STATEN ISLAND, NY 10314									
SAMPLING ADDRESS: 1101 LINWOOD STREET, BROOKLYN, NEW YORK 11208									
SAMPLE LOCATION		SAMPLE DATE		ANALYTICAL PARAMETERS (ug/Kg) PPB					
				MTBE	BENZENE	TOLUENE	ETHYLEBENZE	XYLENE	
SB - 1		01/18/2006		< 60	< 8	410	200000 D	1200000 D	
SAMPLE LOCATION		SAMPLE DATE		ANALYTICAL PARAMETERS (ug/Kg) PPB					
				MTBE	BENZENE	TOLUENE	ETHYLEBENZE	XYLENE	
SB - 2		01/18/2006		< 56	< 8	< 56	1000	29000 D	
SAMPLE LOCATION		SAMPLE DATE		ANALYTICAL PARAMETERS (ug/Kg) PPB					
				MTBE	BENZENE	TOLUENE	ETHYLEBENZE	XYLENE	
SB - 3		01/18/2006		< 57	< 8	< 57	< 57	20000 D	
QUALIFIERS FOR ORGANICS DATA < = INDICATES COMPOUND WAS ANALYZED FOR BUT NOT DETECTED AT QUANTIFICATION LIMIT INDICATED D = SAMPLE DILUTED FOR ANALYSIS									
ANALYTICAL DATA WAS OBTAINED FROM H2M LABS, INC. SEE H2M LABS' RESULTS IN APPENDIX "C".									
LARRY ZEMAN:									
SIGNATURE								DATE	

01-44

1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

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3.0 SUMMARY OF REMEDY:

The constituents of potential concern (COPCs) for soil and groundwater have been identified in section 2.0 of this document.

The identification of the remedial action objectives (RAOs) for the site is based primarily on the human health and environmental risks posed by the site as identified in the Additional Remedial Action Work Plan (ARAWP). Based on the contemplated use of the property, the RAOs for the site are to minimize potential exposure to on-site surface soil, subsoil, and groundwater and to prevent releases from the BTEX compound-impacted soil.

All the components are briefly described as follows:

In 2002, the two tanks and associated piping were removed, inspected, emptied, cleaned and disposed of properly. Approximately 40 cubic yards of contaminated soil around them was also removed. A total of 2,150 gallons of contaminated groundwater was collected for disposal.

In the end of 2004 - beginning of 2005, approximately 250 cubic yards was excavated and disposed of properly, in accordance with NYSDEC regulations. Soil excavation was limited to the 12-foot depth below grade, which is the depth of the building footing. A plastic cover was placed on the bottom and walls of the excavation to separate remaining contaminated soil below 12-foot-depth line from a clean fill that replaced the removed contaminated soil.

In January 2005, a sub-slab depressurization (SSD) system was installed at approximately 4 feet below grade to prevent potential intrusion of VOCs through cracks in the floor.

The work included the following:

1. Installation of a pre-cast 6-foot diameter concrete ring below the slab level, which is 3-foot deep, with a 6-inch thick concrete top and slotted sides, located in the vicinity of grid 4-5/M-N (see the end of this section).
2. Installation of an exhaust duct system below grade and along the external wall leading from the sub-slab pit to the roof.
3. Installation and testing of a rooftop fan.

The SSD system was designed in conformance with standard engineering principles and practices. The design was based on Figures 2.5 and 2.6 of the USEPA Document #EPA/625/R-92/016 with an additional modification for the facility. Thus, instead of a 4 ft

by 4 ft below slab pit, a pre-cast 6-foot diameter concrete ring with slotted sides was installed to ensure an easier access for the potential VOCs into the pit.

A Direct Drive Blower with maximum capacity of 985 cfm was installed on the roof of the building. At a static pressure of 1.25 in.w.c., it will move approximately 360 cfm of air. The fan will operate continuously to depressurize exhaust from under the slab. An in-line Dwyer Mark II molded plastic pressure manometer with a clearly marked line showing the minimum acceptable vacuum level has been installed near the "on / off" switch of the SSD system (see technical literature in Exhibit C of Section 7).

A pressure field extension (PFE) test was performed for the installed SSD system on October 7, 2005 by the Consultant (Shapiro Engineering, P.C.) and the Contractor (A&D Abatement, Inc.) in the presence of Michael MacCabe, P.E., a NYSDEC Senior Environmental Engineer from the Division of Environmental Remediation and Nathan M. Walz, a NYSDOH Public Health Specialist from the Bureau of Environmental Exposure Investigation.

Nine small holes (approximately ½ inch in diameter) were drilled through the slab at various distances and directions from the suction pit. The differential pressure in each hole was measured using a GEM™2000 Gas Analyzer & Extraction Monitor with the exhaust fan "on". All readings were satisfactory. The readings and a plan of the tested area are provided in the end of this section.

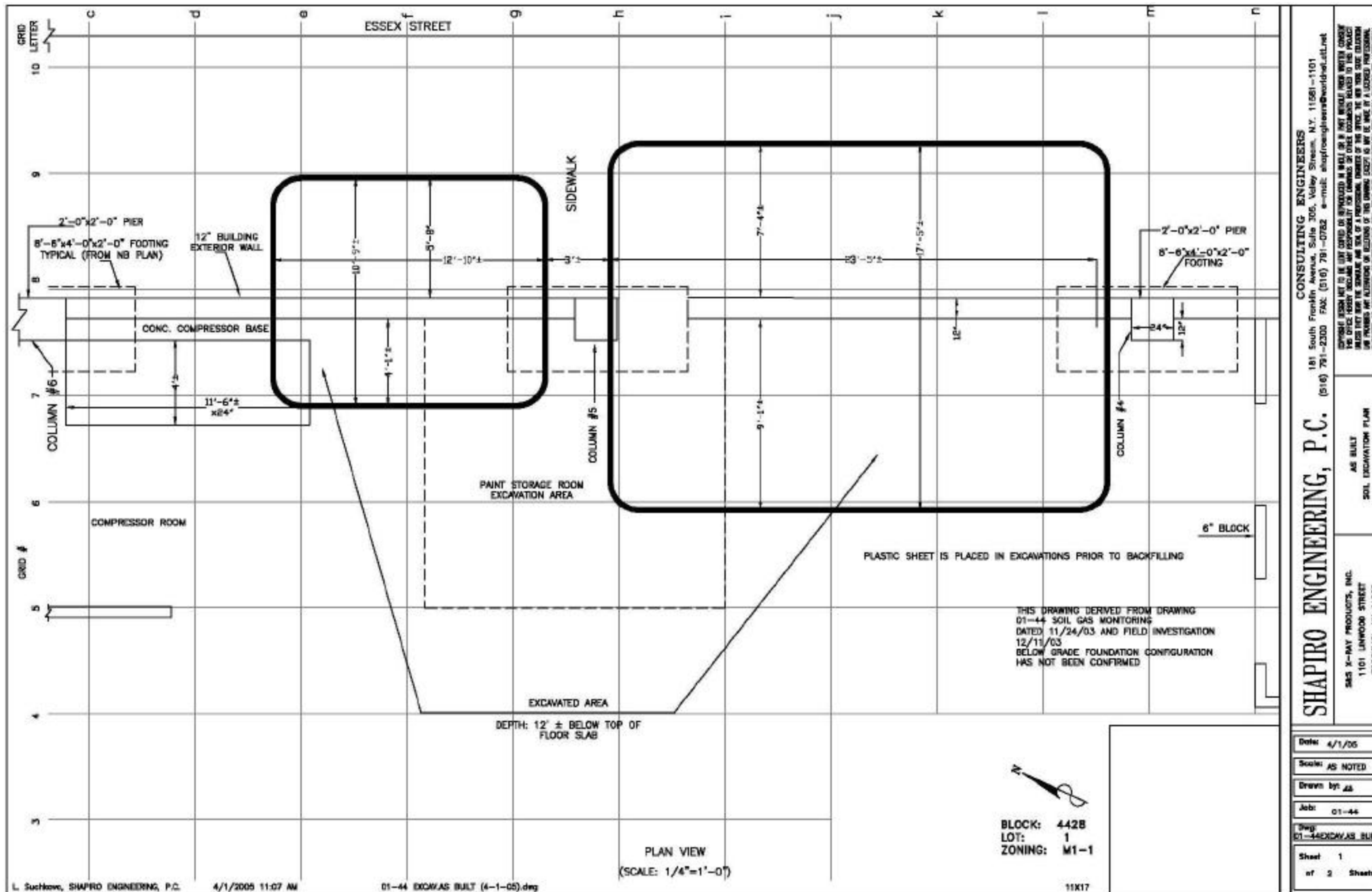
In January 2006, a permanent down gradient monitoring well was installed on the path of the migrating plume caused by the solvent spill. The well was constructed of 2-inch diameter PVC pipe with a 10-foot screen that expanded to the water table. It was installed on the Linwood Street sidewalk on the Southwest side of the building on 1/18/06 and tested on 2/8/06 for BTEX compounds using Method 8260B by H2M Labs, which is an NYSDOH approved lab. Concentrations of groundwater testing indicated no presence of BTEX compounds (see a summary table in the end of section 2.0).

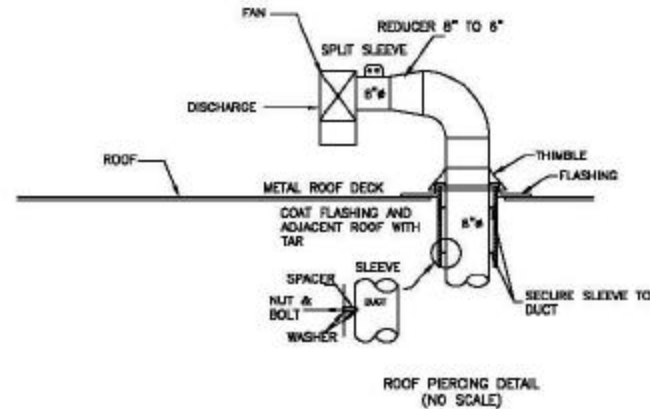
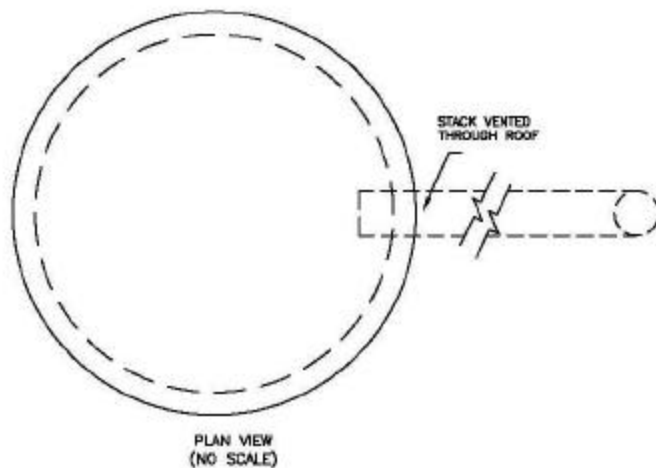
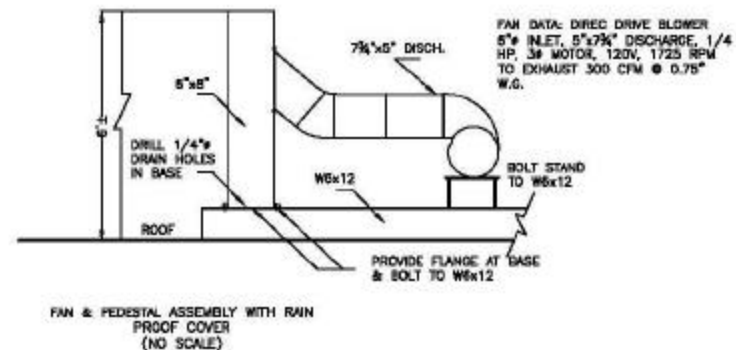
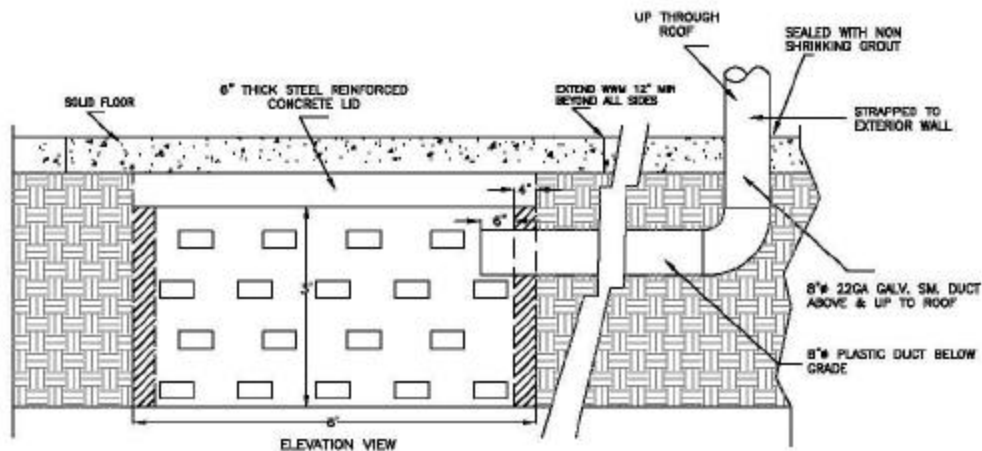
In order to collect soil samples and inject RegenOx Complex for long-term remediation, new borings were placed on the Essex Street sidewalk on the Northeast side of the building by the contractor (Unitech Services Group) and Aquifer Drilling and Testing, Inc. (ADT) in the presence of the consultant (Shapiro Engineering, P.C.) and Michael MacCabe, P.E., a NYS DEC Senior Environmental Engineer from the Division of Environmental Remediation. Three (3) soil samples were collected on 1/18/06 from three new borings just below the bottom of the original excavation, which is below the demarcation line of plastic sheeting approximately 12-foot deep. They were analyzed for BTEX compounds using Method 8260B by H2M Labs. The results indicated elevated levels of ethylbenzene and xylene at locations #1 & 2 and an elevated level of xylene at location #3 (see summary tables and a drawing in the end of section 2.0).

After the samples had been taken, the soil borings was extended to 26 feet below grade and 26-foot long 1-inch diameter drive rods were inserted in turn into each boring, to ensure adequate conditions for RegenOx complexes injection (see Appendix "D").

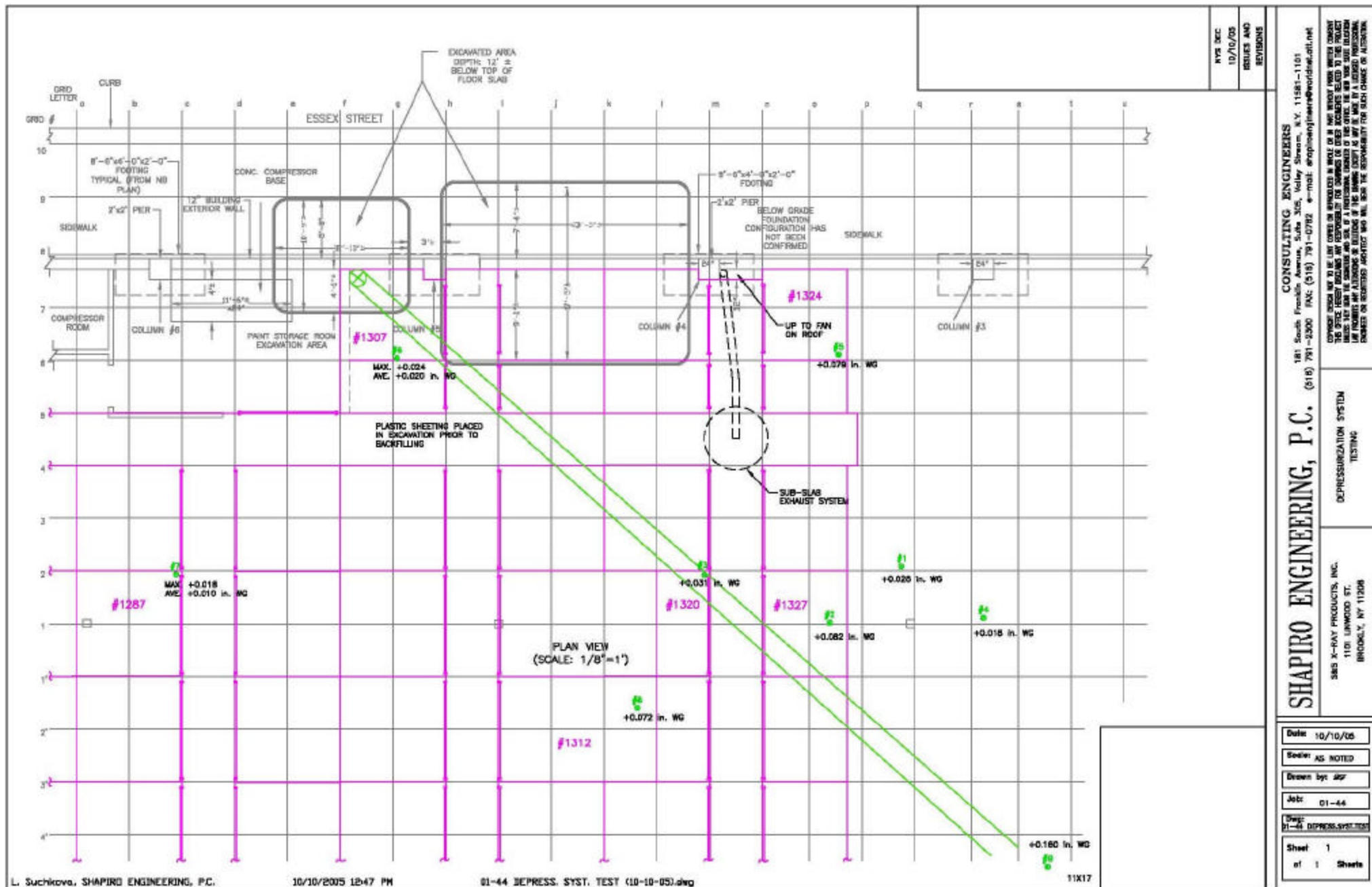
Approximately 252 gallons of RegenOx oxidizer and activator complexes (OAC) were injected into each of the borings. The total amount of RegenOx, 3,960 lbs. (including 1,980 lbs. of oxidizer and 1,980 lbs. of activator), was considered to be optimal for the site conditions and one-time OAC application required by NYS DEC. The quantity of RegenOx used was based on calculations conducted by the manufacturer.

For more details see previously submitted reports.





SUB-SLAB DEPRESSURIZATION EXHAUST SYSTEM
DETAILS DERIVED FROM
USEPA PUBLICATION #EPA/625/R-92/016, FIGURES 2.5 & 2.6



4.0 ADDITIONAL SITE WORK:

Upon the NYSDEC and NYSDOH approval of this Site Management Plan, additional site work required by the Department to obtain post-remedial data will be performed, and the consultant will certify the completion of such work in the first annual certification report in January. This additional work will include:

- 1) Installation of two additional permanent monitoring wells in the locations indicated and confirmed by the Department;
- 2) Determination of the water table elevations to confirm the local groundwater flow direction; and
- 3) Collection and analysis of two soil samples taken from the areas of the RegenOx injections, beneath the original excavations.

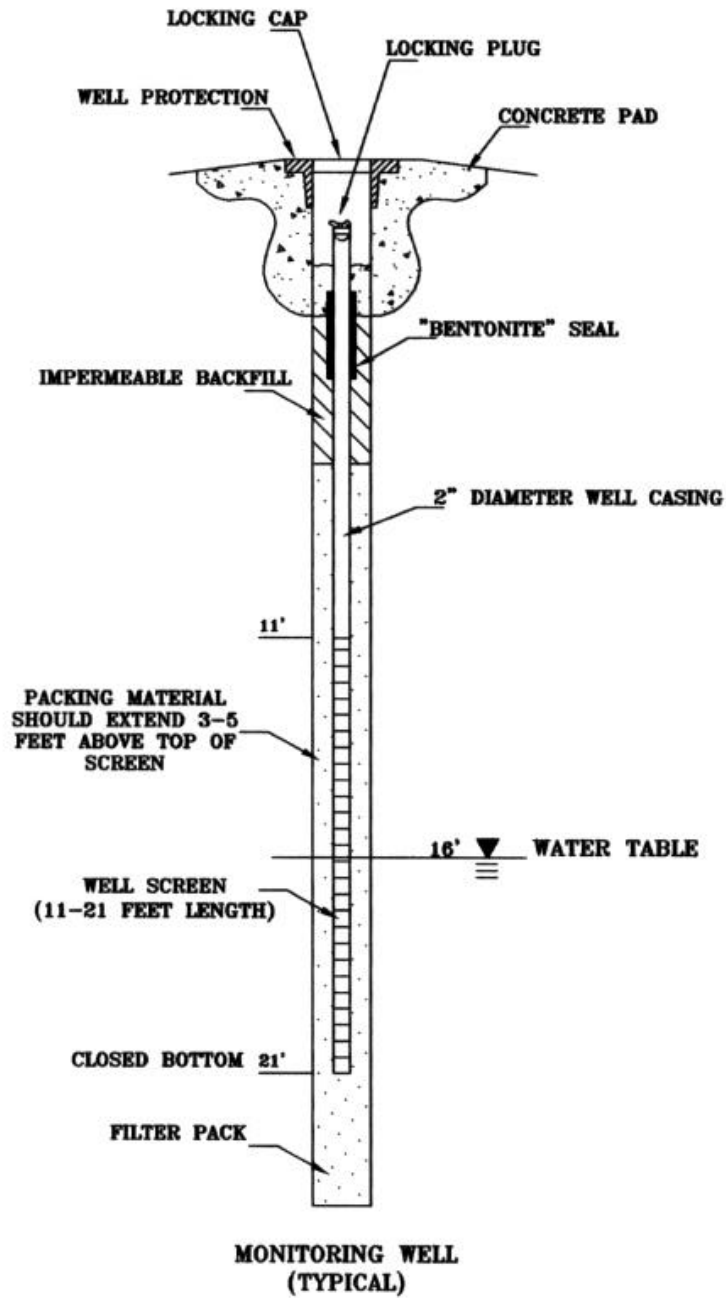
The monitoring wells will be constructed of 2-inch diameter PVC pipe with a 10-foot screen that will expand to the water table (see Monitoring Well dwg.). One well will be installed in the area of excavations to ascertain the effect of RegenOx injections on the groundwater contamination and document the remaining groundwater contamination. The second well will be installed in the parking lot in the southern portion of the site, in the location specified by the Department (see Additional Soil Sampling Location Plan dwg.). After the wells are installed and stabilized, groundwater sampling will be accomplished together with sampling of the permanent down gradient monitoring well on Linwood Street sidewalk on the Southwest side of the building, which was installed on 1/18/06. All the test results will be included in the annual report.

When the monitoring wells are installed, the casing height will be measured by a surveyor to allow for determination of the groundwater elevation during groundwater sampling to confirm the local groundwater flow direction.

In order to collect soil samples, new borings will be placed on the Essex Street sidewalk on the Northeast side of the building by the contractor in the presence of the consultant (Shapiro Engineering, P.C.). One (1) soil sample will be collected from each of the two new borings in the area of the RegenOx injections just below the bottom of the original excavation, which is below the demarcation line of plastic sheeting approximately 12-foot deep. The samples will be collected to ascertain the effect of RegenOx on the soil contamination.

Groundwater and soil samples will be tested for BTEX compounds using Method 8260B by a NYSDOH approved lab.

L. Shapiro, SHAPIRO ENGINEERING, P.C. 11/1/2005 4:23 PM 01-44 MONITORING WELL (11-1-05).dwg



8.5" x 11"

NOT TO SCALE

Sheet 1
of 1 Sheets

DATE: 11/1/05
SCALE: AS NOTED
DRAWN BY: AS
JOB: 01-44
DWG
BY: SHAPIRO ENGINEERING, P.C.

SHAPIRO ENGINEERING, P.C.

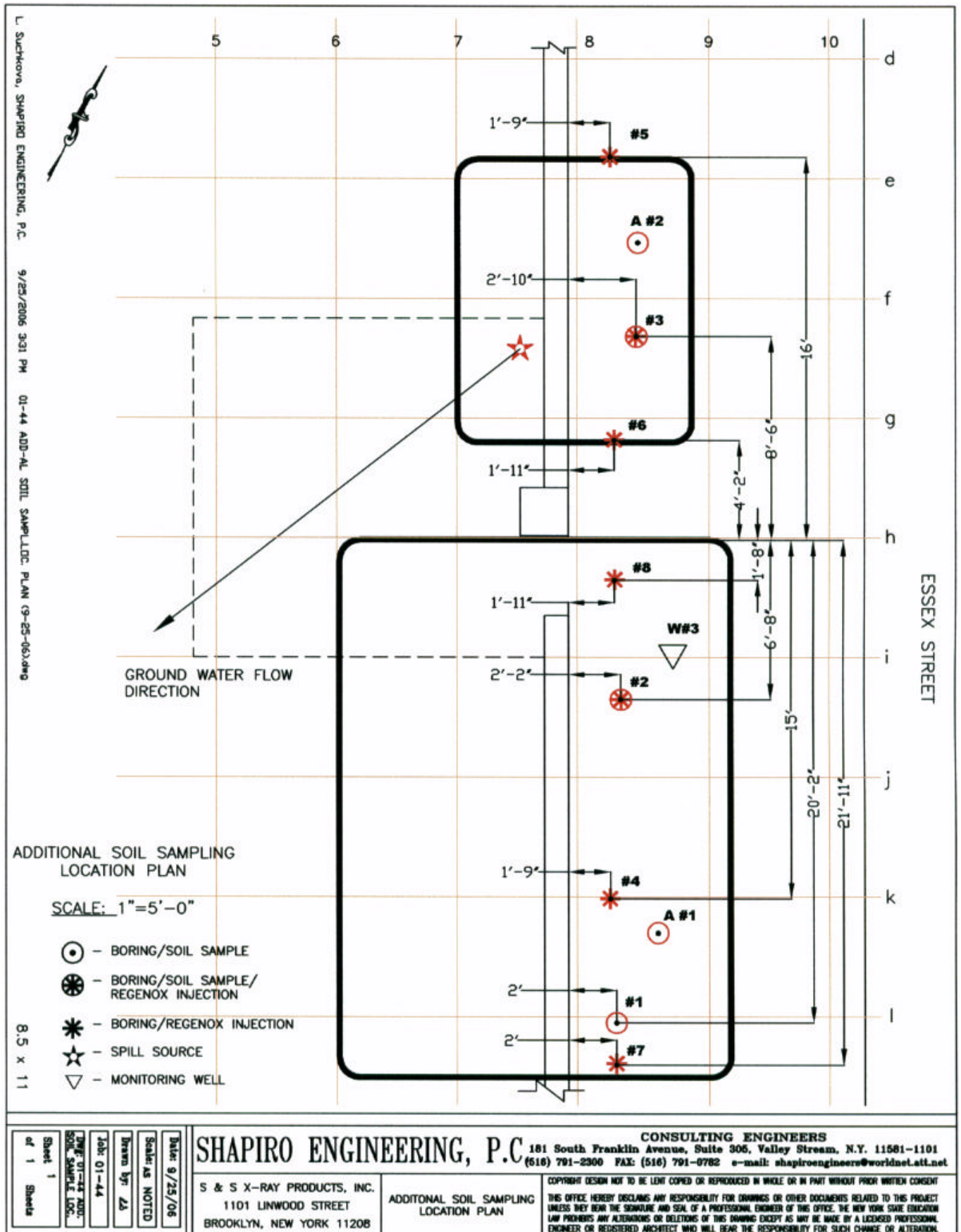
S & S X-RAY PRODUCTS, INC.
1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

MONITORING WELL

CONSULTING ENGINEERS

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5.0 CONTEMPLATED USE:

The VCA identifies the contemplated use as Restricted Commercial Use as defined by the VCA Program Guide. The premises at 1101 Linwood Street is a Factory and is being converted into a self-storage facility. It is located in an area zoned by New York City for Manufacturing Use. The adjacent properties on all sides are also located in the Manufacturing Zone.

6.0 REMEDY IMPLEMENTATION / LONG-TERM MAINTENANCE:**6.1 COVER SYSTEM:**

In order to eliminate the potential for human contact with fill material and eliminate the potential for contaminated runoff from the property, a cover system was installed at the site. The cover system in the area where the remedial actions were performed consists of the following types of clean material:

- Soil: 12 feet of clean fill placed on top of a polyethylene vapor barrier for VOCs intrusion prevention.
- Concrete: 6-inch thick concrete floor inside the building and 6-inch thick concrete sidewalk outside the building.

The cover system for the rest of the restricted area, which was beyond the implemented remedy area, consists of a 6-inch thick concrete floor inside / sidewalk outside the building.

6.2 SOIL MANAGEMENT:**6.2.1 Management of soils/fill and long-term maintenance of cover system**

The purpose of this section is to provide environmental guidelines for management of subsurface soils/fill and the long-term maintenance of the cover system during any future intrusive work, which breaches the cover system.

The Site Management Plan includes the following:

- Any breach of the cover system or any subsurface excavation within the restricted area, including for the purposes of construction or utilities work, must be conducted only after the Department approval for such work. An acceptable burrow source free of industrial and/or other potential sources of chemical or petroleum contamination must be used. The repaired area must be covered with clean soil and impervious product, such as concrete or asphalt, as described above, to prevent erosion in the future.
- Soil from the restricted area that is excavated and is intended to be removed from the property, must be managed, characterized, and properly disposed of in accordance with NYSDEC regulations and directives (see section 5.2.2 for details).
- Soil excavated within the restricted area from the area of the prior excavation may be reused as backfill material on-site provided if it contains no visual or olfactory evidence of contamination, and it is placed beneath a cover system component below a polyethylene vapor barrier placed beneath the concrete.

- All off-site fill material brought to the site for filling and grading purposes shall be from an acceptable source free of industrial and/or other potential sources of chemical or petroleum contamination. Off-site sources should be subject to collection of one representative sample per source. The sample should be analyzed for TCL VOCs, SVOCs, pesticides, PCBs, and TAL metals plus cyanide. The soil will be accepted for use as cover material provided that all parameters meet the NYSDEC recommended soil cleanup objectives included in TAGM 4046.
- Prior to any construction activities, workers will be notified of the site conditions with clear instructions regarding how the work is to proceed. Invasive work performed at the property will be performed in accordance with all applicable local, state, and federal regulations to protect worker health and safety.
- The owner shall complete and submit to the Department an annual report by January 15th of each year. Such report must contain certification that the institutional controls put in place, pursuant to the Deed Restriction for the property, are still in place, has not been altered, and are still effective; that the remedy protective cover has been maintained; and that the conditions at the site are fully protective of public health and the environment.

If the cover system has been breached during the year covered by that Annual Report, the owner of the property shall include the following in that annual report:

- A certification that all work was performed in conformance with this SMP.

In addition, deed restrictions have been implemented in accordance with the requirements of the New York State Voluntary Cleanup Agreement, limiting the future use of the property to restricted industrial development.

6.2.2. Excavated and stockpiled soil/fill disposal

Soil/fill that is excavated as part of development, which cannot be used as fill below the cover system, will be further characterized prior to transportation off-site for disposal at a permitted facility. Excavated soil/fill that produces elevated photoionization detector (PID) readings (10 ppm or greater) or is visibly stained, as it is observed to be discolored, tinted, dyed, unnaturally mottled, or has a sheen, will be considered potentially contaminated and stockpiled on the property for further assessment. The potentially contaminated soil/fill will be stockpiled (maximum 50 cubic yard piles) on polyethylene sheeting and then sampled for reuse or disposal. The stockpiled potentially contaminated soil/fill will also be completely covered using polyethylene sheeting to reduce the infiltration or precipitation and migration of dust.

For excavated soil/fill with visual evidence of contamination, one composite sample and a duplicate sample will be collected for each 100 cubic yards of stockpiled soil/fill.

Excavated soil/fill from the area of the previous excavations (within the restricted area) that have been backfilled with clean fill material may be used as fill below the cover system if analytical results indicate no contaminants above the soil cleanup objectives included in TAGM 4046.

For excavated soil/fill that does not exhibit visual evidence of contamination but must be sent for off-site disposal, one composite sample and a duplicate sample will be collected for 2000 cubic yards of stockpiled soil, and a minimum of 1 sample will be collected for volumes less than 2000 cubic yards.

6.2.3 Excavation and grading below the cover system

As part of redevelopment or future intrusive activities in the restricted area, the site will require grading prior to cover system replacement. The clean fill material and concrete debris generated during intrusive activities inside the building will be graded to the surface required for redevelopment. The contaminated soil from under the slab inside the building and from under the sidewalk outside the building as well as the disturbed sidewalk located within the restricted area will be removed and properly disposed off-site at a permitted facility. Prior to cover system replacement, protruding material will be removed from the ground surface.

Should the excavation of soil/fill material be necessary for the construction of utility corridors during construction activities at the Site, a professional Engineer's representative with construction / remediation experience, representing the subject property owner or developer will monitor soil/fill excavations or disturbances. This Professional Engineer (P.E.) must also provide a stamped/signed certification that excavation work below the cover system and subsequent repair / replacement of the cover system was conducted in a manner consistent with this SMP. This P.E. certification must be included in the annual certification report required in section 8 of this document.

During excavation performed to support development activities, the soil/fill will be inspected for staining and will be field screened for the presence of VOCs with a PID (see Appendix "B" for details).

6.2.4 Subgrade material

Subgrade material used to backfill excavations or placed to increase site grades or elevation shall meet the following criteria:

- Excavated on-site soil/fill, which does not appear to be visually impacted shall be sampled and analyzed, and may be used as fill below the cover system if analytical results indicate no contaminants above the soil cleanup objectives included in TAGM 4046.

- Any off-site fill material brought to the site for filling and grading purposes shall be from an acceptable source free of industrial and/or other potential sources of chemical or petroleum contamination.
- Off-site soils intended for use as site backfill cannot otherwise be defined as a solid waste in accordance with 6 NYCRR Part 360-1.2 (a).
- If the contractor designates a source as “virgin” soil, it shall be further documented in writing to be native soil material from areas not having supported any known prior industrial or commercial development or agricultural use.
- Virgin soils should be subject to collection of a representative composite sample per source. The sample shall be analyzed for TCL VOCs, SVOCs, pesticides, PCBs, arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, and cyanide. The soil will be acceptable for use as backfill if all parameters meet the soil cleanup objectives of TAGM 4046
- Non-virgin soils will be tested via collection of one composite sample per 500 cubic yards of material from each source area. If more than 1000 cubic yards of soil are borrowed from a given off-site non-virgin soil source area and both samples of the first 1000 cubic yards meet soil cleanup objectives of TAGM 4046, the sample collection frequency will be reduced to one composite for every 2500 cubic yards of additional soils from the same source, up to 5000 cubic yards. For sources greater than 5000 cubic yards, sampling frequency may be reduced to one sample per 5000 cubic yards, if all earlier samples met the soil cleanup objectives of TAGM 4046.

6.3 SUB-SLAB DEPRESSURIZATION SYSTEM:

In case of future subsurface development or the construction of utility corridors during construction activities within the restricted area at the Site, the SSD system must be disconnected as necessary and reinstalled before the cover is placed above the disturbed area. The system must be tested to make sure that it maintains an adequate differential pressure between 0.025 - 0.035 in. WC, as recommended by USEPA to compensate for climate changes. Detailed information and drawings for SSD system installation are provided in section 3.0 and prior reports.

7.0 OPERATION, MONITORING & MAINTENANCE PLAN:

For detailed discussion of the updated OM&M Plan see Appendix "E".

The OM&M Plan presents the continued operating, monitoring, and maintenance actions to be performed. Included in the Plan is a requirement to perform annual groundwater testing at the three monitoring wells for BTEX.

Groundwater samples will be collected from the three monitoring wells, which will be performed using the Low Flow Purging and Sampling Procedure employed by EPA Region II. Each well will be purged using a low flow pump, with a flow rate set between 200 and 500 ml/min. The purging will continue until measurements of pH, conductivity, dissolved oxygen (DO), and turbidity are stable for 3 consecutive readings. A Well Purging and Sampling Form will be completed. After the well is purged, a groundwater sample will be collected using the low flow pump. See Appendix "C", QA/QC Plan for proper Sample Collection, Labeling, Storage and Delivery Instructions. A set of samples from the monitoring well will consist of :

1. One Sample from each well.
2. A Trip Blank Sample.
3. A Field Blank Sample.
4. Two Duplicate Samples from one well to be utilized as a Matrix Spike Sample and as a Matrix Spike Duplicate Sample.

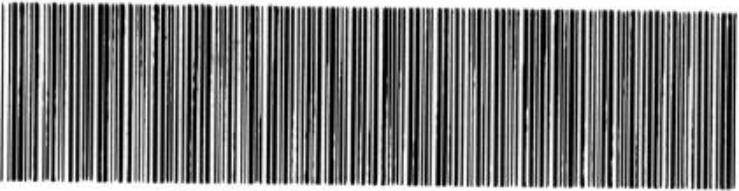
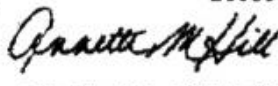
There will be a total of seven (7) samples collected and sent to the Laboratory for individual BTEX Compound analysis. The category B testing protocol will be followed for all collected samples.

8.0 INSTITUTIONAL CONTROLS:

Although treatment and removal of contaminated soil as well as engineering controls to address primary contamination have been conducted, institutional controls will be applied as a supplement. In order to minimize the potential for human exposure to contamination, the use of the property has been restricted by a deed restriction that prevents the use of groundwater and disturbance of the final cover system.

The deed restriction (see Declaration of Covenants and Restrictions in the end of this section) has been filed with the Brooklyn County Clerk (see documentation in the end of this section). This includes the Operation, Monitoring & Maintenance Plan in Exhibit C.

In case of future construction or cover system disturbance within the restricted area, the deed restrictions will apply, so that groundwater use and subsurface excavation will be limited and conducted only after the Department approval for such work.

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RECORDING AND ENDORSEMENT COVER PAGE			
Document ID: 2006073101946001 Document Type: DECLARATION Document Page Count: 31		Document Date: 07-12-2006 Preparation Date: 08-21-2006	
PRESENTER: REALTY-SKYLINE RESEARCH LLC 175 REMSEN STREET VICTORY TITLE ABSTRACT (TM) BROOKLYN, NY 11201 000-000-0000		RETURN TO: VICTORY TITLE ABSTRACT 1031 VICTORY BLVD STATEN ISLAND, NY 10301	
PROPERTY DATA			
Borough BROOKLYN	Block Lot 4428 1	Unit Entire Lot	Address 1101 LINWOOD STREET Property Type: COMMERCIAL REAL ESTATE
CROSS REFERENCE DATA			
CRFN _____ or Document ID _____ or _____ Year _____ Reel _____ Page _____ or File Number _____			
PARTIES			
PARTY 1: SHS FLATLANDS LLC 80 FAHY AVENUE STATEN ISLAND, NY 10314			
FEEES AND TAXES			
Mortgage Mortgage Amount: \$ 0.00 Taxable Mortgage Amount: \$ 0.00 Exemption:		Recording Fee: \$ 192.00 Affidavit Fee: \$ 0.00 NYC Real Property Transfer Tax Filing Fee: \$ 0.00	
TAXES: County (Basic): \$ 0.00 City (Additional): \$ 0.00 Spec (Additional): \$ 0.00 TASF: \$ 0.00 MTA: \$ 0.00 NYCTA: \$ 0.00 Additional MRT: \$ 0.00 TOTAL: \$ 0.00		NYS Real Estate Transfer Tax: \$ 0.00	
			
		RECORDED OR FILED IN THE OFFICE OF THE CITY REGISTER OF THE CITY OF NEW YORK Recorded/Filed 08-23-2006 10:36 City Register File No. (CRFN): 2006000476231  City Register Official Signature	

DECLARATION OF COVENANTS AND RESTRICTIONS

THIS COVENANT is made the 2nd day of July 2006, by SHS FLATLANDS, LLC, a New York limited liability company having an office at 80 Fahy Avenue, Staten Island, New York 10314.

WHEREAS, premises known as 1101 Linwood Street, Brooklyn, New York 11208 is the subject of a Voluntary Agreement executed by Norman Shoenfeld as part of the New York State Department of Environmental Conservation's (the "Department's") Voluntary Cleanup Program, namely that parcel of real property located at 1101 Linwood Street, Brooklyn, New York 11208, being also known and designated on the Tax Map for the Borough of Brooklyn, County of Kings, City and State of New York, as Block 4428, Lot 1, which is part of lands conveyed by S & S XRAY PRODUCTS, INC. to SHS FLATLANDS, LLC by deed dated March 2, 2003 and recorded in the Office of the City Register of Kings County on June 24, 2003 as CRFN 2003000187634 and being more particularly described in Exhibit A attached to this declaration and made a part hereof, and hereinafter referred to as "the Property"; and

WHEREAS, the Department approved a remedy to eliminate or mitigate all significant threats to the environment presented by the contamination disposed at the property and such remedy requires that the Property be subject to restrictive covenants.

NOW THEREFORE, SHS FLATLANDS, LLC, for itself and its successors and/or assigns, covenants that:

First, the Property subject to this Declaration of Covenants and Restrictions is as shown on a map attached to this declaration as Exhibit B and made a part hereof.

*** EXHIBIT C OPERATION, MONITORING, & MAINTENANCE PLAN ***

Second, unless prior written approval by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, there shall be no construction, use or occupancy of the Property that results in the disturbance or excavation of the Property, which threatens the integrity of the concrete building slab or adjacent concrete sidewalk (the "Cap"), or which results in unacceptable human exposure to contaminated soils.

Third, the owner of the Property shall maintain the Cap so as to prevent human exposure to contaminated soil and shall implement and continue to carry out the Operation, Maintenance and Monitoring ("OM&M") Plan, attached to this declaration as Exhibit C and made part hereof, unless and until discontinuance of any aspect of the OM&M Plan is authorized, in writing, by the Relevant Agency.

Fourth, the owner of the Property shall prohibit the Property from ever being used for purposes other than for such use as permitted by appropriate municipal authority and/or appropriate municipal or state zoning regulations and requirements without the express written waiver of such prohibition by the Relevant Agency

Block 4428 Lot 1

Fifth, the owner of the Property shall prohibit the use of the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Relevant Agency.

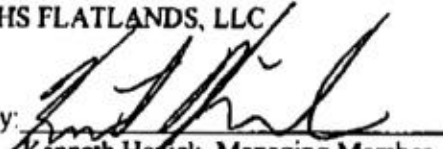
Sixth, the owner of the Property shall continue in full force and effect any institutional and engineering controls required under the Agreement and maintain such controls unless the owner first obtains permission to discontinue such controls from the Relevant Agency.

Seventh, this Declaration is and shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the Property, and shall provide that the owner and its successors and assigns consent to enforcement by the Relevant Agency of the prohibitions and restrictions that Paragraph X of the Agreement require to be recorded, and hereby covenant not to contest the authority of the Relevant Agency to seek enforcement.

Eighth, any deed of conveyance of the Property, or any portion thereof, shall recite, unless the Relevant Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, the undersigned has executed this instruction the day written below.

SHS FLATLANDS, LLC

By: 

Kenneth Herlick, Managing Member

STATE OF NEW YORK)
COUNTY OF Richmond) ss.:

On the 12th day of July 2006, before me, the undersigned, personally appeared KENNETH HENICK personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, execute the instrument.

Janet Bone Martinez
NOTARY PUBLIC

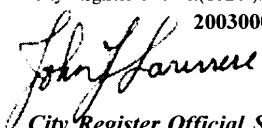
4829

JANET BONE-MARTINEZ
Notary Public, State of New York
No. #01806057708
Qualified in Richmond County
Commission Expires April 23, 2007

SEAL

1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

EXHIBIT A

NYC DEPARTMENT OF FINANCE OFFICE OF THE CITY REGISTER This page is part of the instrument. The City Register will rely on the information provided by you on this page for purposes of indexing this instrument. The information on this page will control for indexing purposes in the event of any conflict with the rest of the document.		 2003051501293001002E97F0	
RECORDING AND ENDORSEMENT COVER PAGE		PAGE 1 OF 4	
Document ID: 2003051501293001 Document Type: DEED, OTHER Document Page Count: 3		Document Date: 05-02-2003 Preparation Date: 05-16-2003	
PRESENTER: REALTY-SKYLINE RESEARCH LLC 175 REMSEN STREET VICTORY TITLE ABST-2211(SP) BROOKLYN, NY 11201 718-306-1100		RETURN TO: SAMUEL L. SCOLLAR 1031 VICTORY BLVD. STATEN ISLAND, NY 10301	
PROPERTY DATA			
Borough BROOKLYN	Block 4428	Lot 1	Unit Partial Lot
			Address 1101 LINWOOD ST
Property Type: INDUSTRIAL BUILDING			
CROSS REFERENCE DATA			
CRFN _____ or Document ID _____ or Year _____ Reel _____ Page _____ or File Number _____			
PARTIES			
GRANTOR: S & S XRAY PRODUCTS, INC. 1101 LINWOOD STREET BROOKLYN, NY 11208		GRANTEE: SHS FLATLANDS, LLC C/O 80 FAHY AVENUE STATEN ISLAND, NY 10314	
FEES AND TAXES			
Mortgage Mortgage Amount: \$ _____ Taxable Mortgage Amount: \$ _____ Exemption: _____ TAXES: County (Basic): \$ _____ City (Additional): \$ _____ Spec (Additional): \$ _____ TASF: \$ _____ MTA: \$ _____ NYCTA: \$ _____ TOTAL: \$ _____		Recording Fee: \$ 52.00 Affidavit Fee: \$ 0.00 NYC Real Property Transfer Tax Filing Fee: \$ 25.00 NYS Real Estate Transfer Tax: \$ 16,800.00	
NYC HPD Affidavit in Lieu of Registration Statement		RECORDED OR FILED IN THE OFFICE OF THE CITY REGISTER OF THE CITY OF NEW YORK Recorded/Filed 06-24-2003 08:22 City Register File No.(CRFN): 2003000187634   City Register Official Signature	

1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

NY005, Bargain and Sale Deed with Covenant against Grantor's Acts Individual or Corporation (Single Sheet) (NYBTU 8002)

CONSULT YOUR LAWYER BEFORE SIGNING THIS INSTRUMENT - THIS INSTRUMENT SHOULD BE USED BY LAWYERS ONLY

THIS INDENTURE, made the 2nd day of May, in the year Two Thousand Three
BETWEEN S & S XRAY PRODUCTS, INC.
1101 Linwood Street
Brooklyn, NY 11208

party of the first part, and SHS FLATLANDS, LLC
c/o 80 Fahy Avenue
Staten Island, NY 10314-314

party of the second part,

WITNESSETH, that the party of the first part, in consideration of Ten Dollars and other valuable consideration paid by the party of the second part, does hereby grant and release unto the party of the second part, the heirs or successors and assigns of the party of the second part forever,

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the

SEE SCHEDULE A ATTACHED

Tax Map
Designation

Dist.

Sec.

Blk. 4428

Part of
Lot(s) 1

TOGETHER with all right, title and interest, if any, of the party of the first part of, in and to any streets and roads abutting the above-described premises to the center lines thereof; TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises; TO HAVE AND TO HOLD the premises herein granted unto the party of the second part, the heirs or successors and assigns of the party of the second part forever.

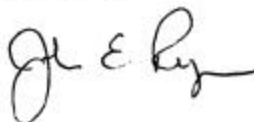
AND the party of the first part covenants that the party of the first part has not done or suffered anything whereby the said premises have been incumbered in any way whatever, except as aforesaid.

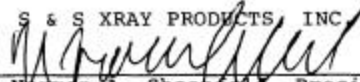
AND the party of the first part, in compliance with Section 13 of the Lien Law, covenants that the party of the first part will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose.

The word "party" shall be construed as if it read "parties" whenever the sense of this indenture so requires.

IN WITNESS WHEREOF, the party of the first part has duly executed this deed the day and year first above written.

IN PRESENCE OF:



S & S XRAY PRODUCTS, INC.
By: 
Norman A. Shoenfeld, President

USE ACKNOWLEDGMENT FORM BELOW WITHIN NEW YORK STATE ONLY:

State of New York, County of Richmond } ss.:

On the 2 day of May in the year 2003
before me, the undersigned, personally appeared
Na'im A. Schoutel
personally known to me or proved to me on the basis of satisfactory
evidence to be the individual(s) whose name(s) is (are) subscribed to the
within instrument and acknowledged to me that he/she/they executed the
same in his/her/their capacity(ies), and that by his/her/their signature(s) on
the instrument, the individual(s), or the person upon behalf of which the
individual(s) acted, executed the instrument.

MARC SCOLLAR

Commissioner of Deeds

City of New York No. 1-31-34

Certificate Filed in Richmond County

Commission Expires June 1, 2003

ACKNOWLEDGMENT FORM FOR USE WITHIN NEW YORK STATE ONLY:

State of New York, County of } ss.:

On the day of in the year
before me, the undersigned, personally appeared

the subscribing witness to the foregoing instrument, with whom I am
personally acquainted, who, being by me duly sworn, did depose and
say that he/she/they reside(s) in

(if the place of residence is in a city, include the street and street number, if
any, thereof); that he/she/they know(s)

to be the individual described in and who executed the foregoing
instrument; that said subscribing witness was present and saw said

execute the same; and that said witness at the same time subscribed
his/her/their name(s) as a witness thereto.

USE ACKNOWLEDGMENT FORM BELOW WITHIN NEW YORK STATE ONLY:

State of New York, County of } ss.:

On the day of in the year
before me, the undersigned, personally appeared

personally known to me or proved to me on the basis of satisfactory
evidence to be the individual(s) whose name(s) is (are) subscribed to the
within instrument and acknowledged to me that he/she/they executed the
same in his/her/their capacity(ies), and that by his/her/their signature(s) on
the instrument, the individual(s), or the person upon behalf of which the
individual(s) acted, executed the instrument.

ACKNOWLEDGMENT FORM FOR USE OUTSIDE NEW YORK STATE ONLY:

[Out of State or Foreign General Acknowledgment Certificate]

} ss.:

[Complete Venue with State, Country, Province or Municipality]

On the day of in the year
before me, the undersigned, personally appeared

personally known to me or proved to me on the basis of satisfactory
evidence to be the individual(s) whose name(s) is (are) subscribed to the
within instrument and acknowledged to me that he/she/they
executed the same in his/her/their capacity(ies), that by his/her/ their
signature(s) on the instrument, the individual(s), or the person upon
behalf of which the individual(s) acted, executed the instrument, and
that such individual made such appearance before the undersigned
in the

(Insert the city or other political subdivision and the state or country or
other place the acknowledgment was taken).

BARGAIN & SALE DEED

WITH COVENANTS AGAINST GRANTOR'S ACTS

TITLE NO. SS-UGT-2211K

S & S XRAY PRODUCTS, INC.

TO

SHS FLATLANDS, LLC

DISTRICT
SECTION
BLOCK 4428
LOT Part of Lot 1
COUNTY OR TOWN KINGS

RECORDED AT REQUEST OF

Fidelity National Title Insurance Company of New York
RETURN BY MAIL TO

Samuel L. Scollar, Esq.
1031 Victory Blvd.
Staten Island, NY 10301

SCHEDULE AParcel 1

Title Number SS-UGT-2211K
(Block 4428, Part of Lot 1, Kings County)

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Borough of Brooklyn, County of Kings and City and State of New York bounded and described as follows:

BEGINNING at the corner formed by the intersection of the southerly side of Cozine Avenue (70 feet wide) with the easterly side of Linwood Street (60 feet wide);

THENCE easterly along the southerly side of Cozine Avenue 200 feet (200 feet 2-1/8 inches U.S. Standard) to the corner formed by the intersection of the southerly side of Cozine Avenue with the westerly side of Essex Street (60 feet wide);

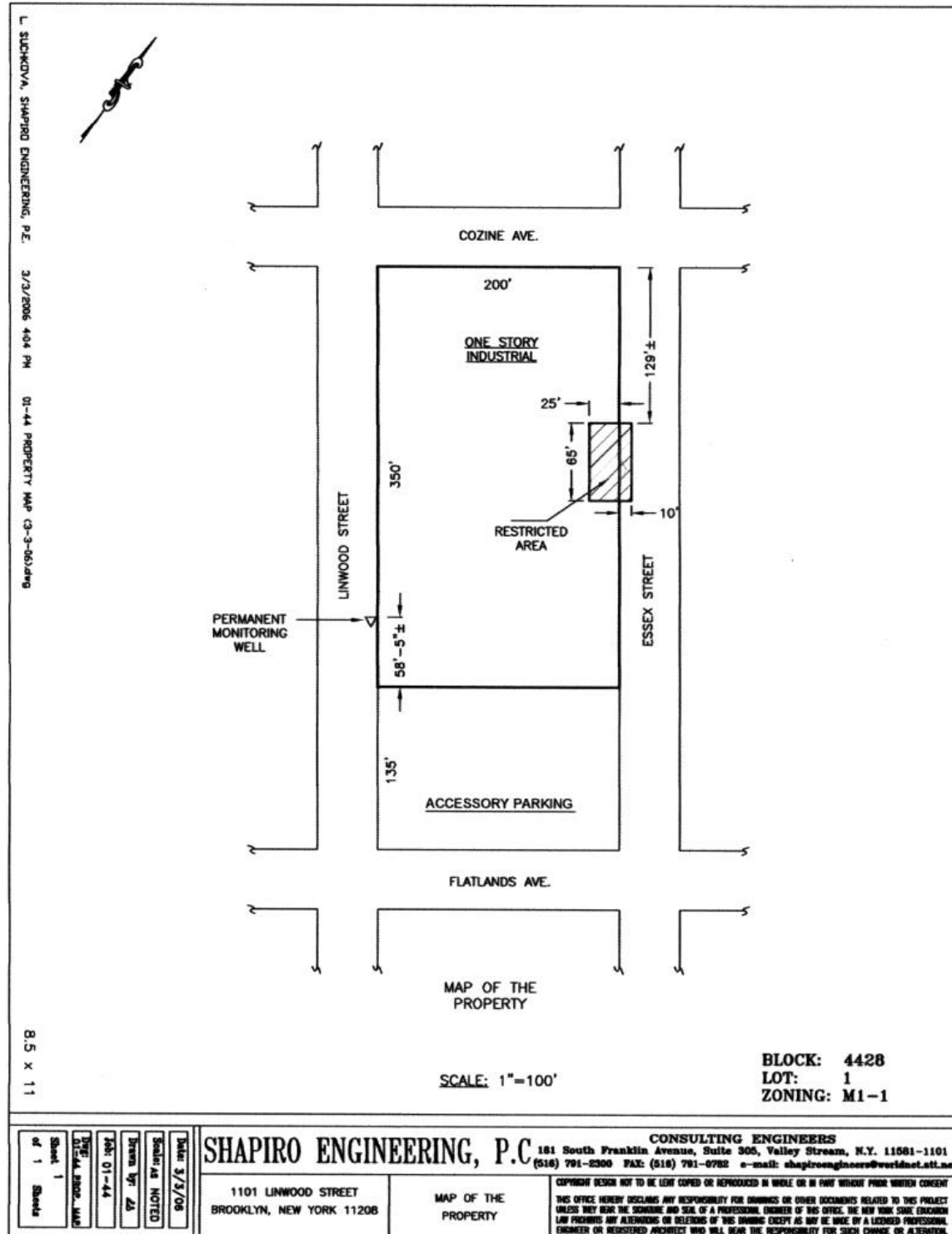
THENCE southerly along the westerly side of Essex Street 350 feet 7 inches (350 feet 10-3/4 inches U.S. Standard) to a point which point is also the intersection of the northeast corner of a certain parcel conveyed this date by the grantor herein to BLOCK 4428 ESSEX, LLC;

THENCE westerly and parallel with Cozine Avenue 200 feet (200 feet 2-1/8 inches U.S. Standard) to the easterly side of Linwood Street (60 feet wide);

THENCE northerly along the easterly side of Linwood Street 350 feet 7 inches (350 feet 10-3/4 inches U.S. Standard) to the corner formed by the intersection of the easterly side of Linwood Street with the southerly side of Cozine Avenue at the point or place of BEGINNING.

Bldg.

EXHIBIT B



1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

EXHIBIT C

OPERATION, MONITORING &
MAINTENANCE PLAN
FOR USE AFTER
VOLUNTARY CLEANUP
OF
THE PROPERTY AT
1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208
SITE # V00582

**SHAPIRO ENGINEERING, P.C.
CONSULTING ENGINEERS
181 SOUTH FRANKLIN AVENUE, SUITE 305
VALLEY STREAM, NEW YORK 11581
516 791-2300
FAX: 516 791-0782
E-MAIL: shapiroengineers@worldnet.att.net**

**ROBERT A. LO PINTO, P.E.
NEW YORK PE # 53312**

OPERATION, MONITORING & MAINTENANCE PLAN

TABLE OF CONTENTS

1. Groundwater Monitoring System
2. Sub-Slab Depressurization System
3. Preventive Maintenance Schedule
4. Inspections and Maintenance
5. Site Plan
6. As Built Soil Excavation Plan
7. As Built Sub-Slab Depressurization Exhaust System Details
8. Operation & Maintenance Contacts
9. Manufacturer's Catalog-Cuts / Manuals

OPERATION, MONITORING & MAINTENANCE PLAN:

The purpose of this OM&M Manual is to establish operating procedures for use after the remediation of the property, located at 1101 Linwood Street, Brooklyn, New York. The OM&M is the last phase of remediation, and continues until the remedial action objectives for the project are met and the site is closed out. The operating procedures outlined below address institutional and engineering controls for the site, monitoring and reporting of the performance and effectiveness of the remedy by sampling and analysis of appropriate media, and periodic inspections and evaluations of the site information to confirm that the remedy continues to be effective for the protection of public health and the environment.

1 GROUNDWATER MONITORING SYSTEM:

The monitoring well will be checked monthly to make sure that the cover cap is in place, locked, and is not rusted. All visual inspections of the monitoring well cover cap will be documented and kept in the bound logbook in the site manager office to be available upon request.

2 SUB-SLAB DEPRESSURIZATION SYSTEM:

The low pressure / high flow sub-slab system was installed at approximately four feet below grade to capture VOC vapor emissions from groundwater & soil to prevent their migration into the building. The captured contaminants are directed from the extraction point through the exhaust duct system and a rooftop exhaust fan. Placement of the fan in this manner ensures that a pressurized discharge point is not present within occupied spaces because it is located above the roofline. It also minimizes a potential of nuisance due to noise and dust emissions for the inhabitants of the area. The fan will operate continuously to depressurize exhaust from under the slab. See Shapiro Engineering, P.C. 01-44 As Built Soil Excavation Plan and As Built Sub-Slab Depressurization Exhaust System Details Drawings in the end of this Plan.

The system was designed to operate around-the-clock with minimal operational oversight and maintenance. It will be operated in a manner that would expedite VOCs reductions while operating within safe limits of voltage and temperature. The building owner has enclosed the duct for protection and installed permanent electrical connection. Access to the emergency control electrical switch is restricted. The system can be shut down with a key to an "on/off" emergency control electrical switch that is kept by the building manager at the front desk.

An in-line Dwyer Mark II molded plastic pressure manometer is located near the "on / off" switch of the SSD system to monitor pressure levels. It has a clearly marked line showing minimum acceptable pressure level.

The building personnel will inspect the SSD system's in-line Dwyer pressure manometer weekly; and the readings will be documented in the bound logbook in the site manager office, so that the records can be included into yearly reports.

The exhaust fan will be inspected annually. The facility operators will record any events, and contact a competent specialist as necessary. See technical documentation and extended warranty materials in the end of this section.

3 PREVENTIVE MAINTENANCE:

One of the SSD system maintenance concerns is a pressure field extension (PFE) test, which confirms that the SSD system maintains an adequate negative pressure under the slab.

If during weekly inspections the in-line manometer readings indicate insufficient SSD system pressure, it must be reported to the site manager and documented in the bound logbook in the site manager office. The on-site personnel must perform an initial visual inspection of the system components as follows:

- Check for visible duct breaching or sealant damage
- Check if the pressure gauge is not damaged
- Check if the rooftop fan is not damaged or broken

The components, which must be checked for sealant tightness are floor/wall cracks and other expansion joints as well as areas around all piping systems that penetrate the slab or foundation walls below grade (utility trenches, electrical conduits, plumbing penetrations, and etc.). If the inspection disclosed missing or damaged sealant, it will be repaired by the on-site personnel.

If the visual inspection of these components indicates that competent assistance is needed, the site manager will contact the engineer or the contractor for repair or replacement of the damaged or malfunctioning system components.

In normal operating conditions, when the in-line pressure manometer readings indicate sufficient pressure differentials, annual inspection of the rooftop fan will be performed. The fan will be inspected for bearing failure or signs of other abnormal operations and will be repaired or replaced based on the three-year extended warranty policy, which will take effect when the supplier's one-year warranty ends (attached at the end of this Plan).

The discharge location of the vent pipe will be inspected to ensure that no air intake has been located nearby, and that the building usage has not change and has not placed the exhaust near operable windows.

The HVAC system will be inspected to ensure that it is operating as designed, so that excessively powered exhaust without adequate makeup air would not overcome the SSD system. The HVAC system must produce a slightly positive air pressure inside all areas of the building. The building will be checked for floor cracks.

Preventive maintenance for the rooftop fan should be provided as specified by the manufacturer. See technical documentation and extended warranty materials in the end of this Plan.

4 INSPECTIONS AND MAINTENANCE:

The SSD system in-line pressure manometer readings should be taken weekly and documented in the bound logbook in the site manager office, so that the records can be included into yearly reports.

Monthly visual inspections of the monitoring well cover cap should be documented and available upon request at the site manager office.

The rooftop fan will be inspected annually or more often if necessary, based on the in-line manometer readings.

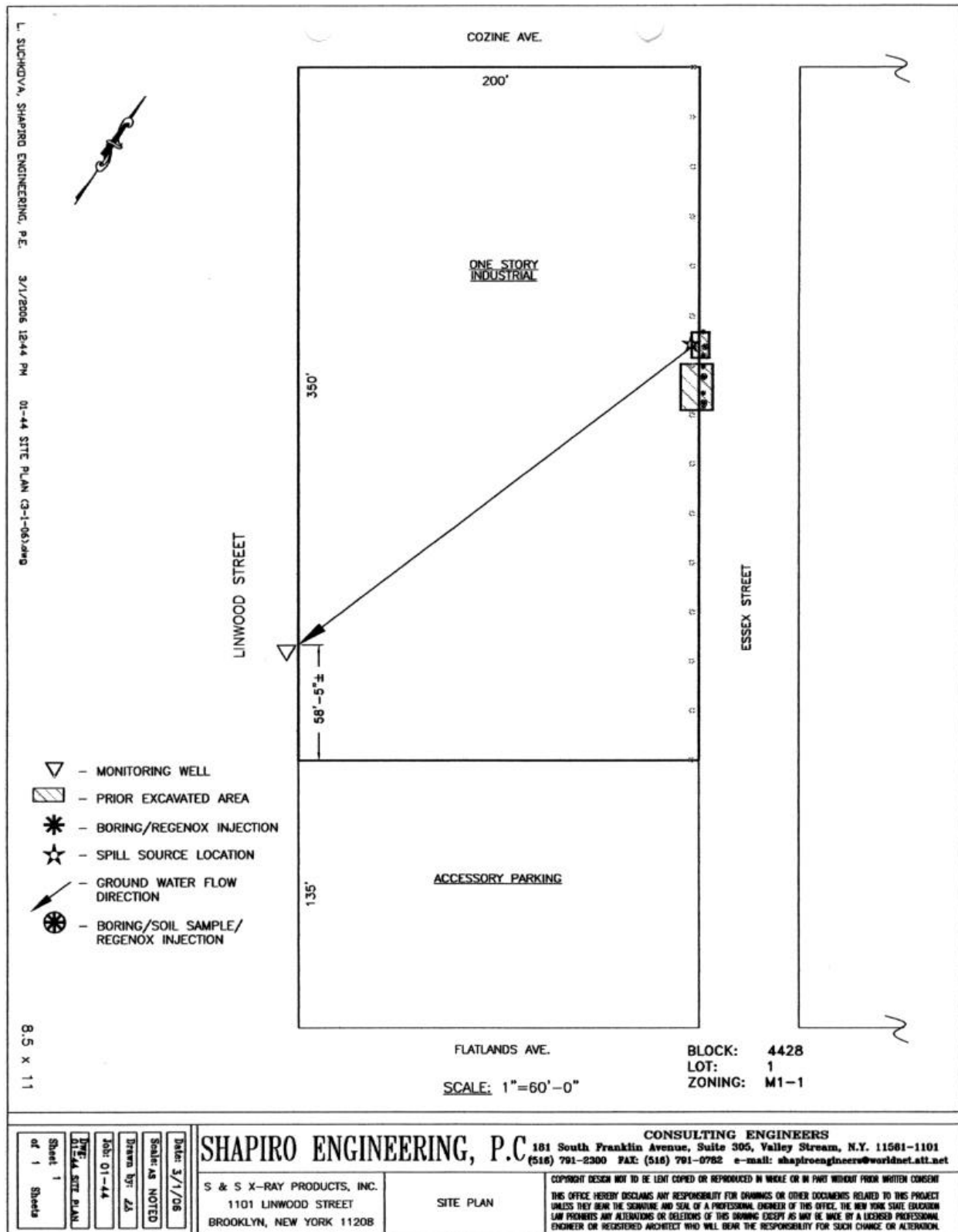
A permanent down gradient monitoring well will be monitored for BTEX compounds annually for a minimum of ten years, starting in August of 2006. The analytical results will be provided in annual reports. The NYSDEC will decide when sampling may cease.

If building settling is noted, a site manager will check the building for cracks in the slab, the floor, or the walls located below grade and pressure field extension (PFE) testing will be performed to ensure the continued effectiveness of the system.

MAINTENANCE SCHEDULE:

	Weekly	Monthly	Annually
Monitoring Well Cover Cap Checkup		x	
Groundwater Monitoring			x
In-line Pressure Manometer	x		
Roof-top Fan			x

Clear instructions, with the name and phone number of a person to be contacted in any of these events, will be posted in the site manager office and near the in-line pressure manometer (a copy is attached in the end of this Plan).





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OPERATION & MAINTENANCE CONTACTS

<u>COMPANY</u>	<u>NAME</u>	<u>PHONE #</u>
SHS FLATLANDS LLC	Neil Simon	718 494-0717 (Office)
Shapiro Engineering, P.C.	Robert A. Lo Pinto, P.E.	516-791-2300 (Office) 516-816-3800 (Mobile)
Grainger Extended Warranty Agreement # 28696711 Grainger Model # 6K030	Customer Service	1-800-811-1747
Grainger Parts Division Grainger Model # 6K030	Customer Service	1-800-323-0620 (ph.) 1-800-722-3291 (fax)
NYC Emergency Response	Police/Fire/Medical	911

**BLOWER, 7 1/2 IN**

Unassembled Single Inlet Forward Curve Direct Drive Blower, Wheel Diameter 7 3/4 Inches, Airflow @ 0.000/0.500/1.250 Inches Static Pressure 985/765/360 CFM, Includes 1/3 HP 115 Volt Single Phase Open Dripproof Motor, Inlet Diameter 8 Inches, Outlet Height 8 1/4 Inches, Outlet Width 5 3/8 Inches, Overall Height 16 Inches, Overall Width 15 Inches, Overall Depth 14 Inches, CW Rotation Viewed From Drive Side, Maximum Inlet Air Temperature 180 Degrees F

Grainger Item #	7C038
Price (ea.)	\$195.75
Brand	DAYTON
Mfr. Model #	7C038
Ship Qty.	1
Sell Qty. (Will-Call)	1
Ship Weight (lbs.)	35.0
Usually Ships	Today
Catalog Page No.	4050
Price shown may not reflect your price. Log in or register.	

Additional Info

- Forward Curve Direct-Drive Blowers
- Direct-drive, single-inlet, high-volume blowers are used for general ventilation when duct systems are required.
- May be assembled to discharge at any of eight equally spaced positions. Feature welded steel construction and dynamically balanced wheels. Motor packed separately when blowers ordered complete.
- **Uses:** Exhausting foul air, blowing cool air, forcing air through washers and blasters, for air furnaces, dryers, and gas ovens.
- Gray baked-on epoxy finish
- Max. inlet air temperature: 180 DegreeF

Tech Specs

- **Item:** Blower
- **Type:** Direct Drive Forward Curve With Motor
- **Wheel Dia. (In.):** 7 3/4

- **CFM @ 0.000-In. SP:** 985
- **CFM @ 0.125-In. SP:** 920
- **CFM @ 0.250-In. SP:** 870
- **CFM @ 0.500-In. SP:** 765
- **CFM @ 0.750-In. SP:** 655
- **CFM @ 1.25-In. SP:** 360
- **dBa @ 5 Feet:** 57
- **Blower RPM:** 1725
- **Max. Inlet Temp. (Deg. F):** 180
- **Max. Ambient Temp. (F):** 104
- **Voltage:** 115
- **Hz:** 60
- **Phase:** 1
- **Full Load Amps:** 5.8
- **Motor HP:** 1/3
-
- **Motor RPM:** 1725
- **Motor Type:** Split Phase
- **Motor Enclosure:** Open Dripp Proof
- **Bearing Type:** Sleeve
- **Outlet Height (In.):** 8 1/4
- **Outlet Width (In.):** 5 3/8
- **Wheel Width (In.):** 3 7/8
- **Wheel Bore (In.):** 1/2
- **Wheel Material:** Steel
- **Rotation:** Clockwise Viewed From Drive Side
- **Housing Material:** Steel
- **Housing Finish:** Gray Polyester Epoxy

Notes & Restrictions

- Note: Review OSHA Codes. OSHA complying guards are required where fan blades are exposed and within reach of personnel. Dayton Electric Mfg. Co. certifies that the blowers shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. The A weighted sound ratings shown have been calculated per AMCA Standard 301. Values shown for blowers are for (inlet Lwi) sound levels for: Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

MSDS

This item does not require a **Material Safety Data Sheet (MSDS)**.

Required Accessories

There are currently no required accessories for this item

*****AUTO**MIXED AADC 630

Bay Shore, NY 11706-1000



On September 21, 2005, you purchased a DAYTON 1/3 HP B/D BLWR MOTOR at Grainger. Smart choice. Even smarter was your decision to protect your 1/3 HP B/D BLWR MOTOR with Grainger's TripleGuard Extended Service plan. As you know, we back all our products up to one year, with or without a manufacturer warranty. So while it's always been smart to buy from Grainger, now it's even smarter. That's because only Grainger offers the TripleGuard Extended Service program—an easy, affordable way to protect your assets and cash flow against unexpected and costly repairs.

Your Grainger TripleGuard Extended Service plan will take effect when our one-year warranty ends, providing you with a full three years of protection against defects in materials and workmanship-with no lapse in coverage.

Thank you for choosing Grainger as your supplier, and for extending the coverage of your new 1/3 HP B/D BLWR MOTOR with the Grainger TripleGuard Extended Service plan. If you have any questions, feel free to contact your sales representative or call or stop by your nearest Grainger branch.

Sincerely,

Your Grainger Team

Please keep this letter with your original invoice. You will need these documents if you need to make a claim. Please also read the Terms and Conditions, as well as the Exclusions and Limitations of this program on the reverse.

Grainger Model # 6K030

Bill to Zip: 11706-1000

Agreement Sales Price \$34.95

GRAINGER TERMS AND CONDITIONS

1. **WHAT IS COVERED:**
 - A. ServicePlan, Inc. (SPI), through its Administrator, Aon Innovative Solutions, Inc. (AIS), will pay on your behalf the cost of labor and repair or replacement parts in the event your product fails to operate as a result of a manufacturer's defect. In Arizona, Washington, Wisconsin and Wyoming, ServiceSaver, Incorporated (SSI), through its Administrator, AIS, will pay on your behalf the cost of labor and repair or replacement parts in the event your product fails to operate as a result of a manufacturer's defect. In Alaska and Maine, Grainger, through its Administrator, AIS, will pay on your behalf the cost of labor and repair or replacement parts in the event your product fails to operate as a result of a manufacturer's defect. Parts will be replaced with those of like kind and quality, and may be new or remanufactured. If the equipment cannot be repaired, if the cost of the repair exceeds the original purchase price or if parts are not available due to the age of the equipment or discontinued by the manufacturer, the equipment will be replaced with equipment of equal features. This Agreement is not available for products being used or sold in Florida.
 - B. If this Agreement covers a product with a retail price of less than \$200, and the product is found to be defective, the product will be replaced with the same product or a product of equal features. This Agreement shall be terminated upon issuance of the replacement product.
2. **LIMITED WARRANTY:**

All products sold are warranted by SPI or SSI or Grainger only to Purchasers for use in business, against defects in workmanship or materials under normal use. Any part which is determined by SPI, SSI, Grainger or the Administrator to be defective in material or workmanship and returned to an authorized service location, or as the Administrator designates, will be, at the exclusive remedy, repaired or replaced, at the Administrator's option.
3. **NO WARRANTIES TO CONSUMERS:**

Grainger makes no warranties to those defined as consumers in the Magnuson-Moss Warranty-Federal Trade Commission Improvement Act.
4. **COVERAGE TERM:**

This Agreement becomes effective after an initial one (1) year manufacturer/distributor warranty and extends through the end of the third year from date of purchase. In the event an Authorized Service Center is servicing your product when this Agreement expires, the term of this Agreement will be extended until the covered repair has been completed.
5. **LIMIT OF LIABILITY**

The limit of liability for any claim under this agreement is the cost to repair or replace your covered equipment in accordance with the TERMS AND CONDITIONS, not to exceed the purchase price of the equipment.
6. **EXCLUSIONS AND LIMITATIONS:**

THE AGREEMENT DOES NOT COVER ANY PRODUCT USED ON A RENTAL BASIS; CONSUMER BASIS OR SOLD ON A RETAIL BASIS; INSTALLATION OR SETUP COST; DIAGNOSTIC CHARGES; PICKUP AND DELIVERY CHARGES; PERIODIC CHECKUPS AND/OR MAINTENANCE; LOSS OF USE OF THE PRODUCT; PRODUCTS NOT ORIGINALLY COVERED BY A MANUFACTURER'S WARRANTY; AND FAILURES OUTSIDE THE UNITED STATES. YOU MUST PAY FOR ALL COSTS RELATED TO FAILURE TO OPERATE AND MAINTAIN THE PRODUCT IN ACCORDANCE WITH THE OWNER'S GUIDE, AND FAILURES DUE TO NORMAL WEAR AND TEAR. ANY COSTS FOR REPAIR ON PRODUCTS COVERED BY A MANUFACTURER'S WARRANTY, REGARDLESS OF WHETHER THE MANUFACTURER HONORS SUCH WARRANTY, ANY AND ALL PRE-EXISTING CONDITIONS THAT OCCUR PRIOR TO THE EFFECTIVE DATE OF THIS AGREEMENT AND/OR ANY COSTS TO REPAIR ANY PRODUCT SOLD "AS-IS" INCLUDING BUT NOT LIMITED TO FLOOR MODELS AND DEMONSTRATION MODELS; ITEMS WHICH ARE STILL SUBJECT TO THE MANUFACTURER'S WARRANTY. IN NO EVENT SHALL SPI, SSI, GRAINGER OR AIS BE LIABLE FOR CONSEQUENTIAL DAMAGES OR DELAY IN RENDERING SERVICE UNDER THIS AGREEMENT, OR LOSS OF USE DURING THE PERIOD THAT THE EQUIPMENT IS AT A REPAIR CENTER OR OTHERWISE AWAITING PARTS. REPLACEMENT PARTS WILL BE NEW OR REMANUFACTURED; ITEMS WITH A MANUFACTURER/DISTRIBUTOR WARRANTY IN EXCESS OF ONE (1) YEAR.
7. **THE FOLLOWING COSTS ARE YOUR RESPONSIBILITY:**
 - A. CONSUMABLE ITEMS, AIR OR WATER FILTERS, EXTERNAL HOSES, LIGHT COVERS, LAMPS, INTERNAL OR EXTERNAL BULBS, PROTECTIVE GLASS, EXTERNAL FUSES, INTERNAL OR EXTERNAL BATTERIES, KNOBS, BUTTONS, HINGES, LOCKS, HANDLES, PLASTIC OR METAL TRIM, MANUFACTURER'S SUGGESTED MAINTENANCE, CLEANING AND LUBRICATION.
 - B. LOSS OR DAMAGE OCCASIONED BY A HAPPENING THROUGH WAR, INVASION OR ACT OF FOREIGN ENEMY, HOSTILITIES, CIVIL WAR, REBELLION, INSURRECTION, RIOT, STRIKE, LABOR DISTURBANCE, LOCKOUT, OR CIVIL COMMOION.
 - C. DAMAGES RESULTING FROM:
 1. USE OF ACCESSORIES NOT APPROVED BY THE MANUFACTURER.
 2. INCORRECT CONNECTION OF SIGNAL LEADS OR INCORRECT ELECTRICAL SUPPLY.
 3. EXTERNAL CAUSES INCLUDING ACTS OF GOD, FIRE, THEFT, ACCIDENT, WINDSTORM, HAIL, LIGHTNING, EARTHQUAKE, EXPLOSION, FLOOD, WATER, CONSEQUENTIAL LOSS OF ANY NATURE, OR ABNORMAL VARIATION OF ELECTRICITY OR WATER SUPPLY.
 4. ABUSE OR MISUSE.
 5. FREIGHT ON PRODUCTS BEING SHIPPED TO US FOR A REPAIR OR REPLACEMENT. WE WILL PAY FOR RETURN SHIPPING FOR REPAIR ITEMS ONLY.
 6. IMPROPER INSTALLATION, SELECTION OR APPLICATION OF EQUIPMENT.
 7. REPAIRS TO MEET CHANGES IN FEDERAL, STATE OR LOCAL CODES AND REGULATIONS.
 - D. HOW TO OBTAIN SERVICE:

Contact Aon Innovative Solutions, Inc. (AIS), the Agreement Administrator, for the appropriate Authorized Repair Center. Call the 24-hour customer service toll-free number at (800) 811-1747. All repairs must be authorized by AIS prior to performance of work. Claims must be submitted by service within thirty (30) days of repair. Claims on unauthorized repairs may be denied. Many apparent faults can be due to simple circumstances such as the product not being switched on, being unplugged, or a fuse blown at the junction box. For a product that uses batteries as the prime power supply, or a remote control unit, please check that the batteries do not need replacing or recharging.
8. **CONDITIONS:**
 - A. Entire Agreement: This is the entire Agreement between the parties, and no representation, promise, or condition not contained herein shall modify these terms. ServicePlan, Inc., 1000 Milwaukee Avenue, Glenview, IL 60025, 800-209-6206 is the obligor under this agreement. In Arizona, Washington, Wisconsin and Wyoming, ServiceSaver, Incorporated is the obligor under this Agreement. In Alaska and Maine, Grainger is the obligor under this agreement. The obligations under this Agreement are insured by a service Agreement reimbursement insurance policy with Virginia Surety Company, Inc., 1000 Milwaukee Avenue, Glenview, IL 60025, 800-209-6206. If a claim is not paid by the Administrator within sixty (60) days of submitting the claim, the claim can be submitted to Virginia Surety Company, Inc. at the above address. This Agreement is not available for products being used or sold in Florida. **ARIZONA ONLY:** In the "EXCLUSIONS AND LIMITATIONS" section of this Agreement, the statement "ANY AND OR ALL PRE-EXISTING CONDITIONS THAT OCCUR PRIOR TO THE EFFECTIVE DATE OF THIS AGREEMENT" does not apply in the state of Arizona. **CALIFORNIA ONLY:** Informal dispute resolution is not available. **CONNECTICUT ONLY:** If You purchased this Agreement in Connecticut, You may pursue arbitration to settle disputes between You and the provider of this Agreement. You may mail your complaint to: State of Connecticut, Insurance Department, P.O. Box 816, Hartford, Connecticut, 06142-0816, Attention: Consumer Affairs.

GRAINGER TERMS AND CONDITIONS

The written complaint must describe the dispute, identify the price of the Product and cost of repair, and include a copy of this Agreement. The term of this Agreement will be automatically extended for the period during which the Product is in the custody of a service center for repair. **MICHIGAN ONLY:** If performance under this Agreement is interrupted because of a strike or work stoppage at the Service Provider's place of business, the effective period of the Agreement shall be extended for the period of the strike or work stoppage. **NORTH CAROLINA ONLY:** You understand that the purchase of this Agreement is not required to purchase or to obtain financing for the Product. **OKLAHOMA ONLY:** This Agreement is not issued by the manufacturer or wholesale company marketing the product covered by this Agreement. This Agreement will not be honored by such manufacturer or wholesale company. **SOUTH CAROLINA ONLY:** If you purchased this Agreement in South Carolina, complaints or questions about this Agreement may be directed to the South Carolina Department of Insurance, P.O. Box 100106, Columbia, South Carolina 29202-5106, telephone number 803-737-6190. **TEXAS ONLY:** If you purchased this Agreement in Texas, unresolved complaints concerning a provider or questions concerning the registration of a service Agreement provider may be addressed to the Texas Department of Licensing and Regulation, P.O. Box 12157, Austin, Texas 78711. **UTAH ONLY:** Coverage afforded under this Agreement is not guaranteed by the Utah Property and Casualty Guaranty Association. Proof of loss should be furnished to the Administrator as soon as reasonably possible and within one (1) year after the time required by the Agreement. There is no deductible required to obtain service for Your covered Product. Non-original manufacturer's parts may be used for repair if the manufacturer's parts are unavailable. **WASHINGTON ONLY:** You are not required to wait sixty (60) days before filing a claim directly with the insurer. We may not cancel this Agreement without providing You with written notice at least 21 days prior to the effective date of cancellation. Such notice shall include the effective date of cancellation and the reason for cancellation. **WISCONSIN ONLY:** THIS AGREEMENT IS SUBJECT TO LIMITED REGULATION BY THE OFFICE OF THE COMMISSIONER OF INSURANCE OF THE STATE OF WISCONSIN. Proof of loss should be furnished by you to the Administrator as soon as reasonably possible and within one year after the time required by this Agreement. Failure to furnish such notice or proof within the time required by this Agreement does not invalidate or reduce a claim. The Agreement holder will be made whole before the Service Provider retains any amounts it may recover. **WYOMING ONLY:** This Agreement is subject to regulation by the Office of the Commissioner of Insurance of the State of Wyoming.

- B. Transferability:** This Agreement is for the benefit of the original purchaser only and is not transferable.
- C. Renewals:** This Agreement is not renewable.
- D. Cancellation:** You may cancel this Agreement for any reason at any time by calling your local Grainger branch. If you cancel your Agreement within thirty (30) days of receipt of your Agreement, you will receive a full refund. If you cancel after thirty (30) days of receipt of your Agreement, Grainger will pay you for a pro rata refund based on the time expired less a \$25.00 cancellation fee, or 10% of the pro rata amount (whichever is less), less the cost of any claims. **ALABAMA, HAWAII, NEVADA, NEW YORK, TEXAS, WASHINGTON AND WYOMING:** A ten percent (10%) penalty per month shall be applied to refunds not paid or credited within thirty (30) days of receipt of a returned Service Agreement. **ARIZONA ONLY:** No claim incurred or paid will be deducted from the amount to be returned in the event of cancellation. **GEORGIA ONLY:** If You cancel after thirty (30) days of receipt of Your Agreement, You will receive a pro rata refund of the Agreement price. In the event of cancellation by US, notice of such

cancellation will be in writing and given at least 30 days prior to cancellation. Cancellation will comply with Section 33-24-44 of the Code of Georgia. Claims paid shall not be deducted from any refund owed as a result of cancellation by Us. **NEVADA ONLY:** If You cancel within thirty (30) days of Your receipt of the Agreement, You will receive a full refund. If You cancel after thirty (30) days, You will receive a pro rata refund based on the time expired, less a cancellation fee of twenty-five dollars (\$25) or ten percent (10%) of the Agreement purchase price, whichever is less. No claim incurred or paid will be deducted from the amount to be returned in the event of cancellation. We may not cancel this Agreement without providing You with written notice at least 15 days prior to the effective date of cancellation. Such notice shall include the effective date of cancellation and the reason for cancellation. Claims paid or the cost of repairs performed shall not be deducted from the amount to be refunded upon cancellation of this Agreement. **NORTH CAROLINA ONLY:** We may not cancel this Agreement except for nonpayment by You or for violation of any of the terms and conditions of this Agreement. **OKLAHOMA ONLY:** In the event this Agreement is cancelled by You, return of premium shall be based upon ninety percent (90%) of the unearned pro rata premium. In the event the Contract is cancelled by Us, return of premium shall be based upon one hundred percent (100%) of unearned pro rata premium. **UTAH ONLY:** We can cancel this Agreement during the first sixty (60) days of an annual term by mailing to You a notice of cancellation at least thirty (30) days prior to the effective date of cancellation except that We can also cancel this Agreement during such time period for nonpayment of premium by mailing You a notice of cancellation at least ten (10) days prior to the effective date of cancellation. After sixty (60) days have elapsed, We may cancel this Agreement by mailing a cancellation notice to You at least ten (10) days prior to the cancellation date for cancellations due to any of the following reasons: (a) nonpayment of premium, (b) material misrepresentation, (c) substantial change in the risk assumed, unless You should reasonably have foreseen the change or contemplated the risk when entering into the Agreement, (d) substantial breaches of Agreemental duties, conditions, or warranties. The notice of cancellation must be in writing to You at Your last known address and contain all of the following: (1) the Agreement number, (2) the date of notice, (3) the effective date of the cancellation and, (4) a detailed explanation of the reason for cancellation. **WASHINGTON ONLY:** We may not cancel this Agreement without providing You with written notice at least 21 days prior to the effective date of cancellation. Such notice shall include the effective date of cancellation and the reason for cancellation. **WISCONSIN ONLY:** If You cancel this Agreement within thirty (30) days of receipt of this Agreement, you will receive a full refund. If You cancel after thirty (30) days of receipt of Your Agreement, You will receive a pro rata refund of the Agreement price. Claims paid or the cost of repairs performed shall not be deducted from the amount to be refunded upon cancellation of this Agreement.

Administered By:
Aon Innovative Solutions, Inc.
P.O. Box 427
Golden, Colorado, 80402
Customer Service Toll-Free Number:
1 800-611-1747

MODEL: 6K030

DESCRIPTION: Split Phase Belt Drive FanBlower Motor

GRAINGER SKU: 6K030 PARTS AVAILABLE? Y

Component Part Number	Part Description	Ref. No.	Part For Sale?	Image File Name
B353185462204	Base		Y	IMAGE NOT AVAILABLE
B452463660000	Bell Bearing		Y	IMAGE NOT AVAILABLE
F101993970610	External Fan		Y	IMAGE NOT AVAILABLE
P752929770006	Overload Protector		Y	IMAGE NOT AVAILABLE
X672151000001	Resilient Ring		Y	IMAGE NOT AVAILABLE
X745331730000	Shaft End Endshield		Y	IMAGE NOT AVAILABLE
X745333590000	Opposite End Endshield		Y	IMAGE NOT AVAILABLE
X837249330904	Stationary Switch		Y	IMAGE NOT AVAILABLE
Z043144160000	Actuator Assembly		Y	IMAGE NOT AVAILABLE

1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

Recipient:	Milina
Company Name:	
Recipient Phone:	
Recipient Fax:	5167910782
Recipient Address:	

Sender:	Joyce Andersden
Sender Extension:	1847254
Sender Fax:	800-722-3291
Sender Email:	Gpartsinfo@grainger.com

Fax Sent Date:	Monday, May 15, 2006 12:47:48 PM
Pages Including Cover:	02
Notes:	

Grainger Parts division is your source for over 2.5 million repair parts and accessories from over 500 of the leading manufacturers and brands. We're here 24/7 to help you get the job done.

- No minimum order requirements
- We're open 24 hours a day, 7 days a week
- Same-day shipping for all in-stock orders placed by 5:00 p.m. (CT) Monday – Friday
- Exploded-view diagrams available to help you make the right selection

When placing your parts order, please provide the following information:

1. Manufacturer name and model number
2. Manufacturer part number or a complete description of the part

It's easy to order repair parts!

United States	Canada/Puerto Rico	Mexico	International
Call: 1-800-323-0620	1-800-323-0620	1-800-527-2331	1-847-498-1920
Fax: 1-800-722-3291	1-800-559-6301	1-847-559-6301	1-847-559-6301

You can also visit us online at: www.grainger.com/repairparts

If this fax was sent as an email, the information you requested is attached in a PDF document.

You may need to download the free Adobe Acrobat Reader to view the attachment.
Download for free at: www.adobe.com/acrobat

We appreciate your business!
GRAINGER®
|||||

**MANOMETER**

Molded Plastic Manometer, Operating Range 0-7 Inches
WC, 3% Accuracy

Grainger Item #	3T292
Price (ea.)	\$71.75
Brand	DWYER INSTRUMENTS
Mfr. Model #	26
Ship Qty.	1
Sell Qty. (Will-Call)	1
Ship Weight (lbs.)	1.1
Usually Ships	Today
Catalog Page No.	923
Price shown may not reflect your price. Log in or register.	

Additional Info

- MARK II (TM) Molded Plastic Manometers
- Manometers mount on any vertical surface to measure low positive, negative, or differential air and gas pressures.
- These virtually indestructible molded plastic instruments have zero adjustment knob and built-in level indicator. Plus or Minus 3% full scale accuracy, 140 DegreeF maximum working temperature. 10 psi maximum internal working pressure. Manometers include: 2 static pressure taps, 8-ft. double column plastic tubing, mounting screws, and red and green pointer flags. Red indicating fluid is used with No. 2T650; blue indicating fluid is used with No. 3T292.
- **Uses:** Dust collection systems, noxious fumes/airborne particulate exhaust systems, and for building HVAC filter banks.

Tech Specs

- **Item:** Molded Plastic Manometer
- **Operating Range (In WC):** 0-7
- **Max. Working Temp. (Deg. F):** 140
- **Accuracy:** +/-3% Of Full Scale
- **Rated Total Pressure:** 10 PSI
- **Mounting:** Screw Or Optional Base
- **Includes:** 2 Static Pressure Tapes, 8 Ft Double Column Plastic Tubing, Mounting Screws, Indicating Fluid, Red and Green Pointer Flags, Instructions

Notes & Restrictions

- (1) These products are covered by OSHA Hazard Communication Standard, and Material Safety Data Sheets (MSDS) are available. See page opposite inside back cover.

MSDS

Material Safety Data Sheets (MSDS) are available for this item.

Required Accessories

There are currently no required accessories for this item.

Optional Accessories

STAND,MANOMETER

Item #: 1TC33

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$26.50

STATIC PRESSURE TIP

Item #: 1W401

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$10.94

GAGE OIL, Blue, 1.910 Specify Gravity

Item #: 1W413

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$36.30

AIR FILTER KIT

Item #: 2T647

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$30.60

TUBE,PITOT



Item #: 3T086

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$48.25

Alternate Products

**MANOMETER,U
INCLINED**



Item #: 2T650

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$35.40

Repair Parts

There is currently no Repair Parts information for this item.

9.0 NOTIFICATION AND REPORTING:

Reports will be prepared and submitted to the Department on an annual basis by January 15 of each year with analytical results of the yearly groundwater sampling at the permanent down gradient monitoring well, installed on the Linwood Street sidewalk and two additional monitoring wells, installed on Essex Street sidewalk and in the parking lot in the southern portion of the site.

An annual report will summarize all the monitoring reports and document the results, conclusions, and recommendations of the annual project evaluation.

The annual report will include the following:

1. The valid Department site identification number, plus the municipality and county, in the title of the report;
2. A location map;
3. A site map;
4. A brief description of the applicable standard test methods run;
5. Results of annual groundwater testing at three monitoring wells for BTEX;
6. Comments, conclusions, and recommendations based on an engineering evaluation of the information included in the report, prepared by a professional engineer in accordance with Sections 1.5 (a) 9 and 1.5 (d) of DER, since engineering and institutional controls are components of the site remedy.

APPENDIX "A"

EXHIBIT 1

[\[Print\]](#) [\[Close\]](#)

From: "Michael MacCabe" <mdmaccab@gw.dec.state.ny.us>
To: <shapiroengineers@att.net>
Cc: "Jack Aversa" <jaaversa@gw.dec.state.ny.us>, "Nate Walz" <nmw02@health.state.ny.us>, "Milana Kononenko" <milana35@hotmail.com>
Subject: Re: S&S X-Ray Part 1
Date: Mon, 2 Oct 2006 15:57:04 +0000

Bob, the revised site management plan is generally ok.

We have two minor comments;

- be sure to change the date in the footer on the front page
- correct the text on page 13 to, "The monitoring wells will be constructed of 2-inch diameter PVC pipe with a 10-foot screen that will extend to the water table .
.."

I lapsed on the citizen participation requirements for the VCP. So, officially, we have to put this document out for a 30-day public comment period. This document and the other reports (just reports) must be placed in the following document repositories.

Spring Creek Branch
12143 Flatlands Avenue
Brooklyn, New York 11207

NYSDEC Region 2 Office
Regional Headquarters
One Hunters Point Plaza
47-40 21st Street
Long Island City, NY 11101

I have drafted a fact sheet that I will be mailing shortly.
Call if you have questions.

APPENDIX "B"

HEALTH & SAFETY PLAN (HASP)

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 - 7.1 Evacuation Procedure
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20. COMMUNITY AIR MONITORING PLAN

MAP OF ROUTE TO NEAREST HOSPITAL

ATTACHMENT - 1 COMMUNITY AIR MONITORING PLAN

1. PROJECT DESCRIPTION

This site-specific Health and Safety Plan (HASP) covers major issues associated with the future work performed within the restricted area of the property at 1101 Linwood Street, Brooklyn, New York 11208 (see Property Map), and during groundwater testing at the monitoring wells installed on Linwood Street, on Essex Street, and in the parking lot in the southern portion of the site.

The HASP at hand follows OSHA 29CFR1910.120(b)(4) Guidelines. This plan is designed to address safety and health hazards, and includes the requirements and procedures for employee protection, and thus is OSHA compliant. A Community Air Monitoring Plan (CAMP) is included herein, as Section 20 of the HASP.

2. SCOPE OF WORK

The objective of the project is to protect human health and safety during future excavation or construction of utility corridors within the restricted area, or during groundwater testing.

3. EQUIPMENT LIST

The following equipment is associated with the project at hand:

1. Excavation/Testing Equipment
2. Photoionization Detector
3. Hand Tools
4. Respirators
5. Back-up Ladders & Lighting Equipment
6. Rescue Equipment (Harness and Ropes)
7. Protective Equipment

4. ORGANIZATIONAL STRUCTURE

The following companies and personnel are the main parties involved with the project at hand.

POSITION/TITLE/AFFILIATION	NAME	PHONE NUMBER/PAGER
General Supervisor	Robert A. Lo Pinto, P.E	516-791-2300 (Office)
	Shapiro Engineering, P.C.	516-816-3800 (Mobile)
Project Manager/ Field Team Leader	Contractor TBD	TBD
Excavators/Testers	Contractor TBD	TBD

4.1 GENERAL SUPERVISOR

The general supervisor has the responsibility and authority to direct waste operations related to this project.

4.2 SITE SAFETY OFFICER

The site safety and health supervisor (SSHS) will be responsible for Volatile Organic Compound (VOC) monitoring, as well as organization of on-site safety meetings. This individual will enforce this Health and Safety Plan ensuring required safety equipment is on site, clean and operable.

The SSHS will coordinate all health and safety issues relevant to the project, and may conduct specialized training as required. It will be the duty of the site safety and health supervisor to provide emergency training to the personnel associated with the project. In the event of an emergency situation, it is the duty of the SSHS to inform the local authorities as to the nature of the incident.

In case of an emergency incident, the SSHS will be contacted immediately. The designated site safety and health supervisor is:

<u>AFFILIATION</u>	<u>NAME</u>	<u>PHONE NUMBER/CELL</u>
Contractor	TBD	TBD

The general supervisor and the SSHS are responsible for periodically reviewing the HASP (and in particular the Emergency Response Plan) and, as necessary, amending it, to keep it current with new or changing site conditions.

5. EMERGENCY FACILITIES

Prior to the start of this project, all the parties and personnel involved with the project will obtain the phone numbers and addresses of the local emergency facilities, such as the police, fire and hospital. The parties involved with the project will establish the most direct route from the facility to the nearest medical facility or hospital.

The hospital closest to the property is Brookdale Hospital located at 564 Rockaway Parkway, Brooklyn, New York 11212. A map of the route to Brookdale Hospital is provided at the end of this plan.

6. EMERGENCY TELEPHONE LIST

<u>COMPANY</u>	<u>NAME</u>	<u>PHONE #</u>
Shapiro Engineering, P.C.	Robert A. Lo Pinto, P.E.	516-791-2300 (Office) 516-816-3800 (Mobile)

Contractor	TBD	TBD
SHSFLATLANDS LLC	Neil Simon	718 494-0717 (Office)
NYC Emergency Response	Police/Fire/Medical	911
Brookdale Hospital		718 240-5363

7. **EMERGENCY RESPONSE PLAN**

The general supervisor and the site safety and health supervisor will coordinate any and all emergency situations with the proper local medical/emergency organizations and personnel on the job site. After contacting the proper medical/emergency organizations, immediately contact the SHSFLATLANDS LLC, the Contractor, and Shapiro Engineering, P.C. The personnel on site will coordinate evacuation procedures (if necessary) and remain a safe distance away from the area of health and safety concern. Personnel on site may need to perform basic first aid as warranted by the emergency situation. Do not move personnel with suspected neck or back injuries. Provide a detailed written report of the emergency situation within 24 hours to Shapiro Engineering, P.C. Site security and control will be enforced by the SSHS with consent for undertaken measures from the employer and the general supervisor.

The SSHS is responsible for pre-emergency planning, as well as emergency recognition and prevention.

7.1 **EVACUATION PROCEDURES**

In the event of an emergency, which necessitates an evacuation of the work site, personnel will sound an evacuation alarm using three (3) quick blasts by vehicle horn or air horn or by using loud verbal commands. All personnel will immediately evacuate the work site to a predetermined safe area. The predetermined safe area will be shown to all personnel prior to the start of fieldwork. Personnel will not re-enter the work site until all health and safety issues return to a satisfactory level. The SSHS is responsible for selecting the most effective evacuation route, as well as designate safe distances and places of refuge.

7.2 **PERSONAL PROTECTIVE EQUIPMENT**

This HASP is based on basic site maps of the work area and in accordance with OSHA 29CFR 1910.120(G). The following PPE will be required at all times by each person in the work area:

1. Head protection.
2. Foot protection
3. Hand protection.
4. Eye protection
5. First Aid kit.

Head Protection

All workers and individuals within the work areas must wear protective helmets. The protective helmets will reduce the potential for injury to the head from permanent, falling, and/or sharp edged objects. The head protection shall comply with the American National Standard Institute (ANSI) Z89.1-1986, "American National Standard for Personnel Protection - Protective Headwear for Industrial Workers".

Foot Protection

All personnel and individuals in the work areas will wear steel-toed or equivalent protective footwear to help prevent foot injuries from falling or rolling objects, objects piercing the footwear sole, and/or exposure to electrical hazards. The footwear will be properly secured to the feet at all times. Protective disposable clothing will be worn, as necessary, over the protective footwear or the footwear should be made of a rubber type material. Protective footwear will comply with ANSI Standard Z.41.1-1967 through 1991.

Hand Protection

All workers entering the work areas will use hand protection to prevent injuries caused from abrasions, lacerations, and burns of any type. The performance characteristics of the hand protection will reflect the task(s) of the individual worker. If worn, protective disposable clothing will cover the hand protection as much as possible and the hand protection/protective disposable clothing interface will be sealed with duct tape.

Eye Protection

All workers and individuals within the work areas will use appropriate eye protection to reduce the potential of damage caused by falling or flying objects/materials. The eye protection should fit securely on the face so the objects/materials will not enter from any side of the protection (goggles that seal to the face using an elastic headband are recommended). Eye protection will comply with ANSI Standard Z87.1-1968 through 1989.

First Aid Kit

A basic first aid kit will be at the facility. At a minimum the first aid kit will include the following: aspirin, bandages, medical tape, gausses, scissors, sterilization lotion/cream, and antibacterial lotion/soap.

8. POTENTIAL CHEMICAL HAZARDS-SAFETY AND HEALTH HAZARD ANALYSIS

The following table lists chemicals that personnel could come in contact with during this project. This list should not be considered as the total or complete chemical list for this project.

<u>Chemical Hazard</u>	<u>Major Pathway To Body</u>	<u>Phase of Chemical</u>	<u>Systems of Overexposure*</u>
Naphthalene	Absorption	Liquid, Solid	Skin and eye irritation.
Benzene	Inhalation, Absorption	Liquid, Gas	Skin and eye irritation. Headache, nausea, tremors, and fatigue.
Ethylbenzene	Absorption	Liquid	Eye, skin and respiratory Irritation with a Narcosis effect
Toluene	Inhalation, Absorption	Liquid, Gas	Eye irritation, headache, nausea, dizziness, and fatigue.
Xylene	Inhalation, Absorption	Liquid, Gas	Eye, nose, throat, and skin irritation. Headache, nausea, and fatigue.
Metals (Pb, Fe, etc.)	Absorption	Liquid	Nausea and headache

*Respiratory protection equipment, personnel protective equipment (PPE), engineering controls and good work practices can help prevent hazardous chemical exposure and overexposure.

Protective measures taken to mitigate exposure will also provide adequate and appropriate protection against known chemical contaminants detected on site. If the recommended PPE is used properly according to this plan, and Standard Operating Procedures (SOP) and decontamination procedures followed, unhealthy exposures should not occur.

9. POTENTIAL PHYSICAL HAZARDS-SAFETY AND HEALTH HAZARD ANALYSIS

Tasks required for activities associated with this project may involve exposure to slipping, falling, heat/cold stress, noise, and other physical hazards associated with intrusive activities which generate airborne particulates and/or release toxic vapors into the breathing zone of the workers. Skin absorption and ingestion may occur from

contaminated soils extracted due to drilling of borings or from groundwater extracted for testing.

During operations of heavy equipment associated with the installation of boreholes, there is the potential for personnel to be cut, struck, or pinned by equipment. The following standard procedures will be required during drilling operations:

- 1 Excavating equipment will be inspected, operated, and maintained in accordance with the manufacturer's operating manual. A copy of the manufacturer's manual will be maintained on site.
- 2 Overhead electrical hazards will be identified prior to bringing the drill rig on-site.
- 3 Drilling crews will be trained in the operation, inspection, maintenance, and safety features of the equipment based on the equipment's operating manual.
- 4 Outriggers, if applicable will be extended in accordance with the manufacturer's specifications.
- 5 Weather conditions will be monitored. Work will stop during electrical storms or when electrical storms are imminent.
- 6 Loose clothing, jewelry, or equipment that can get caught in moving machinery will not be worn on site.

Site Mobilization/Demobilization: The hazards of this phase of activity are those associated with equipment movement, manual materials handling, and manual site preparation. Manual materials handling and manual site preparation may cause blisters, sore muscles, joint and skeletal injuries and may present the potential for eye hazards, contusions and lacerations. Slippery work surfaces can increase the likelihood of back injuries, overexertion injuries, slips and falls.

Excavating Operation: On-site excavated area may lead to slips and falls.

Decontamination Activities: Personnel involved in decontamination activities may be exposed to contaminated soil from heavily contaminated excavating equipment, high pressure water spray, noise, and cold exposure from the water spray.

10. PERSONAL PROTECTIVE EQUIPMENT PROGRAM

Appendix B to OSHA 29CFR1910.120 provides a detailed account of the PPE Program. Specific levels of protection and necessary components for each level are divided into four (4) main categories. PPE will be required when work activities generate and/or involve known or suspected atmospheric vapors, gases, liquids, or particulates at or above satisfactory health and safety levels or regulatory action limits. Personnel in the work areas should be ready to respond and work within any protection category. Based

upon the scope of work for this project, the PPE should not exceed Level C protection and should be level D protection for most operations.

Personnel Protection Categories:

Level A

Wear the highest level of respiratory, skin and eye protection. Positive-pressure tested totally encapsulating chemical protective suits shall be worn.

Level B

Wear highest level of respiratory protection, but possibly a lesser level of skin or eye protection. Level B is the primary level of choice when encountering unknown or possible contaminated areas. Positive pressure self-contained breathing apparatus or positive pressure airline respirators equipped with an escape air supply shall be worn.

Level C

Wear respiratory protection when only air purifying or filtering respirators are required, and a lesser level of skin and eye protection.

Level D

No respiratory or skin hazards in the work area. Wear uniforms or coveralls to provide minimal skin protection against chemical hazards.

Modification of the protection levels is permitted so that personnel are protected while minimizing project costs and maximizing efficiency. As an example, Level C respiratory protection and Level D skin and eye protection may be required for a project due to specific contaminants and/or concentrations. Chemical hazard protection equipment is dependent upon contaminants, concentration, and degree of personnel interface/contact.

11. MEDICAL SURVEILLANCE AND PERSONNEL TRAINING REQUIREMENTS

OSHA has established requirements for a medical surveillance program designed to monitor and reduce health risks for employees who may potentially be exposed to hazardous materials. For the activities related to excavation, this potential has been limited to on-site activities. This program has been designed to provide baseline medical data for each employee involved in hazardous waste operations. Each employee must undergo testing and training, and a determination of his/her ability to wear personal protective equipment. The medical examinations must be administered on a pre-employment, annual basis, employment termination and as warranted for chemicals for which the employee may have been exposed. These examinations shall be provided by employers without cost or loss of pay to the employee.

In accordance with 29 CFR 1910.120, the contractors should maintain all medical surveillance records for 30 years past employment and shall make these records available to the employee, Owner or regulatory agencies, as required.

11.1 MEDICAL SURVEILLANCE REQUIREMENTS

Due to potential exposure to hazardous materials, all contractors, employees, subcontractors and other prime contractors involved in on-site excavation activities should participate in a medical monitoring program meeting specifications of 29 CFR Part 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER). The examining licensed physician is required to provide a written report to the employer of any medical condition that would place employees at increased risk of wearing a respirator or other personal protective equipment. A physician will specify respiratory protection clearance, or the user's ability to wear a respirator of any type for a work shift. Each subcontractor involved in excavating activities shall assume the responsibility of maintaining a medical surveillance program as well as maintaining worker personnel medical records as regulated by 29 CFR 1910.20, provided for all personnel, including subcontractors, who will be on-site.

A medical examination program is required for all those employees who wear or may wear respiratory protection as specified by 29 CFR 1910.134, respiratory protection and 29 CFR 1910.120, HAZWOPER. Disposable dust type respirators are included under these regulations. This program must determine an individual's ability to wear respiratory protection while performing designated duties. All elements of 29 CFR 1910.134, respiratory protection, must be complied with.

11.2 EMPLOYEE AND OTHER PERSONNEL TRAINING

All personnel associated with excavation activities should have participated in a health and safety training program that complies with OSHA 29 CFR 1910.120, HAZWOPER, prior to mobilization. This program instructs employees on the intent of the standard, health and safety principles and procedures, proper operation of monitoring instruments, use of personal protective equipment, decontamination, and specific emergency plans. All personnel must have an initial 40-hour training course. This course is supplemented by an annual 8-hour refresher course. Any chemical specific training that may be required will be based upon compliance with 29 CFR 1910.1200, Hazard Communication. Personnel responsible for supervision and on-site management relative to the work activities described in this work plan should receive an additional 8 hours of specialized training.

Additional training is given to those employees responsible for responding to emergencies.

A copy of this HASP will also be made available to all personnel for review. All employees will complete a Health and Safety Plan review form (given herein as Section 17 of the HASP) to verify they have reviewed this plan. Any subcontractors involved in

implementing the VCP work plan are required to certify that their employees have received medical exams, training and are capable of respirator usage.

All on-site personnel involved with the excavation project will attend a pre-entry briefing on the chemical and physical hazards associated with the property.

The initial health and safety briefing will consist of the following information:

- a Names of personnel and alternates responsible for worker safety and health;
- b Injury, illness, and other hazards present on the property;
- c Safe use of engineering controls and equipment on-site;
- d Work practices by which the employee can minimize risks from hazards;
- e Selection, use, care, and maintenance of Personal Protection Equipment (PPE);
- f Access control procedures, including log-in and log-out;
- g Decontamination procedures;
- h Standard operation safety procedures; and
- i Review of the Emergency Response Plan.

Documentation of all training, fit test and medical monitoring certificates will be maintained by the contractors.

A daily tailgate meeting will be conducted prior to the start of the day's activities during performance of sampling activities. The topics covered will include a reminder of work area hazards, target activities for the day's work, changes in observed exposure levels, staff changes (e.g., due to vacations, reassignments etc.) and responsibilities.

11.3 VISITOR TRAINING

All visitors to the work areas described in this project will be informed of the hazards associated with the work areas. Emergency procedures will be explained and they will be trained in the use of personal protective equipment required during the visit.

12. **EXPOSURE MONITORING/AIR SAMPLING PROGRAM**

This work plan involves soil excavation. Should soil-excavation activities result in any elevated airborne concentrations of Volatile Organics, care will be taken to ensure respirators are worn when necessary. Air monitoring will be performed in order to identify and quantify airborne levels of hazardous substances and safety and health

hazards in order to determine the appropriate level of employee protection needed on site, pursuant to 29CFR1910.120(h).

12.1 CHEMICAL CONTAMINANTS

VOC monitoring will be conducted by the site safety and health supervisor during the soil excavation activities. Exposure monitoring will be conducted for VOCs using a photoionization detector (PID). The worker's breathing zone near the intrusive activities will be checked with the PID.

At any time when concentrations measured with the PID in the breathing zone exceed 75 ppm, work activities will cease and the use of respirators will be required.

A single spike on the PID should not stop work, but a sustained reading (longer than ten seconds) or repetitive spikes (5 within 10 minutes) shall stop work.

Notations of momentary spikes, high readings, and actions taken will be recorded on the borings logs and in the intrusive activities logbook. The PID will be calibrated daily according to the manufacturers instructions and recorded in the logbook.

Prior to performing field activities in dry, dusty areas where contaminated soils are likely to be encountered, workers will wet down the area of activity with water in order to decrease dust generation. If the wetting process is expected to result in potentially contaminated runoff, measures will be taken to contain the runoff.

12.2 NOISE

With the use of soil excavating equipment as part of this project, the potential for elevated noise levels in excess of 85 dBA is probable. A hearing protection program will be instituted if either continuous or impact noise levels exceed 85 dBA (slow response) for an 8-hour work shift, in accordance with 29 CFR 1910 and 1926. If unable to carry out conversation at an arm length, or at 3 ft. distance, hearing protection, such as earplugs and muffs, or administrative controls will be used if engineering controls are not feasible.

13. STANDARD OPERATING SAFETY PROCEDURES, ENGINEERING CONTROLS AND WORK PRACTICES

The following procedures will be followed by all personnel working on this project:

13.1 INFORMATIONAL PROGRAM

The site safety and health supervisor (SSHS) will conduct an informational safety meeting at the start of each workday. Additional meetings may be conducted, as required. Meetings will include pertinent information regarding the day's work and include, but is not limited to, any of the following areas:

- a. The whereabouts of any hazardous chemicals near specific work areas.
- b. Methods used to detect the presence or release of hazardous chemicals at the site.
- c. The physical and chemical health hazards of the project site.
- d. Protective measures such as safe work practices, emergency procedures, and personal protective equipment (PPE).
- e. Details regarding the proper use of protective measures and material safety data sheets.

13.2 HAZARD CONTROL

Work shall comply with all Federal, State and local health and safety requirements including: OSHA 29CFR1904, 1910 and 1926, and EPA40CFR260-270.

All intrusive activity sites will be inspected for health and safety hazards by SSHS prior to entering the site for the intrusive activity. The SSHS will then take all corrective measures necessary to safely work at the site. This inspection and all corrective measures will be documented and communicated to all site workers at the initial safety meeting and subsequent safety meetings held.

The SSHS will insure that all sheeting and bracing is in place before excavating activities that could cause cave-ins are started. Any entry into an excavated area will require a Confined Space Entry Permit.

13.3 OPERATING PROCEDURES

- a. No eating or drinking is permitted within the work area. An exception is made for the replacement of fluids as a preventive measure for heat stress, however hands and face must be washed with potable water prior to drinking replacement fluids.
- b. No tobacco use is permitted within the work area.
- c. No beards or facial hair is allowed on site that may interfere with the seal of a negative pressure respirator.
- d. No contact lenses will be worn on site.
- e. Contamination avoidance shall be practiced to include not walking through puddles or mud unnecessarily, avoiding kneeling on ground or leaning on equipment whenever possible. Weather conditions that may escalate potential site hazards such as lightning, rain or extreme temperatures will be logged.

- f If evidence of illegal dumping or other suspicious fill is encountered within the project area, work at the location will stop. The area will be designated an exclusion zone and encircled with caution tape. The SSHS will be notified immediately.
- g Noise-hearing protection devices will be worn by all field personnel in work areas where noise levels are at or above 85 dBA. The wearing of hearing protection devices is a condition of employment.
- h Employees and visitors will use extreme caution in inclined areas of the work site. Ground surfaces may be wet, slippery and have hazardous objects protruding from the surface.
- i Dependent on the season in which the work will be performed, employees should exercise caution when encountering hazardous plants (poison ivy) and animals (snakes, spiders, bees, wasps, ticks, mosquitoes, ants, etc.) at the work site. Employees who are known to be highly sensitive to insect stings should carry a "sting kit" and notify the SSHS at the work site. All employees are encouraged to use permethrin (0.50%) clothing repellent and DEET (30%) skin repellent for protection against ticks and mosquitoes.
- j Electrical equipment will be grounded.
- k Employees and visitors will exercise extreme caution in the vicinity of open excavations, if present. Under no circumstances will employees enter excavations or other confined spaces without the proper Entry Permit.
- l Thermal stress - All personnel will be assigned a "buddy" who will observe the employee for signs of thermal stress, although personnel should be alert for heat or cold related injuries. Water, Gatorade, or similar electrolyte liquid should be available on site.
- m Fire - No heaters or open flames will be allowed in the work area. If a heater is to be used, it will be a construction type (i.e. salamander). Flammable liquids will be stored in appropriate containers.

13.4 SEVERE WEATHER PLAN

For activities occurring outdoors, the following conditions will be observed:

Condition #1 - Storm threat within 24 hours: stow non-essential gear indoors and maintain a six-hour weather watch.

Condition #2 - Storm threat within 12 hours: all moveable gear, drums, pipes, tools, etc. shall be securely lashed down and maintain a three-hour weather watch.

14. SITE CONTROL MEASURES

The work site will be zoned to reduce the spread of hazardous substances to clean areas. An exclusion zone (EZ) will be established with a radius of 25 feet, when feasible, around the operations and other areas of intrusive activities. No unauthorized person will be allowed within the EZ, nor will any authorized person remain unnecessarily in this zone. This zone will be delineated by yellow caution tape, where appropriate. Since this area has the highest potential for exposure to hazardous chemicals, the proper PPE must be worn in this area.

The Contamination Reduction Zone (CRZ) will be located just outside the EZ. Personnel in this area will be required to wear PPE, which is one level less than that worn in the EZ. During intrusive field activities, the exact layout will depend on the wind direction, the day of work, and site conditions. The CRZ will have only one accessible point to the EZ.

Site access will be denied to the general public by the SSHS or designated personnel and the caution barriers. All equipment and materials will be secured during non-work hours. Continuous communications (i.e. portable radios, hand signals, telephones) shall be maintained between the SSHS and key personnel associated with this project at all times during site operations.

14.1 COMMUNICATION PROCEDURES

- a Personnel will be informed of all known site hazards during an initial safety meeting and will be kept informed of hazards discovered during the site investigation.
- b Personnel in the EZ will remain in constant communication or within sight of the other personnel. Failure of communication requires evacuation of the EZ until communication is reestablished.
- c A mobile (cellular) telephone will be on-site whenever intrusive work is performed in the project area.
- d The emergency signal will be one of the following:
 - Any blast from a pressurized air horn or vehicle horn.
 - Verbal notification.
- e The following standard hand signals will be used:
 - Hand gripping throat -- Out of air and cannot breathe.
 - Grip buddy's wrist -- Leave area immediately.
 - Both hands on buddy's waist -- Leave area immediately.
 - Hands on top of head -- Need assistance.
 - Thumb down -- No/negative

- Thumb up -- Yes/I'm OK/I am all right.

14.2 HAZARD COMMUNICATION

Pursuant to OSHA 29CFR1926.59 and 1910.120 , Material Safety Data Sheets (MSDS) along with a list for those materials covered by the MSDS will be available for all hazardous substances brought on site. Personnel will also be briefed by the SSHS regarding hazardous chemicals present at the work site prior to starting work that personnel could be exposed to. The SSHS will also have the Emergency Response Plan on hand, in case of ensuing emergency incidents.

15. DECONTAMINATION

Personnel involved with the work may be exposed to constituents in a number of ways, despite the most stringent protective procedures. While performing on-site duties, work personnel may come in contact with hazardous substances. Equipment and monitoring instruments may also be exposed to hazardous substances. Decontamination shall be performed in areas away from the work site that will minimize the exposure of uncontaminated employees, or equipment to contaminated employees or equipment. In general, decontamination involves scrubbing with a detergent/water solution or other suitable medium followed by clean water rinses. All disposable items shall be disposed of in designated lined containers to be sent for off-site disposal. Non-disposable equipment will be decontaminated each time it leaves the exclusion zone. Certain parts of equipment, such as respirator harness assemblies and cloth components, are difficult to decontaminate. If grossly contaminated, they may have to be soaked for a period of time in a cleaning solution.

Rubber components shall be soaked in detergent/water and scrubbed with a brush. In addition to decontamination, all respirators, non-disposable protective clothing and personal articles soiled from exhalation or perspiration must be sanitized before they can be used again. Each respirator user will be responsible for the proper maintenance, decontamination, and sanitizing of his/her own respirator and non-disposable personal protective equipment.

15.1 DECONTAMINATION PROCEDURES

The following procedures have been established to provide work site personnel with minimum guidelines for proper decontamination. These minimum procedures must be followed by personnel leaving the EZ (see Section 14). The decontamination process shall take place at a reasonable distance from any area of potential contamination.

Designated stations will be established within the decontamination area and include at least washbasins, scrub brushes, detergent/water and rinse water. Portable sprayer units filled with detergent/water solution and potable water shall also be available to wash and rinse off grossly contaminated boots, gloves and equipment. Non-disposable equipment will be cleaned and staged for the next use. Wash stations shall consist of a

potable water supply, hand soap and clean towels. In most instances, employees will perform self-decontamination. In cases where assistance is necessary, an employee will be designated to work the decontamination area.

The SSHS will monitor decontamination procedures to ensure their effectiveness. Modifications of the decontamination procedures may be necessary as determined by SSHS. Decontamination solutions will be contained in 55-gallon drums, sampled and disposed of consistent with regulatory guidance and applicable regulations. If such decontamination procedures are found to be ineffective, appropriate steps shall be taken to correct any deficiencies.

16. **LOGS, REPORTS & RECORDKEEPING**

The SSHS will ensure that all records are kept up to date and maintained in accordance with applicable regulations. The following items will be recorded in the daily field log:

- 1 Daily list of field personnel,
- 2 Record of all visitors,
- 3 Training logs (site specific and visitors)
- 4 Daily air monitoring results,
- 5 Levels of personal protection worn by workers and, as appropriate, visitors,
- 6 Exposure work-hours and a log of occupational injuries and illnesses,
- 7 Accident investigations
- 8 Daily record of all first aid treatments not otherwise reportable, and
- 9 Daily Health and Safety inspection report.

17. RECORD OF HASP REVIEW

I certify that I have thoroughly read and fully understand the information in the HASP for the project at hand. I understand the potential health and safety hazards and issues associated with this project.

I certify that I have been trained in the use, care, and limitations of the PPE that could be used during this project.

My signature below is official record that I comply with provisions of the HASP and federal, state, and local health and safety regulations and guidelines.

Name: _____

Signature: _____

Company: _____

Position: _____

Date: _____

Name: _____

Signature: _____

Company: _____

Position: _____

Date: _____

Name: _____

Signature: _____

Company: _____

Position: _____

Date: _____

18. SPILL CONTAINMENT PROGRAM

For this project, possible leakage at the work site can result from the equipment used.

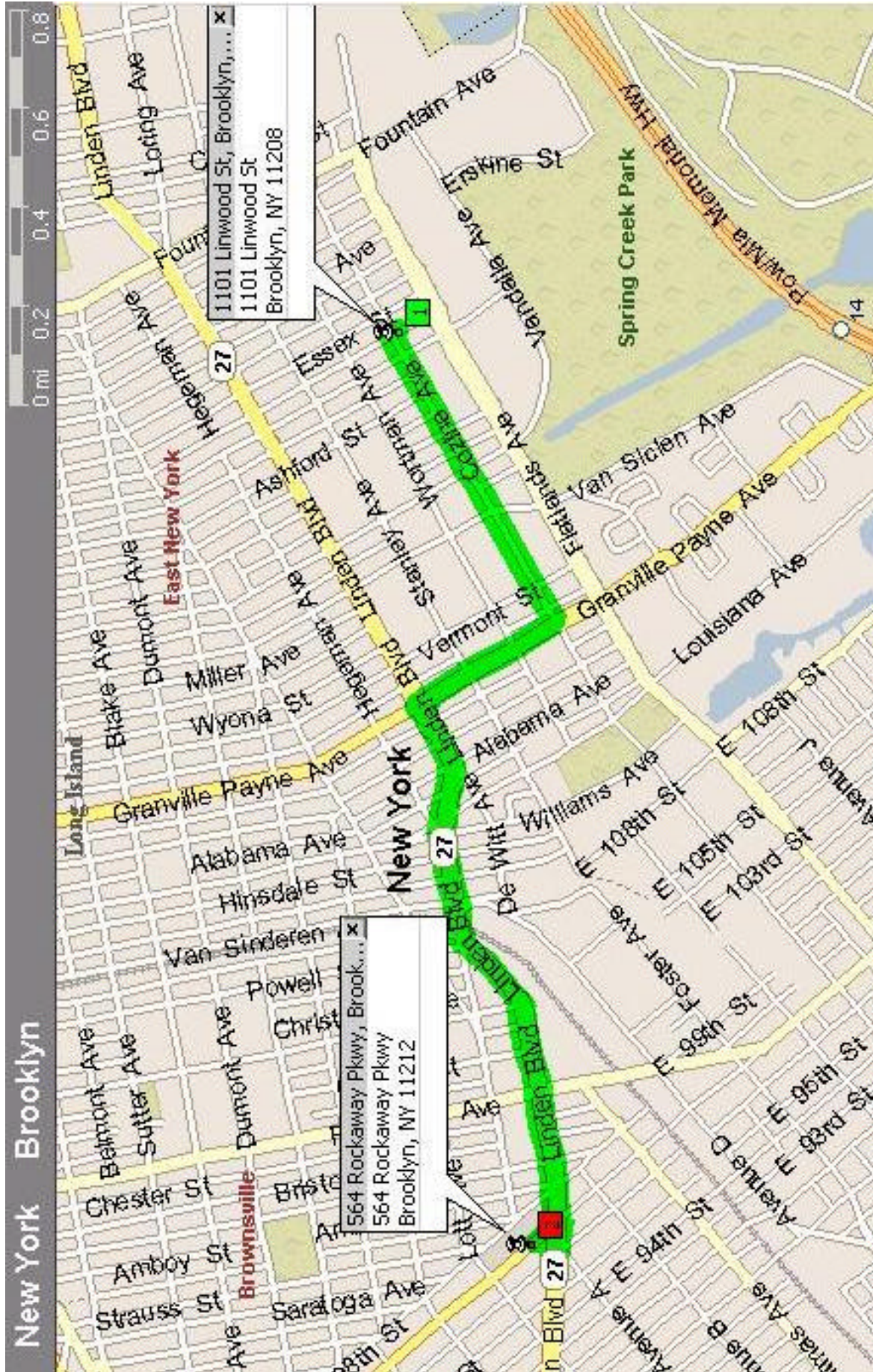
In case of spills at the work site, hydrocarbon absorbent spill socks and/or mats (lab safety supply) shall be used to absorb any spilled free product.

20. COMMUNITY AIR MONITORING PLAN

The Community Air Monitoring Plan (CAMP), requires real-time periodic monitoring for Volatile Organic Compounds (VOCs) and particulates (i.e. dust) at the downwind perimeter of the designated work area when outdoor activities are in progress at the contamination site. This plan is not intended for use in establishing action levels for respiratory protection. The CAMP provides a measure of protection for the downwind community from potential airborne contaminant releases as a direct result of remedial work activities. The action levels specified within the CAMP require increased monitoring, corrective actions to abate emissions and/or work shutdown.

Furthermore, the CAMP aids in confirming that work activities do not spread contamination off site through the air. Reliance on this plan should not replace simple, commonsense measures to keep VOCs and dust at a minimum around the work site.

The Community Air Monitoring Plan is presented as Attachment 1.

1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

ATTACHMENT 1**COMMUNITY AIR MONITORING PLAN**

Real-time air monitoring for Volatile Organic Compounds (VOCs) at the downwind perimeter of the designated outdoor work area (exclusion zone) is necessary to determine that the health and safety of onsite workers and the community is protected.

Frequency of VOC Monitoring

VOCs shall be periodically monitored with a Photo Ionization Detector (PID) at the downwind perimeter of the exclusion zone daily at 15-minute intervals. If total organic vapor levels exceed 5 ppm above background levels, minimally intrusive work activities must be halted and monitoring continued under the provisions of a VOC Emission Response Plan described below. All readings must be recorded and be available for NYSDEC and NYSDOH personnel to review. Upwind concentrations shall be measured at the start of each workday to establish background conditions, and during the day as required. The PID will be calibrated daily for VOC's of concern.

VOC Emission Response Plan

If the ambient air concentration of VOCs exceeds 5 ppm above background at the perimeter of the exclusion zone, minimally intrusive activities will be temporarily halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, minimally intrusive activities can resume but more frequent intervals of monitoring, as directed by the site safety and health supervisor (SSHS), must be conducted. The conditions will be discussed with the general supervisor and appropriate vapor suppression techniques will be employed if deemed necessary. If the VOC levels are greater than 5 ppm over background but less than 25 ppm over background at the perimeter of the exclusion zone, minimally intrusive work activities can resume provided:

- * The VOC level 200 ft. downwind of the exclusion zone or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background; and
- * More frequent intervals of monitoring, as directed by the SSHS, are conducted.

If the VOC level is above 25 ppm over the background at the perimeter of the exclusion zone, all work activities must be shut down. When work shut down occurs, downwind air monitoring, as directed by the SSHS, shall be conducted to ensure that VOC emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the major VOC emission section below.

Major VOC Emission

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

If VOC levels persist greater than 5 ppm above background 200 ft. downwind, or half the distance to the nearest residential or commercial property from the exclusion zone, (whichever is less) VOCs must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 feet zone).

If either of the following criteria is exceeded in the 20 feet zone, then the major VOC emission response plan shall be automatically implemented:

- * Organic vapor levels approaching 5 ppm above background for a period of more than 15 minutes.
- * Organic vapor levels greater than 10 ppm above background for any time period.

Major VOC Emission Response Plan

Upon activation, the following activities will be undertaken:

- * The local police authorities will immediately be contacted by the SSHS and advised of the situation.
- * Air monitoring will be conducted at 15-minute intervals within the 20 feet zone. If two successive readings below action levels are measured, air monitoring may be stopped or modified by the SSHS or the general supervisor.
- * All emergency contacts will go into effect as appropriate.

All readings must be recorded and be available for NYS DEC and DOH personnel for review.

ENTRY PERMIT

Permit valid for 8 continuous hours only. All copies of Permits will remain at the job site until job is completed.

Date and time issued: _____ Date and Time Expires: _____

Equipment to be worked on: _____

Work to be performed: _____

Safety Standby Person (Attendant) is required for all confined space work

	<u>NAME</u>	<u>SIGNATURE</u>
Supervisor:	_____	_____
Entrant:	_____	_____
Attendant (s):	_____	_____
	_____	_____
	_____	_____

Minimum requirements to be completed and reviewed prior to entry.

<u>REQUIREMENTS COMPLETED</u>	<u>DATE</u>	<u>TIME</u>
Breathing Apparatus & Backup:	_____	_____
Ladders:	_____	_____
Rescue Equipment:	_____	_____
Protective Clothing:	_____	_____

Air Monitoring shall be performed as necessary to confirm the atmosphere in the Permit Area.

Supervisor authorizing all of the conditions are satisfied:

_____	_____	_____
Date	Name	Signature

APPENDIX "C"

QUALITY ASSURANCE/QUALITY CONTROL PLAN

APPENDIX "C"**QUALITY ASSURANCE/QUALITY CONTROL PLAN****TABLE OF CONTENTS**

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ATTACHMENT 1

Resume - QA/QC Officer - Elliot J. Shapiro, P.E., DEE
Daily Quality Control Report Form
Well Purging and Sampling Form
Photographic Log Form
Chain of Custody Form

1. **PURPOSE**

The purpose of this Quality Assurance/Quality Control Plan (QA/QCP) is to enumerate the procedures and actions to be taken by Personnel to ensure that a proper and safe remediation of the site is achieved, and that proper, quality data is generated. In order to facilitate this goal, the following procedures have been established.

2. **QUALITY ASSURANCE OBJECTIVES**

2.1 **DATA REQUIREMENTS**

The object of the project-sampling program is to produce representative, defensible data to determine if chemical contamination exists, and to determine if any health hazards will be harmful to human life and the site environment. Chemical analysis of the samples will identify contaminated materials for removal, conforming to all federal and state regulations.

2.2 **DATA QUALITY OBJECTIVES**

The data quality objectives (DQOs) presented in this Site Management Plan (SMP) need to be supported by a certain level of quality, which is based on the intended use of the data. The level of analytical quality control for the project laboratory work is NYS DEC ASP Category B for the groundwater and any future soil sampling. This QA/QCP is written for this sampling.

The groundwater and/or soil samples collected will be analyzed by methods in the EPA "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, 3rd Edition", including UPDATE II, September 1994 and "Methods for Chemical Analysis of Water & Wastes, EPA 8260". In addition to the collection of the various samples, field quality assurance and quality control samples will be analyzed by the contract laboratory. Internal laboratory QC samples, as specified by the method, will be used and analyzed. The contract laboratory a NYS DOH approved laboratory.

Groundwater sampling, soil gas sampling and/or soil sampling may be performed. The soil gas samples, though, only require a standard data package A report. As such, many of the specific requirements listed in this QA/QCP are not applicable to the soil gas sampling. Soil gas samples will be analyzed by a NYS DOH approved laboratory. Even though many of the specific procedures in this QA/QCP are not required for the soil gas analysis, good laboratory procedures will be followed, along with the requirements of NIOSH Method 1501, "Hydrocarbons, Aromatic".

2.3 QUALITY ASSURANCE OBJECTIVES FOR MEASUREMENT

The primary goal of this QA/QCP is to define procedures that will ensure the quality and integrity of samples, accuracy and precision of analyses, and representativeness, comparability and completeness of results for the fieldwork.

The precision, accuracy, representativeness, completeness, and comparability (PARCC) parameters are indicators of data quality. The following procedures and criteria will be used to evaluate data precision, accuracy, and analytical completeness for the analyses conducted.

2.3.1 PRECISION

Precision measures the reproducibility of measurements under a given set of conditions. It is a quantitative measure of the variability of a group of measurements compared to their average value. The overall precision of data is a mixture of sampling and analytical factors.

Quality Control duplicate environmental samples will be collected and analyzed and the precision will be determined by calculating the relative percent difference (RPD). Duplicate internal control samples (as specified by the analytical method), shall be analyzed by the contract laboratory and reported. The following formula is used for calculating RPD:

$$RPD (\%) = \frac{(X_1 - X_2)}{(X_1 + X_2)/2} \times 100$$

where: X_1 = the reported concentration for the first sample

X_2 = the reported concentration of duplicate sample

Duplicate QA samples will be collected from the same sampling location, from which the QC sample is collected, and sent to the contract laboratory for analysis. This is the basis for the overall data evaluation of the contract laboratory. A chemical quality assurance report will be produced on the contract laboratory's precision and accuracy for the data generated.

2.3.2 ACCURACY

Accuracy measures the bias in a measurement system. Sources of error are the sampling process, field contamination, preservation, handling, sample matrix, sample preparation and analysis techniques.

The accuracy of the sample will be determined by evaluating the recoveries of the surrogate standards and the laboratory control sample, which are run with the analytical

method. Accuracy will be expressed as percent recovery for laboratory control samples and surrogates as follows:

$$\text{Percent Recovery} = 100 (X/T)$$

Where: X = the observed value of measurement
T = the "true" value

These recoveries will be evaluated against with the control limits reported by the laboratory.

Matrix spike and matrix spike duplicate sample results will be used to calculate the percent recovery as an indicator of matrix effects as follows:

$$\text{Percent Recovery} = 100(X-S/R)$$

(for matrix spikes)

where: X = observed value after spike
S = sample value
T = amount spiked

Sampling accuracy is assessed by evaluating the results of field and/or trips blanks. Analytical accuracy is accessed through use of QC samples and/or matrix spikes.

The matrix spike and matrix spike duplicate percent recoveries will be compared against the control limits reported by the laboratory.

2.3.3 REPRESENTATIVENESS

Representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition.

Samples will be collected at locations potentially containing chemical contamination. Specific sites for sample collection will be based on the results of a preliminary assessment conducted at the project site, so as to obtain results that accurately represent the true conditions. All sampling will be performed in compliance with the procedures described in the SMP.

2.3.4 COMPLETENESS

Completeness is defined as the ratio of acceptable valid results to the total number of analytical results requested on samples submitted for analysis. The overall analytical completeness goal for this project will be 90%.

$$\% \text{ Completeness} = \frac{\text{Accepted Analytical Results} + \text{Accepted Estimated Analytical Results}}{\text{Total Number of Analytical Results Requested}}$$

2.3.5 COMPARABILITY

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another. Comparability can be related to accuracy and precision, quantities, which are measures of data reliability. Data should be comparable if sample location considerations, collection techniques and measurement procedures, analytical methods, and reporting are equivalent for the samples within a sample set.

By using standard, equivalent, sampling and analytical methods, plus the use of QC samples as described above, data of known quality is ensured. This data set can then be compared with any other data of known quality. A qualitative assessment of data comparability will be made of applicable data sets.

2.4 FIELD SAMPLING QUALITY ASSURANCE/QUALITY CONTROL CHECKS

Field duplicates, field splits, field blanks, field blind duplicates, and trip blanks will be collected and submitted to the analytical laboratory to provide a means to assess the quality of the data resulting from the field sampling program. Types of samples collected and used for the assessment of chemical quality assurance are defined in the subsections that follow. The field personnel for the project shall collect all field, QC, and QA samples and send them to the contract laboratory. An attempt will be made to select samples containing contaminants for QA/QC, based on physical evidence such as appearance, odor, or field screening tests.

2.4.1 QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

The QA and QC samples are duplicate or split samples which are analyzed at the laboratory. QA and QC samples will be collected at a minimum rate of 10% of the total samples. The duplicate sample or split aliquots are processed separately and the results compared to evaluate the effects of the matrix on the precision of the analysis. Results are expressed as relative percent difference between the duplicate aliquots analyzed.

A comparison between the QA and QC sample results by the Laboratory is used to assess the quality and validity of the data along with the contract laboratory's internal quality control measures. A report of findings shall be presented in the Chemical Quality Assurance Report (CQAR) from the laboratory.

2.4.2 TRIP BLANKS

A trip blank is prepared by the laboratory. It is sent to the field along with all the other sample containers. One trip blank will be used per set of 20 samples collected, and returned to the laboratory for analysis with all the other samples.

2.4.3 FIELD BLANKS

Field blanks are defined as samples, which are obtained by pouring analyte-free deionized water through the sample collection equipment (bailer, pump, auger, etc.) after decontamination, and placing it in appropriate sample containers for analysis. A field blank is used to determine if decontamination procedures are effective. One field blank will be collected per set of 20 samples collected, and returned to the laboratory for analysis with all the other samples.

2.4.4 DUPLICATES

Duplicate samples are multiple grab samples, collected separately, that equally represent the medium at a given time and location. This is the type of co-located sample required for volatile organic analyses. Duplicate samples collected in the field provide precision information for the entire measurement system including sampling, homogeneity, handling, shipping, storage, preparation, and analysis. These Samples will be utilized as the matrix spike sample and matrix spike duplicate sample. Samples for duplicate analyses will be selected at locations with suspected contamination. One set of two duplicates will be collected from one of the 20 sampling locations for each set of 20 groundwater samples collected, and returned to the laboratory for analysis with all the other samples.

2.4.5 FIELD BLIND DUPLICATE SAMPLES

A Field Blind Duplicate Sample is a duplicate sample as described above, except it is delivered to the laboratory without the sampling location identified. One field blind duplicate sample will be collected for each set of 20 samples collected.

2.4.6 SPLIT SAMPLES

Split samples are those collected as a single sample, mixed, divided into two or more equal parts, and placed in separate containers. Samples to be analyzed for volatiles are never split samples because the VOCs can volatilize. The samples shall be split in the field prior to delivery to the laboratory for analysis. Split samples are subjected to the same environmental conditions and steps in the measurement process. This serves as an oversight function in assessing the analytical portion of the measurement system.

2.5 METHOD DETECTION LIMITS

Contract Required Quantitation Limits (CRQLs) set forth by the State of New York and Risk-Based Concentrations (RBCs) of U.S. Environmental Protection Agency (EPA) will be used as guidelines on detection limits for chemical parameters investigated in this project. New York State Department of Environmental Conservation (NYSDEC) Technical Administrative Guidance Memorandum (TAGM), HWR-94-4046, "Determination of Soil Cleanup Levels", revised January 24, 1994 and U.S. EPA Region

III "Risk-Based Concentration Table", April 19, 1996 contain the necessary regulatory criteria and containment levels needed for imposing the detection limits required for this project.

2.6 FIELD QA/QC:

Due to the nature of the project, the only field equipment which will be utilized will be a portable PID (Photoionization Detector) Meter, which will be calibrated daily prior to use. This equipment will be employed for Safety and Health Monitoring only and not for Analytical Testing for data evaluation.

3. PROJECT STAFFING

All personnel involved in an investigation and in the generation of data are implicitly a part of the overall project and quality assurance program. In addition, certain individuals have specifically delegated responsibilities. Persons with specific QA/QC roles during these investigations including the Project Director, the Project Manager and the Quality Assurance Officer (QAO). The following section lists the roles and responsibilities of key personnel.

Project Name:	Voluntary Cleanup Program for S&S X-Ray Products Inc.
Project Director:	Robert A. Lo Pinto, P.E., Shapiro Engineering, P.C.
Project Manager/ Field Team Leader:	Contractor TBD
QA/QC Officer:	Elliot J. Shapiro, P.E., DEE, Shapiro Engineering, P.C.

3.1 PROJECT DIRECTOR

The Project Director has the overall responsibility of the project. It is the responsibility of the Project Director to ensure that all quality assurance procedures are being adhered to. In addition, the Project Director will review all data generated and attest that they were reviewed.

3.2 PROJECT MANAGER/FIELD TEAM LEADER:

The Project Manager/Field Team Leader will report to Shapiro Engineering, P.C. (SEPC) and the Project Director. The Project Manager/Field Team Leader will be responsible for scheduling, communicating to the SEPC representatives, technical review of field activities and the overall quality of the project and project deliverables. He is also responsible for the day-to-day management and coordination of field staff, for the quality of the field activities and will be experienced in field investigation projects and the Management of Multi-disciplinary projects

3.3 QA/QC OFFICER

The QA/QC Officer will have the overall responsibility for QA/QC review of all analytical data generated during the field investigation; data validation; and qualification of analytical results in terms of data usability. The QA/QC Officer should be experienced in the validation of analytical data and the protocols and QC requirements of the analytical methods listed in the NYSDEC ASP and the data validation guidance, USEPA CLP National Functional Guidelines for Organic Data review (February 1994) and USEPA Region II CLP Data Review SOP. The QA/QC Officer for this project will be Elliot J. Shapiro, P.E., DEE. His resume is included in Attachment 1.

4.0 SAMPLING PROCEDURES

4.1 WELL DRILLING AND DEVELOPMENT

Each installed well must be developed; that is, the well must be purged of drilling fluids and sediment that may have moved through the filter pack and well screen. Otherwise, the presence of these fluids and sediment may restrict the flow of water and product from the aquifer materials into the well.

Well development will be accomplished by cyclic removal of water from the well using a low flow pump. A Well Purging and Sampling Form will be used to record the required information. A copy of the Form is in Attachment 1.

Development of the well continues until there is no sediment in the removed water or until there seems to be no further improvement in water quality. Make note of the well water levels, and the clarity, color, and odor of the development water. The total volume of water and any product removed during development should be recorded. Development water must be handled in compliance with local, state, and federal regulations.

Before sampling a well (Monitoring well or supply well), first measure the water level and product level, if product is present. It is then necessary to purge the well of the standing water in order to obtain a "representative" groundwater sample.

When sampling a well, it is important to:

- a. Select sampling devices constructed of inert materials such as stainless steel, non-flexible PVC, or Teflon;
- b. Place plastic sheeting around the wellhead so that sampling equipment does not come into contact with the soil or drilling fluids;
- c. Measure and record the water level and free product thickness, if product is present, to the nearest 0.1 inch;

d. Use a sampling technique suited for the contaminants of interest (e.g., do not use methods or pump at a rate that would liberate volatiles, if you are sampling for volatiles).

4.2 SAMPLING PROCEDURES

a. Soil Gas Sampling:

- 1 MSA (Mine Safety Appliance) Sampling Pumps (or equal) will be used to purge the soil gas wells and to collect samples. The pumps will be operated at a 100-200 ml/min. pumping rate. Tygon Tubing will be used to connect the sample tube to the pump. The pumps will be calibrated before and after use.
- 2 The wells will be purged before sampling by removing 3 times the volume of air in the 2 foot screened area of the well. This will take approximately 3 minutes at a 100 ml/min. pumping rate.
- 3 After purging, a portable PID Monitor will be used to screen each well. The sample tube will be connected to the pump and sampling will begin. NIOSH Method 1501 (Hydrocarbons, Aromatics) will be used for sampling and analysis. A total of 10 liters of air will be collected. This is equal to 1 hour and 40 minutes of sampling at a 100 ml/min. pumping rate.
- 4 Sampling at the three separate depths at each location will be performed simultaneously. After sampling is completed, the sampling tubes will be capped, and stored on site in a cooler.
- 5 Steps 2 -4 will be repeated at each of the remaining soil gas monitoring wells. Depending on the number of pumps available, two or more locations may be sampled at the same time.
- 6 Appropriate QA/QC Samples will be collected in accordance with NIOSH method 1501. The results of the PID screening will be recorded and sent to the Laboratory with the samples.

b. Groundwater Sampling

- 1 The wells will be purged by pumping approximately 3 volumes of water from the well using a low flow pump.
- 2 Equilibrium will be determined, and purging terminated by testing the pumped water for pH, Dissolved Oxygen and Turbidity using an In-Situ Inc. MP Trill 9000 Multi-Parameter Tester. A Well Purging and Sampling Form will be completed for each well.
- 3 After the well is purged, a groundwater sample will be collected using the low flow pump. Each set of samples from the wells will consist of:

- i One sample from each well.
- i A Trip Blank Sample
- i A Field Blank.
- i Two Duplicate Samples from one of the wells, labeled with the well location to be utilized as a Matrix Spike Sample and as a Matrix Spike Duplicate sample.
- v A Field Blind Duplicate Sample. This will be a Duplicate Sample of one of the well samples. It will be labeled in such a way that the Laboratory will not know which well it was collected from, but the person sampling will.

c. Soil Sampling

- 1 Samples will be collected using either a Hand Auger or Drilling Apparatus.
- 2 Sampling Equipment will be decontaminated between samples.
- 3 QA/AC Samples will be collected as follows:
 - i Field Blank
 - i Trip Blank
 - i A Matrix/Duplicate for each 20 samples.
 - i A Blind Duplicate for each 20 samples.

4.3 SAMPLING CONTAINER

All water samples will be collected in a precleaned glass 40 ml VOC Container. Soil Samples will be collected in 2 oz. Glass jars.

4.4 DECONTAMINATION SUPPLIES

The following items are likely to be needed as decontamination supplies: basin, scrub brush, 6 five gallon buckets, flat bladed scrapers, garden type water sprayers, disposal drums (55 gallon with secure lids), sponges, paper towels, Nalgene squirt bottles, plastic sheeting, trash bags, disposable gloves, non-phosphate detergent, potable tap water, pesticide grade isopropanol, reagent grade nitric acid, and distilled/deionized water. This list is not intended to be an exhaustive list and other supplies may be needed.

4.5 DECONTAMINATION/CLEANING PROCEDURES

All sampling and drilling equipment that may come in direct contact with the sample (i.e. split spoon samplers, sampling spatulas, bowls and spoons), will be decontaminated at the start of work and between sampling increments.

A sufficient field cleaning procedure is outlined below for routine decontamination of such equipment:

- a. Wash the equipment thoroughly with phosphate-free detergent and tap water. Use a brush to remove any particulate matter or surface film.
- b. Rinse the equipment thoroughly with potable water.
- c. Thoroughly rinse equipment with distilled/deionized water and allow to air dry.
- d. Wrap sampling equipment completely with aluminum foil or plastic wrap to prevent contamination during storage and/or transport.

4.6 SAMPLE PRESERVATION

After collection, each sample will be placed in a cooler with ice and cooled to approximately 4°C. (39°F).

4.7 HOLDING TIMES

All samples will be delivered to the contract laboratory at the end of each day or shipped for overnight delivery. The laboratory will perform the required analyses within the required method holding time.

5. SAMPLE DOCUMENTATION, CUSTODY AND TRANSPORT

5.1 FIELD DOCUMENTATION

5.1.1 FIELD NOTEBOOK

A permanently bound field notebook shall be maintained by the field team leader to document all pertinent project activities. The notebook will be bound so that pages cannot be torn out. The following procedures will be followed when entering information into the logbook:

- a. All entries will be made legibly with indelible, dark blue or black ink.
- b. All time will be reported as local military time. (24-hour clock)

- c. All pages in the log will be numbered consecutively, signed and dated.
- d. No blank pages or sections will be allowed. If a page is not completely filled in, a line will be drawn through the blank portion and initialed by the person keeping the log.
- e. Errors will be corrected by drawing a single line through the error and initialing dating the change.
- f. At the end of each day, the logbook will be signed and dated.

The field notebook will contain the following:

- a. Record the start of each day, the date, time and weather.
- b. Note the people present throughout the day.
- c. Record Personal Protective Equipment (PPE) levels and any changes made during the day.
- d. Field instrument measurements and calibration.
- e. Record action taken, project progress and observations.
- f. Documentation of sample collection to include sample identification number (including QA/QC samples), description of the sampling method, sampling matrix, sample location (including depths), time of collection, sampling depth, sample description, and type of analysis requested.
- g. Record of photographs taken.
- h. Any deviation from the sampling plan shall be noted and explained.
- i. Record any unusual incidents, problems and accidents.

The Field Notebook serves as a permanent and traceable record of all field activities related to a project and it will become part of the project files.

5.1.2 DAILY QUALITY CONTROL REPORT

During field investigation activities Daily Quality Control Reports (DQCR) will be completed, dated and signed by the sampling technician at the end of each workday. Copies will be distributed to the Project Manager on a daily basis. These DQCR's shall include, but not be limited to, the minimum information described and listed below:

- a. Weather conditions at the time of sampling.

- b. Level of Personal Protective Equipment.
- c. Samples collected.
- d. Any deviations from the QA/QCP, problems occurring, and corrective actions taken.

If a significant problem occurs during sampling, the DQCR will be provided to the Project Director within 24 hours with a corrective action summary report. The DQCR will be written by the sampling technician and will be crosschecked against the field notebook, for completeness at the end of the each day. For a copy of a Sample DQCR Form see Attachment 1.

5.1.3 PHOTOGRAPHIC DOCUMENTATION

Typical examples of intrusive activities as well as other pertinent activities will be documented with representative photographs. The picture number, roll number (or other identifier for electronic photographs) and a brief description of the view will be logged in the Field Notebook. The developed prints will have the following information put on the back (or on the front for electronic photographs: 1) project name, 2) picture location (soil boring, well or building coring number, 3) geographic direction of view, 4) picture number and 5) roll number (or other identifier for electronic photographs).

If a digital camera is used, a Photograph Log with the same information as for developed prints will be recorded. A copy of the Photographic Log Form is in Attachment 1.

5.1.4 DEPARTURE FROM APPROVED PLANS

Any deviation from the approved work plan shall be reported on the DQCR to the Project Manager within 24 hours of the occurrence. These reports shall be supplied to the Project Director by the Project Manager and include problems identified, corrective actions taken, and verbal/written instructions for sampling or re-analysis.

5.1.5 UNUSUAL INCIDENTS AND ACCIDENTS

Any unusual event or accident involving personal injury shall be reported on the DQCR to the Project Manager within 24 hours of the occurrence. These Reports shall be supplied to the Project Director by the Project Manager and include a description of the incident, name and severity of person(s) injured, status of injured, if known, and corrective actions taken to prevent reoccurrence.

5.1.6 SAMPLE IDENTIFICATION

All field samples, including QA and QC duplicates/splits, trip blanks, and field blanks, shall be identified using a unique sample identification scheme suitable to the project

and sampling protocol. This unique sample number shall be recorded in indelible ink on the sample label and chain of custody form. The QA/QC sample I.D. and labels will be written so that they can be submitted “blind” to the laboratory; that is their labels and I.D. numbers must be indistinguishable from that of any regular sample.

The S&S X-Ray Products Investigation sample numbering will be in the format AA-BB-CC-XXX.

Where: AA = Sample Location
BB = Sample Type
CC = Depth of Sample
XXX = Sample Number

Sample location AA from sampling work plan grid.

Sample location A1 will be used to identify a sample as a quality control sample

Type of Sample BB	SS	=	Surface Soil	TB	=	Field Trip Blank
	SB	=	Soil Boring	FB	=	Field Blank
	SW	=	Surface Water	MS	=	Matrix Spike
	GW	=	Groundwater	MD	=	Matrix Spiked Duplicate
	SG	=	Soil Gas	BD	=	Field Blind Duplicate

Depth of Sample CC or 00 for non-sampled quality control samples.

Sample Number XXX, consecutive numbering of all samples.

5.1.7 SAMPLE LABELS

Field personnel are responsible for uniquely identifying and labeling all samples collected during a field investigation. All labeling will be completed in indelible ink and be securely affixed to the sample container using a self stick label or tape. All sample labels should contain the following information:

- a. Project name
- b. Unique sample identification number
- c. Sample type (grab or composite)
- d. The specific chemical analytes.
- e. Sampling date and time
- f. Name of a person collecting samples.

- g. Method of Sample preservation

5.2 CHAIN OF CUSTODY

5.2.1 CHAIN OF CUSTODY PROCEDURES

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, shipment, and analysis.

An essential consideration for the validation of environmental data is demonstrating that samples have been obtained from the locations stated and that they have reached the laboratory without alteration. Evidence of sample traceability from collection to shipment, to laboratory receipt and custody while in the laboratory, until proper disposal, must be documented. A sample is considered to be in a person's custody if the sample is:

- a. In a person's actual possession
 - b. In view after being in a person's possession
 - c. Locked up so that no one can tamper with it after having been in physical custody.
 - d. In a secured area, restricted to authorized personnel.
- Chain of custody procedures are initiated in the field following sample collection. The procedures consist of:
- a. Preparing and attaching a unique sample label to each sample collected.
 - b. Completing the chain of custody form.
 - c. Preparing and packaging the samples for shipment.

5.2.2 CHAIN OF CUSTODY FORM

Documentation will be accomplished through a Chain of Custody form that records each sample and the individuals responsible for sample collection, transfer, shipment and receipt by the laboratory. This form must also contain pertinent information about sampling location, date, and times, signature of sampling technician, types and numbers of samples collected and shipped for analysis in each lot, parameters to be analyzed per sample, sample identification number and the project name.

Samples shall be accompanied by an approved and completed chain of custody form during each step of custody, transfer, and shipment. When physical possession of samples is transferred, both the individual relinquishing the samples and the individual

receiving them shall sign, date and record the time on the chain of custody form. A sample of the Chain of Custody record is in Attachment 1.

5.3 SAMPLE TRANSPORTATION

5.3.1 PACKING AND TRANSPORTATION

Samples will be placed in individual containers compatible with the intended analysis, properly preserved, and sealed with a Teflon-lined screw cap prior to shipment to the laboratory. Sample labels, field notebook information, and chain of custody forms are to be checked to be sure there are no errors in sample identification and to verify that all the required information has been supplied. The samples are then packaged to prevent breakage and/or leakage.

As soon as the environmental sampler is ready to transport samples from the field to the Contract Laboratory, they shall notify the laboratory by telephone of the shipment along with the estimated time of arrival. In addition, the environmental sampler shall coordinate with a point of contact (POC) at the laboratory, advising them of the number and type of samples/analyses and the estimated time of arrival.

No samples for chemical analysis shall be held on site for more than 24 hours. Samples shall be shipped to the laboratory via overnight delivery or by hand delivery. See Sample Shipping below.

5.3.2 SAMPLE PACKING INSTRUCTIONS

In order to maintain chain of custody protocol and to prevent breakage of the sample containers, package the samples as follows:

- a. After Sample collection, make sure the lids are securely affixed to the properly labeled sample containers, to prevent loosening and possible leakage of contents.
- b. Enclose the bottles in clear plastic ZipLoc-type bags, through which labels are visible, and seal the bag. Place the bottles so that they will remain upright, cushioned and separated in the cooler during the shipment.
- c. Put additional packing material to partially cover sample bottles (more than halfway), to ensure that they do not shift during transport.
- d. Place sealed plastic bags of ice (double bagged in "Ziploc" bags") around and on top of the sample bottles. If chemical ice is used (i.e. blue ice), bag similarly. NOTE: Use enough ice in order to maintain samples at a temperature of 4°C (39.2 °F) during shipment. Fill the cooler the rest of the way with ice or packing material to prevent shifting and breakage of contents.

- e. Seal the appropriate chain of custody form(s) in a ZipLoc-type plastic bag, and tape it securely to the inside lid of the cooler.
- f. Tape the cooler/ice chest drain shut.
- g. Close and secure the cooler. Secure the lid by taping. Wrap the cooler completely with strapping tape at a minimum of two locations. Do not cover any labels.
- h. Attach a completed shipping label to the top of the cooler. While packing each cooler for shipment, remember not to exceed the weight limit set by the shipper if using overnight shipping.

5.3.3 SAMPLE SHIPPING

- a. Samples shall either be shipped overnight express or be hand delivered to the laboratory every day. A copy of the chain of custody form showing proper turnover to the lab will be returned to the Project Director at the completion of the project.
- b. Samples collected on Friday and going to the contract laboratory shall be marked on the shipping label **For Saturday Delivery** and sent by overnight express or hand delivered. The Field Team Leader will alert the laboratory to expect a Saturday delivery.
- c. It is preferred that chemical analytical samples be shipped to the lab within 24 hours. Therefore, the Field Team Leader must obtain specific prior approval from the Project Director for samples collected on Saturday, which will be shipped to the laboratory on Monday. In that case the temperature of 4° C (39.2°F) must be maintained inside the cooler throughout the weekend and until the samples have been turned over to the laboratory.
- e. Shipping Addresses: Soil and/or Groundwater Samples collected will be sent to H2M Laboratories, 575 Broad Hollow Road, Melville, NY 11747 or other ELAP certified lab. Soil Gas Samples will be sent to EcoTest Labs, Inc. 377 Sheffield Ave., North Babylon, NY 11703.

6. LABORATORY QUALITY ASSURANCE

6.1 INCOMING SAMPLES

Upon sample receipt, the laboratory representative responsible for accepting incoming sample shipments must compare the samples received against the list on the chain of custody form. All samples will be examined to verify the condition of the samples upon receipt, and verify that sample holding times have not been exceeded.

Laboratory personnel shall measure the surface temperature of the samples to determine if the proper temperature was maintained during shipment. If any samples

are observed as improperly preserved or damaged during transit, The Project Director and Project Manager shall be notified with 24 hours to decide if resampling will be required:

Project Director: Robert A. Lo Pinto, P.E., Phone: 516 791-2300
Project Manager: Contractor TBD

6.2 INSTRUMENT PREVENTIVE MAINTENANCE, CALIBRATION AND FREQUENCY

The analytical instrumentation to be used for sample analysis shall have preventive maintenance performed and calibrations done at a frequency that is specified and in accordance with the procedures documented in the Laboratory's QA Manual. These shall be consistent with the requirements of the analytical method.

6.3 LABORATORY ANALYTICAL METHODS

Samples for volatiles will be analyzed by EPA Method 8260. Method 8260 is a gas chromatograph/mass spectrometer (GC/MS) method that detects a wide range of volatile organic compounds (VOCs).

6.4 QUALITY CONTROL PROCEDURES

Two types of quality assurance checks will be used to assess the production of analytical data of known and documented quality: program quality assurance and analytical method quality control. The objectives of the lab QA/QC program are to:

- a. Verify that all administrative and/or technical procedures are documented.
- b. Document that all analytical procedures comply with sound scientific principles and have been validated.
- c. Monitor performance of the lab by a systematic inspection program and provide for corrective action as necessary.
- d. Verify that all data are properly recorded and archived.

In each data package provided, the lab will maintain documentation to show that analytical QC functions have been met. Internal quality control procedures for analytical services should comply with the standard operating procedures of the analytical method and QA/QC plan. Any samples analyzed that are not in conformance with the QC criteria will be reanalyzed by the lab if the lab procedures were deficient as assessed by lab control procedures and, if sufficient sample volume is available for reanalysis.

Quality Control check samples (Method Blanks, Matrix Spike/Matrix Spike Duplicate, Duplicates, etc.) will be analyzed concurrently with the sample batch to which they are assigned. Any deviations or modification from the published EPA procedures must be documented and clearly noted in the case narrative.

6.5 INTERNAL QUALITY CONTROL CHECKS

Quality control checks are necessary to evaluate performance reliability for each measured parameter. The lab will perform internal quality control checks on the Method and Instrument Blanks, Surrogate Spike Samples, Matrix Spike Samples, Laboratory Duplicates and/or Matrix Spike Duplicates and Laboratory Control Samples in order to assess the precision, accuracy, and completeness of each measurement. At a minimum, these shall be run at rates specified within the individual methods.

6.6 CORRECTIVE ACTION

The laboratory department supervisors will review the data generated to verify that all quality control samples have been run as specified in the protocol. Recoveries of Matrix Spike Samples shall be checked for consistency with method accuracy and Matrix Spike Duplicate Samples, for method precision, and will be evaluated using the data quality goals discussed in the Quality Assurance Objective Section. Analytical data generated with laboratory control samples, which fall with the established control limits are judged to be in control. Data generated with laboratory control samples that do not fall within the control limits are considered suspect and the analysis is to be repeated or the results reported with qualifiers if this is not possible.

Corrective actions are necessary if:

- a. QC data are outside the warning or acceptable windows for precision and accuracy established for lab control samples.
- b. Blanks contain contaminants at concentrations above the level specified in the QC plan for the target compound.
- c. There are unusual changes in detection limits.
- d. Undesirable trends are detected in matrix spike recoveries or relative percent difference (RPD) between matrix spike duplicates.

If any nonconformance in analytical methodologies, quality control sample results, etc., are found by the analyst, corrective actions will be taken immediately. Corrective actions may include, but will not be limited to:

- a. Reanalyzing suspect samples;
- b. Reevaluating and amending sampling and/or analytical procedures;

- c. Accepting data with an acknowledged level of uncertainty;
- d. Recalibrating analytical instruments, and/or
- e. Discarding the data.

Additional samples will be collected for laboratory analysis if the 90% completeness of PARCC parameters is not met.

Performance and systems audits may be conducted to verify the documentation or implementation of the QA program, assess the effectiveness of the project QA/QCP, identify any nonconformance, and verify the correction of identified deficiencies. The Project Manager will be responsible for initiating audits, selecting the audit team, and overseeing audit implementation.

6.7 DATA REDUCTION, EVALUATION AND DOCUMENTATION

Data evaluation shall be performed in accordance with the procedures of the approved laboratory's QA manual and shall adhere to the protocols described in Test Methods for Evaluating Solid Waste: "Physical/Chemical Methods, SW-846, Third Edition", U.S. EPA, including UPDATE III, September 1994 and EPA 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes, March 1983".

Data evaluation serves three main purposes:

- a. It qualifies data for further use to ensure data are not inappropriately used;
- b. It serves as a check on the laboratory to ensure they are meeting contractual deliverables and regulatory requirements;
- c. It establishes due diligence and allows errors to be addressed sooner, so that the impact will be less than if the errors were detected later.

The laboratory will present all the data in the data quality package, along with QC supporting data. The laboratory will send a copy of this data quality package to SEPC. The details of this package are delineated in the Section "Analytical results".

7. CHEMICAL DATA DELIVERABLES

During the project, the chemical data deliverables to be submitted are listed in the Section "Laboratory Analytical Data Report Package" (Section 7.2).

7.1 ANALYTICAL RESULTS

Chemical analysis results will be compiled and submitted to SEPC. Analytical results with laboratory quality control/internal check data will be delivered within 21 days of receipt of samples.

7.2 LABORATORY ANALYTICAL DATA REPORT PACKAGE

This deliverable shall contain at a minimum all of the items listed below to allow the Project Director to perform an adequate data evaluation. (Data shall be presented in tabular format whenever possible):

- a. Sample Identification - Prepare a tabular presentation which matches the contract laboratory sample identifications to the field identification numbers assigned to each sample. This list shall identify all field splits/duplicates.
- b. Chain of Custody Record Forms - Provide copies from all sample shipments received by the contract laboratory.
- c. General Organic Reports - For each analytical method run, report results of all analyses for each sample (concentration detected or less than the specific quantitation limit). On the sample's data sheets, clearly identify the specific analytical batch the sample belongs to and the corresponding QC data reported. Report any dilution factors, as well as date of extraction (if applicable) and date of analysis for each sample.
- d. Internal Quality Control (QC Reports) - For each analytical batch, report a complete set of QC results. At a minimum, Internal QC samples shall be analyzed at rates specified in the applicable method. The following Internal QC results shall be submitted:
 - (1) Laboratory Blanks (Method and Instrument Blanks) - Report all analytes for each laboratory blank analyzed per sample batch.
 - (2) Surrogate Spike Samples - Report recoveries with all organic method reports, where applicable (i.e. when the method requires surrogate spikes). Also specify the control limits for surrogate spike results, and the concentration used for the spike.
 - (3) Matrix Spike Samples - Report recoveries for all organic analyses. Also specify the control limits for matrix spike results, for each method, and each matrix. General sample results shall be designated as corresponding to a particular matrix spike sample.
 - (4) Laboratory Duplicates and/or Matrix Spike Duplicate Pairs - Report the Relative Percent Difference (RPD) for each duplicate pair and the analyte/matrix specific control limits.

(5) Laboratory Control Samples - When run for a method's internal QC, report the results of the laboratory control sample (LCS) with the corresponding project sample data. Also specify the control limits for the LCSs.

(6) Field Duplicates and Field Blanks - Report the Relative Percent Difference for all field duplicate pairs.

7.3 LABORATORY QUALITY CONTROL SUMMARY REPORT

This report shall address QC practices employed throughout the project. Include a discussion of all data points, which may have been influenced or compromised and their impact on the Data Quality Objectives.

7.4 CHEMICAL QUALITY ASSURANCE REPORT

The laboratory will generate a Chemical Quality Assurance Report (CQAR). This will compare QA versus primary and QC sample results, and thus assess the quality and validity of the data along with the contract laboratory's internal quality control measures.

7.5 FINAL INVESTIGATION REPORT

The final investigation report will be developed to compile the results of S&S X-Ray Products investigation, laboratory analyses, and associated background research. This will include a summary of findings, a tabulation of chemical analysis performed, an assessment of the environmental conditions at the site, a risk assessment and recommendations for any further action.

8. DATA USABILITY SUMMARY REPORT

8.1 BACKGROUND

The Data Usability Summary Report (DUSR) provides a thorough evaluation of analytical data in an efficient, cost effective manner. The primary objective of a DUSR is to determine whether or not the data, as presented, meets the site/project specific criteria for data quality and data use. The development of the DUSR will be carried out by the project QA/QC Officer, who is fully capable of conducting a full data validation. The DUSR is developed from the New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category B Laboratory Report Package.

8.2 REVIEW

If the DUSR and the data deliverables package indicate significant problems with some or all of the data in the package, the data should be either rejected or evaluated to determine if it can be used. This decision will be based upon several factors and should be made with advice from the QA/QC Officer, the Project Manager and the Project Director. In some cases, the data may be usable for screening purposes only.

8.3 PREPARATION OF A DUSR

The DUSR is developed by reviewing and evaluating the analytical data package. During the course of this review the following questions must be asked and answered:

- a. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?
- b. Have all holding times been met?
- c. Do all the QC data (i.e., blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data) fall within the protocol required limits and specifications?
- d. Have all of the data been generated using established and agreed upon analytical protocols?
- e. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?
- f. Have the correct data qualifiers been used?

Once the data package has been reviewed and the questions enumerated above have been answered, the DUSR proceeds to describe the samples and the analytical parameters. Data deficiencies, analytical protocol deviations, and quality control problems are identified and their effect on the data is discussed. The DUSR shall also include recommendations on resampling and/or reanalysis. All data qualifications must be documented following the latest NYSDEC ASP Guidance.

ATTACHMENT 1
TO
APPENDIX "C"

RESUME - QA/QC OFFICER, ELLIOT J. SHAPIRO, P.E., DEE

DAILY QUALITY CONTROL REPORT FORM

WELL PURGING AND SAMPLING FORM

PHOTOGRAPHIC LOG FORM

CHAIN OF CUSTODY FORM

RESUME

NAME: ELLIOT J. SHAPIRO, P.E., DEE

DATE OF BIRTH: December 16, 1929

EMPLOYMENT: Chief Executive Officer, Laboratory Director
Shapiro Engineering, P.C.
181 S. Franklin Avenue - Suite 305
Valley stream, N.Y. 11581

EDUCATION & LICENSURE: U.S. Merchant Marine Academy, Kings Point, B.S. 1951
U.S. Merchant Marine Officer, Third Assistant Engineer
Steam & Diesel, Any Horsepower
Licensed Professional Engineer
New York #38645
New Jersey #17251
California #16566
Diplomat: American Academy of Environmental Engineers
Industrial Hygiene Engineer
Air Pollution Control Engineer

OCCUPATION: MECHANICAL ENGINEER
Practicing in the fields of Mechanical, Environmental and
Industrial Hygiene Engineering

EMPLOYMENT:

1/51-12/52	United States Lines, Junior Third Assistant Engineer, S.S. America: Watch Engineer (Boiler Room), Watch Electrical Engineer.
1/53-6/53	U.S. NAVY, Brooklyn Navy Yard, Design Division, Scientific & Test Section Test Engineer, writing test procedures for Hydraulic Elevators and Hydraulic Catapults on Air Craft Carriers. Write test procedures for Boiler Feed Water Controller. Design steam powered detergent heater for use in cleaning trace quantities of oil from liquid oxygen lines.
7/53-7/54	U.S. Navy, Active Duty U.S.S. Bowers APD-40: Damage Control Officer, Nuclear, Biological & Chemical Defense Officer.
8/54-7/55	Chief Engineer

9/55 to Present

Private Practice, Charles M. Shapiro, P.E. and Successors
Charles M. Shapiro and Sons, P.C. and Shapiro Engineering, P.C

Design of Industrial Buildings, Sprinkler Systems, Heating and Air Conditioning Systems, Industrial Exhaust Systems, Air Pollution Control Systems, Afterburners, Wastewater Treatment Systems. Conduct Implant Air Tests and Studies to determine worker exposure to Chemicals. Conduct Ambient Air Tests and Studies to determine levels of Air Pollution. Test and measure soil for hazardous waste constituents and determine remedial procedures.

Forensic Engineering relating to Building Contamination Remediation and Wastewater Treatment. Evaluation of Analytical Procedures.

Established the Environmental Services Laboratory and at the inception of the Program secured New York State Department of Health Environmental Laboratory Approval Program Certification for Metals and Organics in Drinking Water, Wastewater, Air Emissions and Solid Wastes, Laboratory Director.

**PROFESSIONAL AND
TECHNICAL SOCIETIES:**

Member American Institute of Plant-Engineers 1966
Member American Institute of Chemical Engineers 1980
Member American Chemical Society 1988
Member Air Pollution Control Association
President New York State Society of Professional Engineers (1993-1994)
Director National Society of Professional Engineers
Trustee, New York State Society of Professional Engineers (1995-Present)
Member, N.Y.C. Buildings Commissioner's Advisory Cabinet (1994-1996)
Member N.Y.C. Environmental Protection Commissioner's Advisory Cabinet (1996-Present)
President, N.Y.S.S.P.E. (1993-1994)
Director, NSPE (1993-1995)
Member NSPE Legislative & Government Affairs Committee (1996-Present)
Chairman, Board of Directors of the Professional Design Center of New York (1998)
Director, Professional Design Center of N.Y. (1997 to Date)
Chairman, Mechanical Equipment Sub-Committee, N.Y.C. Dept. of Buildings World Trade Center Task Force (2002-2003)

1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

C-30

01-44

1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

Well Purging and Sampling Form

Client: Property at 1101 Linwood St., Brooklyn, NY 11208 Contact Person: Robert A. LoPinto, P.E., SEPC

Project Location: 1101 Linwood Street, Brooklyn, NY 11208 Job #: 01-44

Date: _____ Time: _____

Weather Conditions: _____

Well Information

Well #: _____

Well Location (in reference to permanent structures or features): _____

Well Coordinates (in reference to permanent structures or features): _____

Diameter of Well Flush Mount: _____

Diameter of Casing: _____

Before Purging

Total Depth of Well From Top of Casing or Surveyor's Mark (ft., in.): _____

Height of Casing: _____

Estimated Volume of Groundwater in Casing ($V = \pi * r^2 * h$):
= $3.14 * 2\text{ft} * (1\text{in})^2 = 1.236 \text{ Liters} = 1,236 \text{ cc}$

Purging

Start Purge Time (24 hr. Clock): _____

End Purge Time (24 hr. Clock): _____

Purge Method (bladder pump, bailer, etc.): _____

Purge Rate (cc/min.): _____

Purge Range (Estimated Volume of Soil Gas in the Casing multiplied by 3) (cc.): 3,707 cc

Total Volume Purged (cc): _____

Sampling

Soil Gas Sample #: _____

Sampling Method: _____

Start Sample Time (24 hr. Clock): _____ End Sample Time (24 hr. Clock): _____

Soil Gas Collected (cc): _____

Signature _____ Name _____

1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

Photographic Log

C-33

APPENDIX "D"

REGENOX OXIDIZER AND ACTIVATOR

COMPLEXES INJECTION

APPENDIX “D”**REGENOX OXIDIZER AND ACTIVATOR
COMPLEXES INJECTION****I General**

This Appendix describes the procedures to be followed to inject RegenOx Oxidizer and Activator Complexes (OAC) into the borings, which will be placed in the area of the original excavation. In addition to this procedure, all Health and Safety Control procedures presented in Appendix “B” of ARAWP, “Health and Safety Plan” will be followed.

II Product

RegenOx is an advanced in-situ chemical oxidation technology designed by Regenesis to treat organic contaminants (petroleum, chlorinated or mixed plumes) including high concentration source areas in the saturated and vadose zones.

Product Features:

- Rapid and sustained oxidation of target compounds
- Easily applied with readily available equipment
- Destroys a broad range of contaminants
- More efficient than other solid oxidants
- Enhances subsequent bioremediation
- Avoids detrimental impacts to groundwater aquifers

RegenOx maximizes in situ performance using a solid alkaline oxidant that employs a sodium percarbonate complex with a multi-part catalytic formula. Once in the subsurface, the product produces an effective surface-mediated oxidation reaction comparable to that of Fenton’s Reagent without a violent exothermic reaction. RegenOx safely, effectively and rapidly destroys a wide range of contaminants in both soil and groundwater.

RegenOx consists of two combined parts - Oxidizer and Activator. The product provides a unique catalytic surface (Activator Complex) for both the contaminant and the RegenOx Oxidizer Complex to interface. Once the contaminant, Oxidizer Complex and Activator Complex come together, oxidation reactions take place more frequently due to the increased surface area provided by the RegenOx catalytic surface. Reactions can still take place without the catalytic surface via direct oxidation. However, surface-mediated oxidation is more efficient.

The advantages of Surface-Mediated Reactions include:

1. Increased efficiency - Brings oxidant and contaminant together isolates oxidative reactive from soil matrix effects.
2. Adjustable reaction rates - Can be accomplished by varying oxidizer to activator ratios.
3. Positional longevity - Activator's mobility in the subsurface can be adjusted by injection design.

OAC will be injected into the subsurface using common drilling or direct-push equipment.

III Equipment

The contractor will ensure that all equipment required for the specific task, and all Health and Safety Equipment will be on site each workday. Properly sized equipment will be used for the required tasks.

IV Procedures

1. Contractor will obtain Permits from N.Y.C. Department of Transportation to perform drilling on the sidewalk and to restore sidewalk before the work began.
2. Prior to drilling, the existing concrete slab will be cored. Coring will be accomplished by use of a Core Bore M-1 Drilling Machine.
3. After coring is completed, three soil borings will be placed in the area of the earlier excavations through the sidewalk outside the building. Two of them will be located in the area of the larger excavation. One boring will be placed in the area of the smaller excavation (see dwg. Sampling / Injection Location Plan at the end of this Appendix).
4. One soil sample will be collected from each boring just below the bottom of the original excavation, which is below the demarcation line of plastic sheeting. Each of the three soil samples will be sent to a NYS DOH approved laboratory for individual BTEX compound analysis, using the EPA Method 8260B. The sample results will be kept for NYS DEC records and will not result in any additional excavation.
5. The three soil borings will be extended to 26 feet below grade and 26-foot long 1-inch diameter drive rods will be inserted into each boring, to ensure adequate conditions for RegenOx Complexes injection. The drive rod assembly with an expendable tip will be pushed to the desired maximum depth. The number of drive rods needed to reach depth will be pre-counted prior to starting injection activities. After the drive rods have been pushed to the desired depth, the rod assembly will be withdrawn three to six inches, so that the expendable tip can be dropped from the drive rods, following SOP. If an injection tool is used instead of an expendable tip,

the application of material will take place without any preliminary withdrawal of the rods.

To prevent the injection of air into the aquifer during RegenOx application, as well as to prevent problems associated with heaving sands, the drive rods should be filled with water, or the RegenOx mixture prior to dropping the expendable tip or exposing the injection tool (see OAC Injection Boring dwg. in the end of this section).

6. RegenOx Oxidizer and Activator Complexes (OAC) will then be injected into each of the borings. The total amount of RegenOx, estimated to be 3,960 lbs. (including 1,980 lbs. of Oxidizer and 1,980 lbs. of Activator), which is considered to be optimal for S&S X-Ray site conditions and one-time ORC application required by NYS DEC (see attached). This total amount will be divided into several portions as necessary to be completely injected with a time interval of approximately two hours or more, depending on the soil permeability and weather conditions at the time of OAC injection.

Regenesis will supply RegenOx in two separate parts: Part A - Oxidizer complex, which is a fine white powder, and Part B - Activator complex that comes as a liquid gel. Based on Regenesis calculations, Oxidizer will be mixed with water to create a 10.61% solution and will be kept stirred up to the moment when it is injected into the boring to prevent an excess reaction and flocculation. Before the injection, the Activator complex will be added to the 10.61% solution of the Oxidizer with water in the amount equal to the amount of the Oxidizer and will be mixed for at least 5 minutes until a homogenous mixture is formed. Then, RegenOx will be pumped into the borings, while the mixing process continues in the drums for the next portion of OAC.

7. The contents of the mixing tank will be transferred to the pump hopper using a gravity drain or a sump pump. The volume of the product displaced per pump stroke will be determined in advance. The delivery hose will be connected to the pump outlet and the delivery sub-assembly. RegenOx will be circulated through the hose and the delivery sub-assembly to displace air in the hose. The sub-assembly will be connected to the drive rod; and after confirming that all of the connections are secure, the RegenOx will be pumped through the delivery system to displace the water/fluid in the rods.
8. The drive rods will be slowly withdrawn. Commonly, RegenOx injections progress at 1-foot intervals. However, continuous injection while slowly withdrawing single lengths of drive rod (3 or 4 feet) is an acceptable option. The pre-determined volume of RegenOx should be pumped into the aquifer across the desired treatment interval.
9. One section of the drive rod should be removed because the drive rod may contain some residual RegenOx. The RegenOx-filled rod will be placed in a clean,

empty bucket to allow the RegenOx to drain. Eventually, the RegenOx should be returned to the RegenOx pump hopper for reuse.

10. Any indications of aquifer refusal should be observed. This is typically indicated by a high-pitched squeal in the pump's hydraulic system or (in the case of shallow applications) RegenOx "surfacing" around the injection rods or previously installed injection points. If backpressure caused by gassing will impede pump movement, it will be corrected by bleeding the pressure off using a pressure relief/bypass valve (placed in line between the pump discharge and the delivery sub-assembly). If aquifer acceptance is low, enough time will be allowed for the aquifer to equilibrate prior to removing the drive rod.

11. The procedure will be repeated until it extends to the top of the capillary fringe/smeared zone, or to the top of the targeted treatment interval and treatment of the entire contaminated vertical zone is achieved.

The procedure will be repeated for each of the three borings, in rotation, until all the RegenOx is inserted into the groundwater zone.

12. An appropriate seal, such as bentonite, will be installed above the RegenOx material through the entire vadose zone. A proper borehole and surface seal assures that the RegenOx remains properly placed and prevents contaminant migration from the surface. Each borehole should be sealed immediately following RegenOx application to minimize RegenOx surfacing during the injection process. If RegenOx continues to "surface" up the direct push boring, an appropriately sized (oversized) disposable drive tip or wood plug/stake can be used to plug the hole until the aquifer equilibrates and the RegenOx stops surfacing. All nearby borings should be tightly capped to reduce potential for surfacing through them.

13. The drive rods will be removed and cleaned as necessary.

14. The boring will be finished at the surface as appropriate with a concrete cap. A quick set concrete is recommended to provide a good surface seal with minimal set up time. Prior to emplacing the boring seal, clean sand will be placed in the boring to the top of the RegenOx treatment zone. Bentonite chips or granular bentonite should be placed immediately above the treatment zone, followed by a cement/bentonite grout to roughly 0.5 feet below ground surface. Quick-set concrete should then be used as a surface seal.

15. The pre- and post-injection volumes of RegenOx in the pump hopper should be periodically compared using pre-marked volume levels. Volume level indicators are not on all pump hoppers. In this case, volume level markings can be temporarily added using known amounts of water and a carpenter's grease pencil (Kiel crayon) to mark the water levels in gallon increments.

16. Reflecting barriers will be provided to prevent pedestrians from entering a work zone. At the end of each day, the borings will be closed and secured with drive tips or wood plugs/stakes.
17. After the OAC injection operation is finished, the borings will be closed and sealed.
18. Restoration of the sidewalk will be performed by the Contractor after all additional Remedial Action procedures are completed and the scope of the Additional Remedial Action Work Plan will be considered accomplished.

V Cleaning Objective

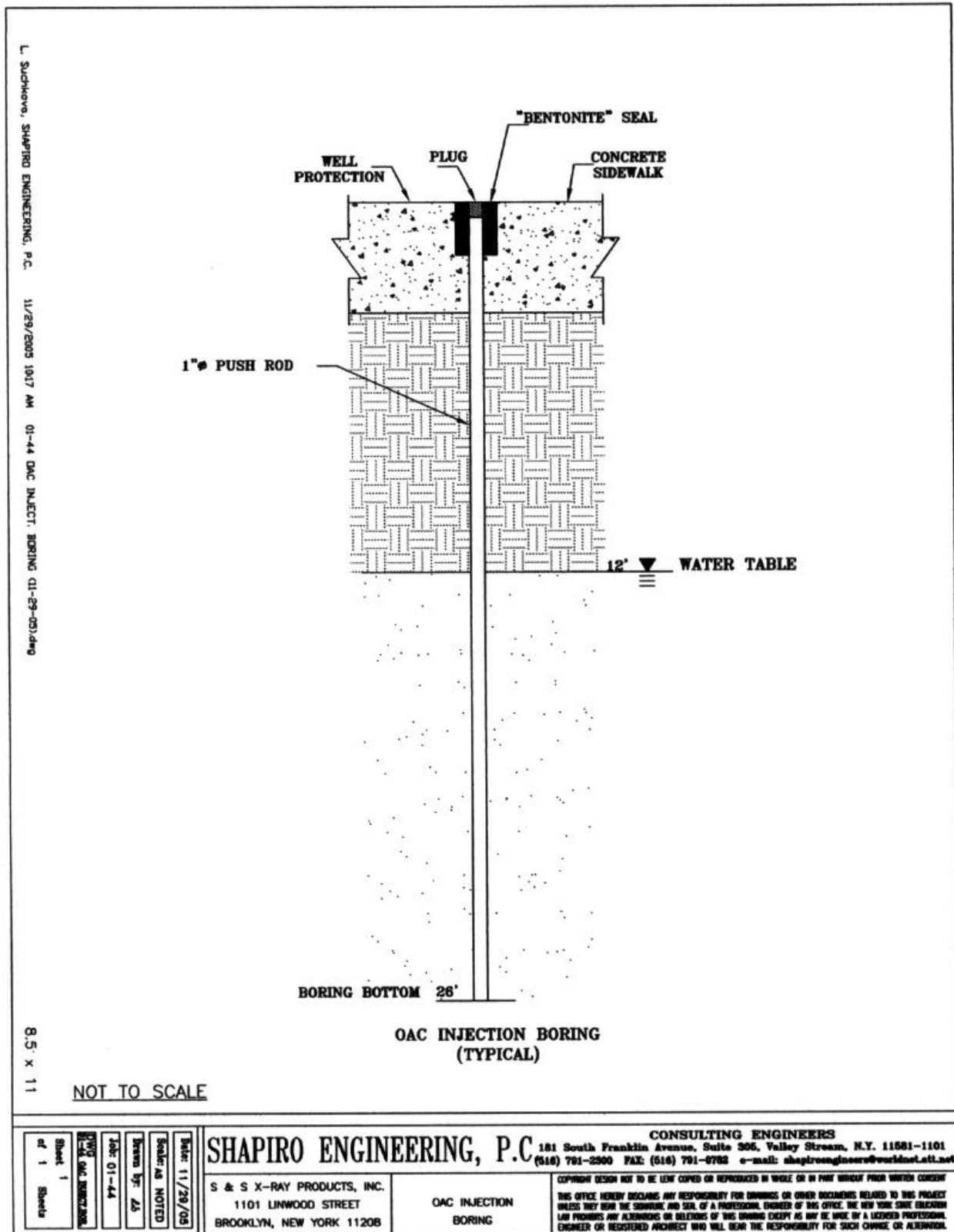
During the operation, VOC levels will be periodically monitored with a Photo Ionization Detector (PID) at the downwind perimeter of the Exclusion Zone daily at 15-minute intervals. If total organic vapor levels exceed 5 ppm above background levels, minimally intrusive work activities (such as collection of Groundwater Samples from the Monitoring Wells) will be halted and monitoring continued under the provisions of a VOC Emission Response Plan (see Appendix "B").

According to the evaluation method presented in 6NYCRR375-1.10(c) and applied below, the desirable groundwater cleanup values are as follows:

Benzene	0.06 ppm
Toluene	1.5 ppm
Ethylbenzene	5.5 ppm
Xylene	1.2 ppm

VI Drawings:

Attached is a Shapiro Engineering, P.C. 01-44 OAC Injection Boring dwg.



RegenOx Design Software for Grid Applications
Regenesis Technical Support: USA (949) 366-8000
www.regenoxusa.com

September 2009

Site Name: S45 X-Ray
Location: Brooklyn, NY - Project No. 18000198
Consultant: Maria Koncinski w/ Regen Engineering

Number of RegenOx application (first, second, third, fourth, ...): **1st**

Is NAPL present? (yes or no): **no**

Estimated Plume Requiring Treatment

Width of plume (intersecting ge flow direction): **30** ft

Length of plume (parallel to ge flow direction): **27** ft

Depth to contaminated zone: **10** ft

Thickness of contaminated saturated zone: **10** ft

Nominal aquifer soil (gravel, sand, silty sand, silt, clay): **silty sand**

Total porosity: **0.4**

Hydraulic conductivity: **10** ft/day

Hydraulic gradient: **0.008** ft/ft

Seepage velocity: **31.3** ft/day

Treatment Zone Pore Volume: **1,530** ft³

Effective porosity: **0.3**

Stoichiometry (wt/wt): **5.96-05** wt/wt

RegenOx Oxidant: **14,480** gallons

Dissolved Phase Oxygen Demand:

Contaminant Conc. (mg/L)	Contaminant Mass (lb)	Stoichiometry (wt/wt) Oxidant/contaminant	RegenOx Oxidant Dose (lb)
Benzene	22.50	2.7	71
Toluene	22.50	2.7	72
Ethylbenzene	22.50	2.7	73
Xylenes	22.50	2.7	73
Tetrachloroethene (PCE)	0.00	0.0	0
Trichloroethene (TCE)	0.00	0.0	0
cis-1,2-dichloroethene (DCE)	0.00	0.0	0
Vinyl Chloride (VC)	0.00	0.0	0
User added, add stoich. demand and Koc (see pull-down)	0.00	0.0	0
User added, add stoich. demand and Koc (see pull-down)	0.00	0.0	0

1,2,4-Trinitrobenzene = pull-down menu

Measures of total oxygen demand

Estimated total oxidant demand: **1.60** lbs oxid/1000 lbs soil

Known total oxidant demand (from bench test): **0.00** lbs oxid/1000 lbs soil

Parameters for Sorbed Phase Oxygen Demand:

Soil bulk density: **1.76** g/cm³

Fraction of organic carbon (foc): **0.002** range: 0.0001 to 0.01

(Estimated using sorbed phase = f_{oc}*K_{oc}*C_{org})

(Adjust K_{oc} as necessary to provide realistic estimates)

Individual species that represent oxygen demand:

Contaminant Conc. (mg/kg)	Contaminant Mass (lb)	Stoichiometry (wt/wt) Oxidant/contaminant	RegenOx Oxidant Dose (lb)
Benzene	121	2.9	77
Toluene	267	6.4	168
Ethylbenzene	227	7.8	211
Xylenes	238	7.1	192
Tetrachloroethene (PCE)	271	0.0	0
Trichloroethene (TCE)	122	0.0	0
cis-1,2-dichloroethene (DCE)	40	0.0	0
Vinyl Chloride (VC)	2.5	0.0	0
User added, add stoich. demand and Koc (see pull-down)	0	0.0	0
User added, add stoich. demand and Koc (see pull-down)	0	0.0	0

Summary of Estimated RegenOx Requirements

Dissolved Phase Oxidant Demand (lbs)	Sorbed Phase Oxidant Demand (lbs)	Additional RegenOx Safety Factor	Total RegenOx Oxidant Demand (lbs)	RegenOx Oxidant Cost
289	648	2.5	1,876	\$5,715
			801	\$1,685
			0	\$0
			1981	\$3,880

Percentage of TOD accounted for: **100%**

Required RegenOx oxidant quantity (in 30 lb increments): **1,980** lbs RegenOx oxidant

Delivery Design for RegenOx

Spacing within rows (ft): **7.0**

points per row: **4**

Spacing between rows (ft): **7.0**

of rows: **4**

Adhesive travel time bet. rows (days): **28**

Number of points in grid: **16**

Oxidant application rate: **12.4** lbs/ft²

Total RegenOx oxidant required: **1,980** lbs

Total RegenOx activator required: **1,980** lbs

Mixing Volume for Injections

Volume of pore space: **1028** ft³

Percent of pore space occupied by RegenOx solution: **7.0%**

Amount of RegenOx activator required for injection: **1,385** lbs

Amount of water required for injection: **2,000** gallons

Percent oxidant in solution: **16.61%**

Volume of water required per foot of injection: **12.5** gallons

Amount of oxidant required per foot of injection: **12.4** lbs

Amount of activator required per foot of injection: **12.4** lbs

Total volume of solution injected per foot of injection: **15.0** gallons

Radius of influence (based on injection point spacing): **3.4** feet

Estimated efficiency factor: **0.93**

grams of oxidant per kg of soil oxidant concentration: **3.72** g/kg

Project Summary

Number of RegenOx delivery points (adjust as necessary for site): **16**

RegenOx oxidant application rate in lbs/ft² (adjust as necessary for site): **12.4**

RegenOx oxidant material requirement (lbs): **1,980**

Number of 30 lb RegenOx oxidant buckets: **66.0**

RegenOx activator application rate in lbs/ft² (adjust as necessary for site): **12.4**

RegenOx activator material requirement (lbs): **1,980**

Number of 30 lb RegenOx activator buckets: **66.0**

Bulk RegenOx material requirement for single injection: **3,960** lbs

Unit cost of RegenOx (per pound): **1.45**

Total RegenOx material cost for single injection: **7,841**

Shipping and Tax Estimates

Notes: Tax: **5.00%**

Total Material Cost: **7,841**

Shipping cost (per amount): **0**

Total Regeneration Material Cost: **7,841**

RegenOx Injection Cost Estimates (responsibility of customer to contract work)

Privilege for each point = uncontaminated interval = RegenOx injection interval (ft): **28**

Total length for direct push for project (ft): **352**

Estimated daily installation rate (ft per day): **200** for push, **100** for drilling

Estimated points per day (7 to 20 is typical for direct push): **9.1**

Required number of days: **2**

Estimated cost for injection subcontractor: **0**

Daily rate for injection subcontractor: **0**

Total injection subcontractor cost for application: **0**

Total install cost (not including consultant fee, etc.): **7,841**

Other Project Cost Estimates

Design	0
Permitting and reporting	0
Construction management	0
Groundwater monitoring and ops	0
Other	0
Other	0
Other	0
Total Project Cost	7,841

APPENDIX “E”

OPERATION, MONITORING & MAINTENANCE PLAN

1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

OPERATION, MONITORING &
MAINTENANCE PLAN
FOR USE AFTER
VOLUNTARY CLEANUP
OF
THE PROPERTY AT
1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208
SITE # V00582

**SHAPIRO ENGINEERING, P.C.
CONSULTING ENGINEERS
181 SOUTH FRANKLIN AVENUE, SUITE 305
VALLEY STREAM, NEW YORK 11581
516 791-2300
FAX: 516 791-0782
E-MAIL: shapiroengineers@worldnet.att.net**

**ROBERT A. LO PINTO, P.E.
NEW YORK PE # 53312**

REVISED MAY 10, 2007

OPERATION, MONITORING & MAINTENANCE PLAN

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OPERATION, MONITORING & MAINTENANCE PLAN:

The purpose of this OM&M Manual is to establish operating procedures for use after the remediation of the property, located at 1101 Linwood Street, Brooklyn, New York. The OM&M is the last phase of remediation, and continues until the remedial action objectives for the project are met and the site is closed out. The operating procedures outlined below address institutional and engineering controls for the site, monitoring and reporting of the performance and effectiveness of the remedy by sampling and analysis of appropriate media, and periodic inspections and evaluations of the site information to confirm that the remedy continues to be effective for the protection of public health and the environment.

1 GROUNDWATER MONITORING SYSTEM:

The monitoring wells will be checked monthly to make sure that the cover caps are in place, locked, and are not rusted. All visual inspections of the monitoring well cover caps will be documented and kept in the bound logbook in the site manager office to be available upon request. Annually, the three monitoring wells will be tested for BTEX, and the results will be presented in the annual report.

2 SUB-SLAB DEPRESSURIZATION SYSTEM:

The low pressure / high flow sub-slab system was installed at approximately four feet below grade to capture VOC vapor emissions from groundwater & soil to prevent their migration into the building. The captured contaminants are directed from the extraction point through the exhaust duct system and a rooftop exhaust fan. Placement of the fan in this manner ensures that a pressurized discharge point is not present within occupied spaces because it is located above the roofline. It also minimizes a potential of nuisance due to noise and dust emissions for the inhabitants of the area. The fan will operate continuously to depressurize exhaust from under the slab. See Shapiro Engineering, P.C. 01-44 As Built Soil Excavation Plan and As Built Sub-Slab Depressurization Exhaust System Details Drawings in the end of this Plan.

The system was designed to operate around-the-clock with minimal operational oversight and maintenance. It will be operated in a manner that would expedite VOCs reductions while operating within safe limits of voltage and temperature. The building owner has enclosed the duct for protection and installed permanent electrical connection. Access to the emergency control electrical switch is restricted. The system can be shut down with a key to an "on/off" emergency control electrical switch that is kept by the building manager at the front desk.

An in-line Dwyer Mark II molded plastic pressure manometer is located near the "on / off" switch of the SSD system to monitor pressure levels. It has a clearly marked line showing minimum acceptable pressure level.

The building personnel will inspect the SSD system's in-line Dwyer pressure manometer weekly; and the readings will be documented in the bound logbook in the site manager office, so that the records can be included into yearly reports.

The exhaust fan will be inspected annually. The facility operators will record any events, and contact a competent specialist as necessary. See technical documentation and extended warranty materials in the end of this section.

3 PREVENTIVE MAINTENANCE:

One of the SSD system maintenance concerns is a pressure field extension (PFE) test, which confirms that the SSD system maintains an adequate negative pressure under the slab.

If during weekly inspections the in-line manometer readings indicate insufficient SSD system pressure, it must be reported to the site manager and documented in the bound logbook in the site manager office. The on-site personnel must perform an initial visual inspection of the system components as follows:

- Check for visible duct breaching or sealant damage
- Check if the pressure gauge is not damaged
- Check if the rooftop fan is not damaged or broken

The components, which must be checked for sealant tightness are floor/wall cracks and other expansion joints as well as areas around all piping systems that penetrate the slab or foundation walls below grade (utility trenches, electrical conduits, plumbing penetrations, and etc.). If the inspection disclosed missing or damaged sealant, it will be repaired by the on-site personnel.

If the visual inspection of these components indicates that competent assistance is needed, the site manager will contact the engineer or the contractor for repair or replacement of the damaged or malfunctioning system components.

In normal operating conditions, when the in-line pressure manometer readings indicate sufficient pressure differentials, annual inspection of the rooftop fan will be performed. The fan will be inspected for bearing failure or signs of other abnormal operations and will be repaired or replaced based on the three-year extended warranty policy, which will take effect when the supplier's one-year warranty ends (attached at the end of this Plan).

The discharge location of the vent pipe will be inspected to ensure that no air intake has been located nearby, and that the building usage has not change and has not placed the exhaust near operable windows.

The HVAC system will be inspected to ensure that it is operating as designed, so that excessively powered exhaust without adequate makeup air would not overcome the SSD system. The HVAC system must produce a slightly positive air pressure inside all areas of the building. The building will be checked for floor cracks.

Preventive maintenance for the rooftop fan should be provided as specified by the manufacturer. See technical documentation and extended warranty materials in the end of this Plan.

4 INSPECTIONS AND MAINTENANCE:

The SSD system in-line pressure manometer readings should be taken weekly and documented in the bound logbook in the site manager office, so that the records can be included into yearly reports.

Monthly visual inspections of the monitoring well cover caps should be documented and available upon request at the site manager office.

The rooftop fan will be inspected annually or more often if necessary, based on the in-line manometer readings.

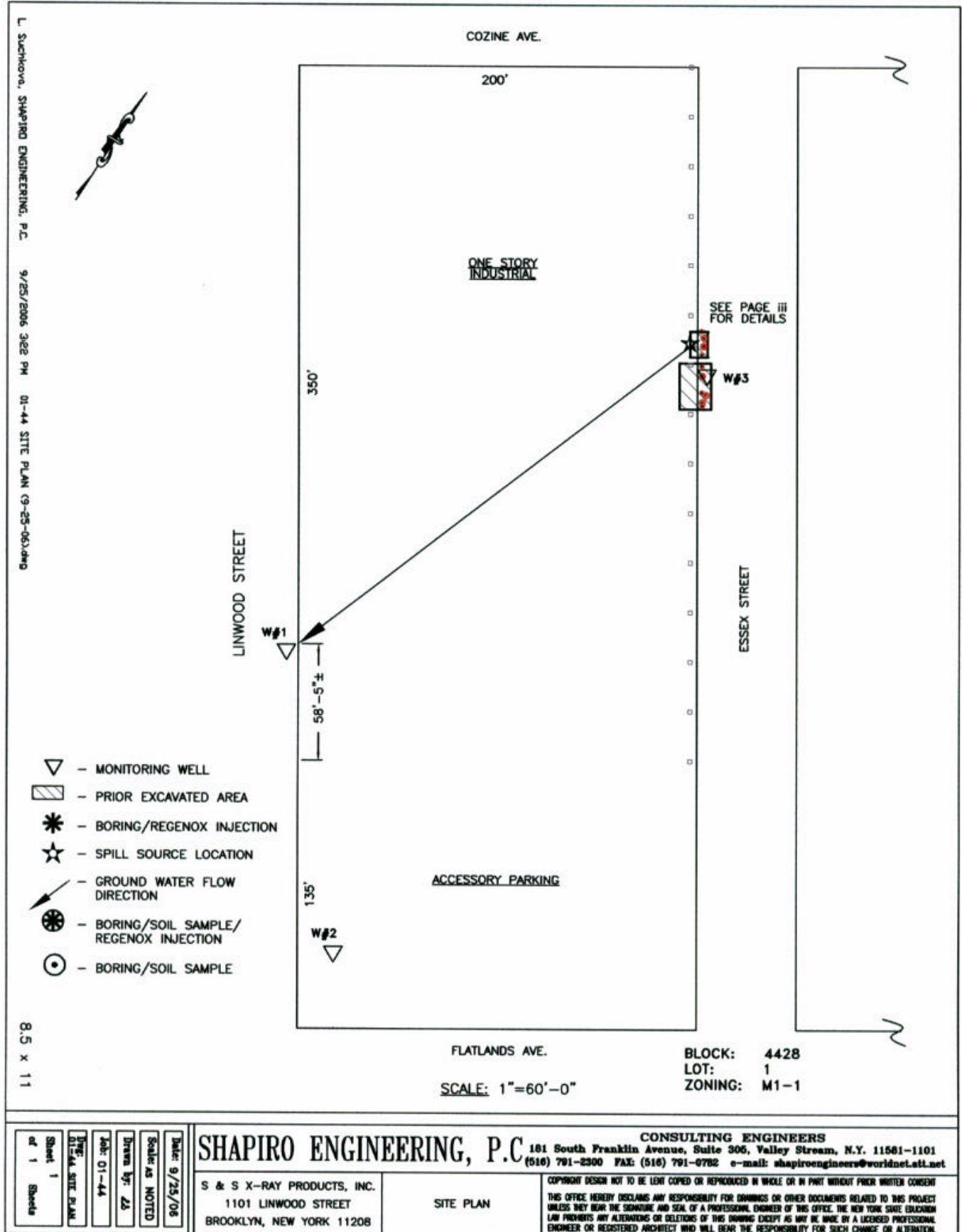
All three permanent monitoring wells will be monitored for BTEX compounds annually for a minimum of ten years, starting in 2006. The analytical results will be provided in annual reports. The NYSDEC will decide when sampling may cease.

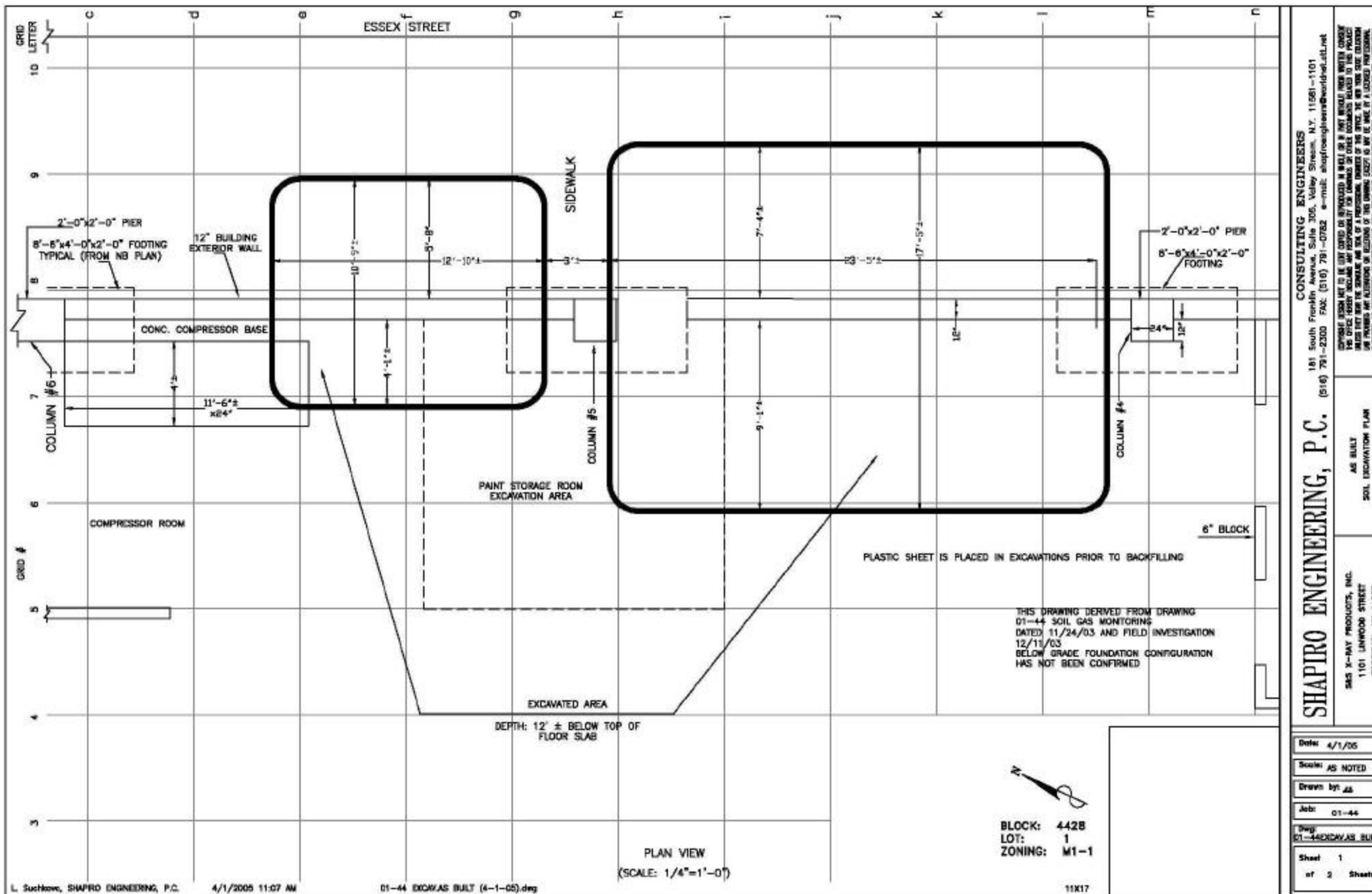
If building settling is noted, a site manager will check the building for cracks in the slab, the floor, or the walls located below grade and pressure field extension (PFE) testing will be performed to ensure the continued effectiveness of the system.

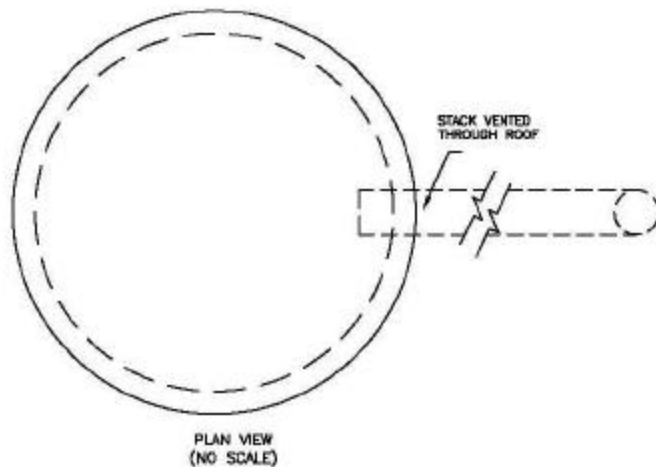
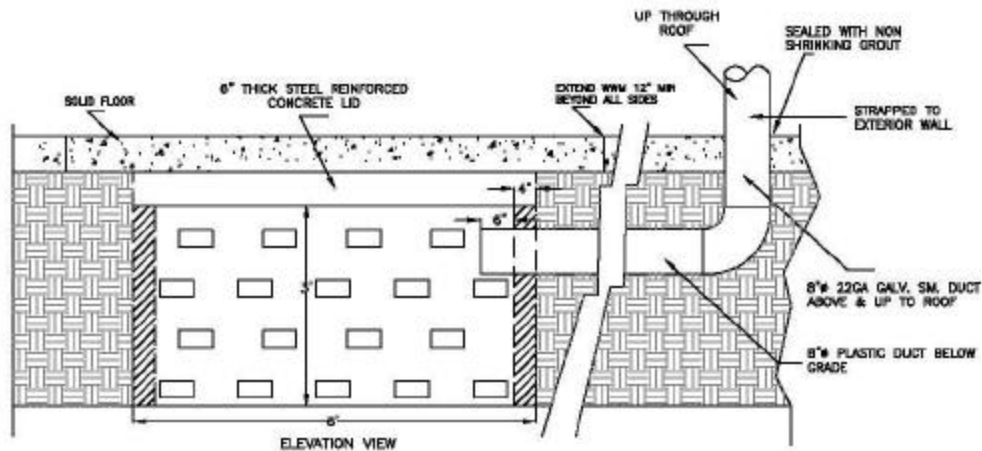
MAINTENANCE SCHEDULE:

	Weekly	Monthly	Annually
Monitoring Well Cover Caps Checkup		x	
Groundwater Monitoring			x
In-line Pressure Manometer	x		
Roof-top Fan			x

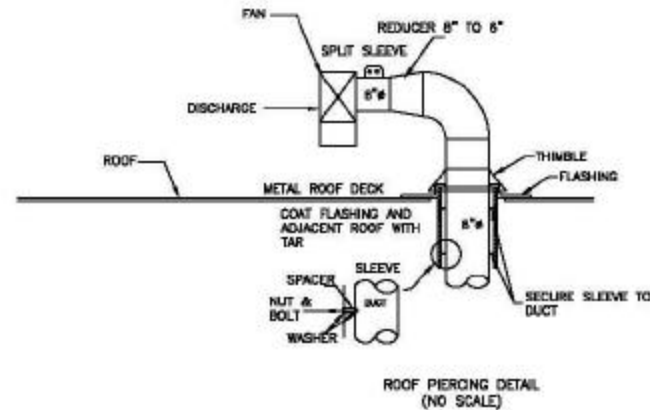
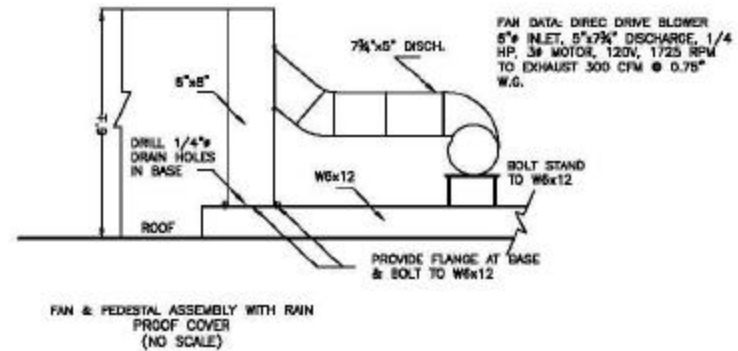
Clear instructions, with the name and phone number of a person to be contacted in any of these events, will be posted in the site manager office and near the in-line pressure manometer (a copy is attached in the end of this Plan).







SUB-SLAB DEPRESSURIZATION EXHAUST SYSTEM
DETAILS DERIVED FROM
USEPA PUBLICATION #EPA/625/R-92/016, FIGURES 2.5 & 2.6



OPERATION & MAINTENANCE CONTACTS

<u>COMPANY</u>	<u>NAME</u>	<u>PHONE #</u>
SHS FLATLANDS LLC	Neil Simon	718 494-0717 (Office)
Shapiro Engineering, P.C.	Robert A. Lo Pinto, P.E.	516-791-2300 (Office) 516-816-3800 (Mobile)
Grainger Extended Warranty Agreement # 28696711 Grainger Model # 6K030	Customer Service	1-800-811-1747
Grainger Parts Division Grainger Model # 6K030	Customer Service	1-800-323-0620 (ph.) 1-800-722-3291 (fax)
NYC Emergency Response	Police/Fire/Medical	911

MANUFACTURER'S CATALOG-CUTS / MANUALS

DAYTON ROOFTOP FAN

DWYER IN-LINE PRESSURE GAUGE

**BLOWER, 7 1/2 IN**

Unassembled Single Inlet Forward Curve Direct Drive Blower, Wheel Diameter 7 3/4 Inches, Airflow @ 0.000/0.500/1.250 Inches Static Pressure 985/765/360 CFM, Includes 1/3 HP 115 Volt Single Phase Open Dripproof Motor, Inlet Diameter 8 Inches, Outlet Height 8 1/4 Inches, Outlet Width 5 3/8 Inches, Overall Height 16 Inches, Overall Width 15 Inches, Overall Depth 14 Inches, CW Rotation Viewed From Drive Side, Maximum Inlet Air Temperature 180 Degrees F

Grainger Item #	7C038
Price (ea.)	\$195.75
Brand	DAYTON
Mfr. Model #	7C038
Ship Qty.	1
Sell Qty. (Will-Call)	1
Ship Weight (lbs.)	35.0
Usually Ships	Today
Catalog Page No.	4050
Price shown may not reflect your price. Log in or register.	

Additional Info

- Forward Curve Direct-Drive Blowers
- Direct-drive, single-inlet, high-volume blowers are used for general ventilation when duct systems are required.
- May be assembled to discharge at any of eight equally spaced positions. Feature welded steel construction and dynamically balanced wheels. Motor packed separately when blowers ordered complete.
- **Uses:** Exhausting foul air, blowing cool air, forcing air through washers and blasters, for air furnaces, dryers, and gas ovens.
- Gray baked-on epoxy finish
- Max. inlet air temperature: 180 DegreeF

Tech Specs

- **Item:** Blower
- **Type:** Direct Drive Forward Curve With Motor
- **Wheel Dia. (In.):** 7 3/4

- | | |
|---|---|
| • CFM @ 0.000-In. SP: 985 | • Motor RPM: 1725 |
| • CFM @ 0.125-In. SP: 920 | • Motor Type: Split Phase |
| • CFM @ 0.250-In. SP: 870 | • Motor Enclosure: Open Drupp Proof |
| • CFM @ 0.500-In. SP: 765 | • Bearing Type: Sleeve |
| • CFM @ 0.750-In. SP: 655 | • Outlet Height (In.): 8 1/4 |
| • CFM @ 1.25-In. SP: 360 | • Outlet Width (In.): 5 3/8 |
| • dBa @ 5 Feet: 57 | • Wheel Width (In.): 3 7/8 |
| • Blower RPM: 1725 | • Wheel Bore (In.): 1/2 |
| • Max. Inlet Temp. (Deg. F): 180 | • Wheel Material: Steel |
| • Max. Ambient Temp. (F): 104 | • Rotation: Clockwise Viewed From Drive Side |
| • Voltage: 115 | • Housing Material: Steel |
| • Hz: 60 | |
| • Phase: 1 | |
| • Full Load Amps: 5.8 | |
| • Motor HP: 1/3 | |

Housing Finish: Gray Polyester Epoxy

Notes & Restrictions

- Note: Review OSHA Codes. OSHA complying guards are required where fan blades are exposed and within reach of personnel. Dayton Electric Mfg. Co. certifies that the blowers shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. The A weighted sound ratings shown have been calculated per AMCA Standard 301. Values shown for blowers are for (inlet Lwi) sound levels for: Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

MSDS

This item does not require a **Material Safety Data Sheet (MSDS)**.

Required Accessories

There are currently no required accessories for this item

*****AUTO**MIXED AADC 630

Unitech Services Group
66 S 2nd St Ste B
Bay Shore, NY 11706-1000



On September 21, 2005, you purchased a DAYTON 1/3 HP B/D BLWR MOTOR at Grainger. Smart choice. Even smarter was your decision to protect your 1/3 HP B/D BLWR MOTOR with Grainger's TripleGuard Extended Service plan. As you know, we back all our products up to one year, with or without a manufacturer warranty. So while it's always been smart to buy from Grainger, now it's even smarter. That's because only Grainger offers the TripleGuard Extended Service program—an easy, affordable way to protect your assets and cash flow against unexpected and costly repairs.

Thank you for choosing Grainger as your supplier, and for extending the coverage of your new 1/3 HP B/D BLWR MOTOR with the Grainger TripleGuard Extended Service plan. If you have any questions, feel free to contact your sales representative or call or stop by your nearest Grainger branch.

Your Grainger Team

Grainger Account # 0866304488
 Original Order # 1132047612
 Order # 1132047612
 Billing # 8156893828
 TripleGuard Product # GRPL15
 Quantity of warranties: 1
 Invoice # 548-893828-4
 Product Model # 6K030
 Grainger Model # 6K030

Bill-to Address1: 66 S 2nd St Ste B
Bill to City: Bay Shore
Bill to State: NY
Bill to Zip: 11706-1000

Agreement # 28696711
Agreement Sales Price \$34.95

GRAINGER TERMS AND CONDITIONS

1. **WHAT IS COVERED:**
 - A. ServicePlan, Inc. (SPI), through its Administrator, Aon Innovative Solutions, Inc. (AIS), will pay on your behalf the cost of labor and repair or replacement parts in the event your product fails to operate as a result of a manufacturer's defect. In Arizona, Washington, Wisconsin and Wyoming, ServiceSaver, Incorporated (SSI), through its Administrator, AIS, will pay on your behalf the cost of labor and repair or replacement parts in the event your product fails to operate as a result of a manufacturer's defect. In Alaska and Maine, Grainger, through its Administrator, AIS, will pay on your behalf the cost of labor and repair or replacement parts in the event your product fails to operate as a result of a manufacturer's defect. Parts will be replaced with those of like kind and quality, and may be new or remanufactured. If the equipment cannot be repaired, if the cost of the repair exceeds the original purchase price or if parts are not available due to the age of the equipment or discontinued by the manufacturer, the equipment will be replaced with equipment of equal features. This Agreement is not available for products being used or sold in Florida.
 - B. If this Agreement covers a product with a retail price of less than \$200, and the product is found to be defective, the product will be replaced with the same product or a product of equal features. This Agreement shall be terminated upon issuance of the replacement product.
2. **LIMITED WARRANTY:**

All products sold are warranted by SPI or SSI or Grainger only to Purchasers for use in business, against defects in workmanship or materials under normal use. Any part which is determined by SPI, SSI, Grainger or the Administrator to be defective in material or workmanship and returned to an authorized service location, or as the Administrator designates, will be, at the exclusive remedy, repaired or replaced, at the Administrator's option.
3. **NO WARRANTIES TO CONSUMERS:**

Grainger makes no warranties to those defined as consumers in the Magnuson-Moss Warranty-Federal Trade Commission Improvement Act.
4. **COVERAGE TERM:**

This Agreement becomes effective after an initial one (1) year manufacturer/distributor warranty and extends through the end of the third year from date of purchase. In the event an Authorized Service Center is servicing your product when this Agreement expires, the term of this Agreement will be extended until the covered repair has been completed.
5. **LIMIT OF LIABILITY**

The limit of liability for any claim under this agreement is the cost to repair or replace your covered equipment in accordance with the TERMS AND CONDITIONS, not to exceed the purchase price of the equipment.
6. **EXCLUSIONS AND LIMITATIONS:**

THE AGREEMENT DOES NOT COVER ANY PRODUCT USED ON A RENTAL BASIS; CONSUMER BASIS OR SOLD ON A RETAIL BASIS; INSTALLATION OR SETUP COST; DIAGNOSTIC CHARGES; PICKUP AND DELIVERY CHARGES; PERIODIC CHECKUPS AND/OR MAINTENANCE; LOSS OF USE OF THE PRODUCT; PRODUCTS NOT ORIGINALLY COVERED BY A MANUFACTURER'S WARRANTY; AND FAILURES OUTSIDE THE UNITED STATES. YOU MUST PAY FOR ALL COSTS RELATED TO FAILURE TO OPERATE AND MAINTAIN THE PRODUCT IN ACCORDANCE WITH THE OWNER'S GUIDE, AND FAILURES DUE TO NORMAL WEAR AND TEAR. ANY COSTS FOR REPAIR ON PRODUCTS COVERED BY A MANUFACTURER'S WARRANTY, REGARDLESS OF WHETHER THE MANUFACTURER HONORS SUCH WARRANTY, ANY AND ALL PRE-EXISTING CONDITIONS THAT OCCUR PRIOR TO THE EFFECTIVE DATE OF THIS AGREEMENT AND/OR ANY COSTS TO REPAIR ANY PRODUCT SOLD "AS-IS" INCLUDING BUT NOT LIMITED TO FLOOR MODELS AND DEMONSTRATION MODELS; ITEMS WHICH ARE STILL SUBJECT TO THE MANUFACTURER'S WARRANTY. IN NO EVENT SHALL SPI, SSI, GRAINGER OR AIS BE LIABLE FOR CONSEQUENTIAL DAMAGES OR DELAY IN RENDERING SERVICE UNDER THIS AGREEMENT, OR LOSS OF USE DURING THE PERIOD THAT THE EQUIPMENT IS AT A REPAIR CENTER OR OTHERWISE AWAITING PARTS. REPLACEMENT PARTS WILL BE NEW OR REMANUFACTURED; ITEMS WITH A MANUFACTURER/DISTRIBUTOR WARRANTY IN EXCESS OF ONE (1) YEAR.
7. **THE FOLLOWING COSTS ARE YOUR RESPONSIBILITY:**
 - A. CONSUMABLE ITEMS, AIR OR WATER FILTERS, EXTERNAL HOSES, LIGHT COVERS, LAMPS, INTERNAL OR EXTERNAL BULBS, PROTECTIVE GLASS, EXTERNAL FUSES, INTERNAL OR EXTERNAL BATTERIES, KNOBS, BUTTONS, HINGES, LOCKS, HANDLES, PLASTIC OR METAL TRIM, MANUFACTURER'S SUGGESTED MAINTENANCE, CLEANING AND LUBRICATION.
 - B. LOSS OR DAMAGE OCCASIONED BY A HAPPENING THROUGH WAR, INVASION OR ACT OF FOREIGN ENEMY, HOSTILITIES, CIVIL WAR, REBELLION, INSURRECTION, RIOT, STRIKE, LABOR DISTURBANCE, LOCKOUT, OR CIVIL COMMOION.
 - C. DAMAGES RESULTING FROM:
 1. USE OF ACCESSORIES NOT APPROVED BY THE MANUFACTURER.
 2. INCORRECT CONNECTION OF SIGNAL LEADS OR INCORRECT ELECTRICAL SUPPLY.
 3. EXTERNAL CAUSES INCLUDING ACTS OF GOD, FIRE, THEFT, ACCIDENT, WINDSTORM, HAIL, LIGHTNING, EARTHQUAKE, EXPLOSION, FLOOD, WATER, CONSEQUENTIAL LOSS OF ANY NATURE, OR ABNORMAL VARIATION OF ELECTRICITY OR WATER SUPPLY.
 4. ABUSE OR MISUSE.
 5. FREIGHT ON PRODUCTS BEING SHIPPED TO US FOR A REPAIR OR REPLACEMENT. WE WILL PAY FOR RETURN SHIPPING FOR REPAIR ITEMS ONLY.
 6. IMPROPER INSTALLATION, SELECTION OR APPLICATION OF EQUIPMENT.
 7. REPAIRS TO MEET CHANGES IN FEDERAL, STATE OR LOCAL CODES AND REGULATIONS.
 - D. HOW TO OBTAIN SERVICE:

Contact Aon Innovative Solutions, Inc. (AIS), the Agreement Administrator, for the appropriate Authorized Repair Center. Call the 24-hour customer service toll-free number at (800) 811-1747. All repairs must be authorized by AIS prior to performance of work. Claims must be submitted by service within thirty (30) days of repair. Claims on unauthorized repairs may be denied. Many apparent faults can be due to simple circumstances such as the product not being switched on, being unplugged, or a fuse blown at the junction box. For a product that uses batteries as the prime power supply, or a remote control unit, please check that the batteries do not need replacing or recharging.
 - E. CONDITIONS:
 - A. Entire Agreement: This is the entire Agreement between the parties, and no representation, promise, or condition not contained herein shall modify these terms. ServicePlan, Inc., 1000 Milwaukee Avenue, Glenview, IL 60025, 800-209-6206 is the obligor under this agreement. In Arizona, Washington, Wisconsin and Wyoming, ServiceSaver, Incorporated is the obligor under this Agreement. In Alaska and Maine, Grainger is the obligor under this agreement. The obligations under this Agreement are insured by a service Agreement reimbursement insurance policy with Virginia Surety Company, Inc., 1000 Milwaukee Avenue, Glenview, IL 60025, 800-209-6206. If a claim is not paid by the Administrator within sixty (60) days of submitting the claim, the claim can be submitted to Virginia Surety Company, Inc. at the above address. This Agreement is not available for products being used or sold in Florida. **ARIZONA ONLY:** In the "EXCLUSIONS AND LIMITATIONS" section of this Agreement, the statement: "ANY AND/OR ALL PRE-EXISTING CONDITIONS THAT OCCUR PRIOR TO THE EFFECTIVE DATE OF THIS AGREEMENT" does not apply in the state of Arizona. **CALIFORNIA ONLY:** Informal dispute resolution is not available. **CONNECTICUT ONLY:** If You purchased this Agreement in Connecticut, You may pursue arbitration to settle disputes between You and the provider of this Agreement. You may mail your complaint to: State of Connecticut, Insurance Department, P.O. Box 816, Hartford, Connecticut, 06142-0816, Attention: Consumer Affairs.

GRAINGER TERMS AND CONDITIONS

The written complaint must describe the dispute, identify the price of the Product and cost of repair, and include a copy of this Agreement. The term of this Agreement will be automatically extended for the period during which the Product is in the custody of a service center for repair. **MICHIGAN ONLY:** If performance under this Agreement is interrupted because of a strike or work stoppage at the Service Provider's place of business, the effective period of the Agreement shall be extended for the period of the strike or work stoppage. **NORTH CAROLINA ONLY:** You understand that the purchase of this Agreement is not required to purchase or to obtain financing for the Product. **OKLAHOMA ONLY:** This Agreement is not issued by the manufacturer or wholesale company marketing the product covered by this Agreement. This Agreement will not be honored by such manufacturer or wholesale company. **SOUTH CAROLINA ONLY:** If you purchased this Agreement in South Carolina, complaints or questions about this Agreement may be directed to the South Carolina Department of Insurance, P.O. Box 100106, Columbia, South Carolina 29202-5106, telephone number 803-737-6190. **TEXAS ONLY:** If you purchased this Agreement in Texas, unresolved complaints concerning a provider or questions concerning the registration of a service Agreement provider may be addressed to the Texas Department of Licensing and Regulation, P.O. Box 12157, Austin, Texas 78711. **UTAH ONLY:** Coverage afforded under this Agreement is not guaranteed by the Utah Property and Casualty Guaranty Association. Proof of loss should be furnished to the Administrator as soon as reasonably possible and within one (1) year after the time required by the Agreement. There is no deductible required to obtain service for Your covered Product. Non-original manufacturer's parts may be used for repair if the manufacturer's parts are unavailable. **WASHINGTON ONLY:** You are not required to wait sixty (60) days before filing a claim directly with the insurer. We may not cancel this Agreement without providing You with written notice at least 21 days prior to the effective date of cancellation. Such notice shall include the effective date of cancellation and the reason for cancellation. **WISCONSIN ONLY:** THIS AGREEMENT IS SUBJECT TO LIMITED REGULATION BY THE OFFICE OF THE COMMISSIONER OF INSURANCE OF THE STATE OF WISCONSIN. Proof of loss should be furnished by you to the Administrator as soon as reasonably possible and within one year after the time required by this Agreement. Failure to furnish such notice or proof within the time required by this Agreement does not invalidate or reduce a claim. The Agreement holder will be made whole before the Service Provider retains any amounts it may recover. **WYOMING ONLY:** This Agreement is subject to regulation by the Office of the Commissioner of Insurance of the State of Wyoming.

- B. Transferability:** This Agreement is for the benefit of the original purchaser only and is not transferable.
- C. Renewals:** This Agreement is not renewable.
- D. Cancellation:** You may cancel this Agreement for any reason at any time by calling your local Grainger branch. If you cancel your Agreement within thirty (30) days of receipt of your Agreement, you will receive a full refund. If you cancel after thirty (30) days of receipt of your Agreement, Grainger will pay you for a pro rata refund based on the time expired less a \$25.00 cancellation fee, or 10% of the pro rata amount (whichever is less), less the cost of any claims. **ALABAMA, HAWAII, NEVADA, NEW YORK, TEXAS, WASHINGTON AND WYOMING:** A ten percent (10%) penalty per month shall be applied to refunds not paid or credited within thirty (30) days of receipt of a returned Service Agreement. **ARIZONA ONLY:** No claim incurred or paid will be deducted from the amount to be returned in the event of cancellation. **GEORGIA ONLY:** If You cancel after thirty (30) days of receipt of Your Agreement, You will receive a pro rata refund of the Agreement price. In the event of cancellation by US, notice of such

cancellation will be in writing and given at least 30 days prior to cancellation. Cancellation will comply with Section 33-24-44 of the Code of Georgia. Claims paid shall not be deducted from any refund owed as a result of cancellation by Us. **NEVADA ONLY:** If You cancel within thirty (30) days of Your receipt of the Agreement, You will receive a full refund. If You cancel after thirty (30) days, You will receive a pro rata refund based on the time expired, less a cancellation fee of twenty-five dollars (\$25) or ten percent (10%) of the Agreement purchase price, whichever is less. No claim incurred or paid will be deducted from the amount to be returned in the event of cancellation. We may not cancel this Agreement without providing You with written notice at least 15 days prior to the effective date of cancellation. Such notice shall include the effective date of cancellation and the reason for cancellation. Claims paid or the cost of repairs performed shall not be deducted from the amount to be refunded upon cancellation of this Agreement. **NORTH CAROLINA ONLY:** We may not cancel this Agreement except for nonpayment by You or for violation of any of the terms and conditions of this Agreement. **OKLAHOMA ONLY:** In the event this Agreement is cancelled by You, return of premium shall be based upon ninety percent (90%) of the unearned pro rata premium. In the event the Contract is cancelled by Us, return of premium shall be based upon one hundred percent (100%) of unearned pro rata premium. **UTAH ONLY:** We can cancel this Agreement during the first sixty (60) days of an annual term by mailing to You a notice of cancellation at least thirty (30) days prior to the effective date of cancellation except that We can also cancel this Agreement during such time period for nonpayment of premium by mailing You a notice of cancellation at least ten (10) days prior to the effective date of cancellation. After sixty (60) days have elapsed, We may cancel this Agreement by mailing a cancellation notice to You at least ten (10) days prior to the cancellation date for cancellations due to any of the following reasons: (a) nonpayment of premium, (b) material misrepresentation, (c) substantial change in the risk assumed, unless You should reasonably have foreseen the change or contemplated the risk when entering into the Agreement, (d) substantial breaches of Agreemental duties, conditions, or warranties. The notice of cancellation must be in writing to You at Your last known address and contain all of the following: (1) the Agreement number, (2) the date of notice, (3) the effective date of the cancellation and, (4) a detailed explanation of the reason for cancellation. **WASHINGTON ONLY:** We may not cancel this Agreement without providing You with written notice at least 21 days prior to the effective date of cancellation. Such notice shall include the effective date of cancellation and the reason for cancellation. **WISCONSIN ONLY:** If You cancel this Agreement within thirty (30) days of receipt of this Agreement, you will receive a full refund. If You cancel after thirty (30) days of receipt of Your Agreement, You will receive a pro rata refund of the Agreement price. Claims paid or the cost of repairs performed shall not be deducted from the amount to be refunded upon cancellation of this Agreement.

Administered By:
Aon Innovative Solutions, Inc.
P.O. Box 427
Golden, Colorado, 80402
Customer Service Toll-Free Number:
1 800-611-1747

MODEL: 6K030

DESCRIPTION: Split Phase Belt Drive Fan/Blower Motor

GRAINGER SKU: 6K030 PARTS AVAILABLE? Y

Component Part Number	Part Description	Ref. No.	Part For Sale?	Image File Name
B353185462204	Base		Y	IMAGE NOT AVAILABLE
B453463660000	Bull Bearing		Y	IMAGE NOT AVAILABLE
F101993970010	External Fan		Y	IMAGE NOT AVAILABLE
P752929770006	Overload Protector		Y	IMAGE NOT AVAILABLE
X672151000001	Resilient Ring		Y	IMAGE NOT AVAILABLE
X745331730000	Shaft End Endshield		Y	IMAGE NOT AVAILABLE
X745333590000	Opposite End Endshield		Y	IMAGE NOT AVAILABLE
X837249330004	Stationary Switch		Y	IMAGE NOT AVAILABLE
Z043144160000	Actuator Assembly		Y	IMAGE NOT AVAILABLE

Recipient:	Milina
Company Name:	
Recipient Phone:	
Recipient Fax:	5167910782
Recipient Address:	
Sender:	Joyce Andersson
Sender Extension:	1847254
Sender Fax:	800-722-3291
Sender Email:	Gpartsinfo@grainger.com
Fax Sent Date:	Monday, May 15, 2006 12:47:48 PM
Pages Including Cover:	02
Notes:	

Grainger Parts division is your source for over 2.5 million repair parts and accessories from over 500 of the leading manufacturers and brands. We're here 24/7 to help you get the job done.

- No minimum order requirements
- We're open 24 hours a day, 7 days a week
- Same-day shipping for all in-stock orders placed by 5:00 p.m. (CT) Monday – Friday
- Exploded-view diagrams available to help you make the right selection

When placing your parts order, please provide the following information:

1. Manufacturer name and model number
2. Manufacturer part number or a complete description of the part

It's easy to order repair parts!

	United States	Canada/Puerto Rico	Mexico	International
Call:	1-800-323-0620	1-800-323-0620	1-800-527-2331	1-847-498-1920
Fax:	1-800-722-3291	1-800-559-6301	1-847-559-6301	1-847-559-6301

You can also visit us online at: www.grainger.com/repairparts

If this fax was sent as an email, the information you requested is attached in a PDF document.

You may need to download the free Adobe Acrobat Reader to view the attachment.
Download for free at: www.adobe.com/acrobat

We appreciate your business!
GRAINGER®


**MANOMETER**

Molded Plastic Manometer, Operating Range 0-7 Inches
WC, 3% Accuracy

Grainger Item #	3T292
Price (ea.)	\$71.75
Brand	DWYER INSTRUMENTS
Mfr. Model #	26
Ship Qty.	1
Sell Qty. (Will-Call)	1
Ship Weight (lbs.)	1.1
Usually Ships	Today
Catalog Page No.	923
Price shown may not reflect your price. Log in or register.	

Additional Info

- MARK II (TM) Molded Plastic Manometers
- Manometers mount on any vertical surface to measure low positive, negative, or differential air and gas pressures.
- These virtually indestructible molded plastic instruments have zero adjustment knob and built-in level indicator. Plus or Minus 3% full scale accuracy, 140 DegreeF maximum working temperature. 10 psi maximum internal working pressure. Manometers include: 2 static pressure taps, 8-ft. double column plastic tubing, mounting screws, and red and green pointer flags. Red indicating fluid is used with No. 2T650; blue indicating fluid is used with No. 3T292.
- **Uses:** Dust collection systems, noxious fumes/airborne particulate exhaust systems, and for building HVAC filter banks.

Tech Specs

- **Item:** Molded Plastic Manometer
- **Operating Range (In WC):** 0-7
- **Max. Working Temp. (Deg. F):** 140
- **Accuracy:** +/-3% Of Full Scale
- **Rated Total Pressure:** 10 PSI
- **Mounting:** Screw Or Optional Base
- **Includes:** 2 Static Pressure Tapes, 8 Ft Double Column Plastic Tubing, Mounting Screws, Indicating Fluid, Red and Green Pointer Flags, Instructions

Notes & Restrictions

- (1) These products are covered by OSHA Hazard Communication Standard, and Material Safety Data Sheets (MSDS) are available. See page opposite inside back cover.

MSDS

Material Safety Data Sheets (MSDS) are available for this item.

Required Accessories

There are currently no required accessories for this item.

Optional Accessories

STAND,MANOMETER

Item #: 1TC33

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$26.50

STATIC PRESSURE TIP

Item #: 1W401

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$10.94

GAGE OIL, Blue, 1.910 Specify Gravity

Item #: 1W413

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$36.30

AIR FILTER KIT

Item #: 2T647

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$30.60

TUBE,PITOT



Item #: 3T086

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$48.25

Alternate Products

**MANOMETER,U
INCLINED**



Item #: 2T650

Brand: DWYER
INSTRUMENTS

Usually Ships: Today

Price (ea): \$35.40

Repair Parts

There is currently no Repair Parts information for this item.

1101 LINWOOD STREET
BROOKLYN, NEW YORK 11208

APPENDIX "F"

GLOSSARY OF ABBREVIATIONS

APPENDIX "E"**GLOSSARY OF ABBREVIATIONS**

ACGIH	American Conference of Governmental Industrial Hygienists
ANSI	American National Standards Institute
ARAWP	Additional Remedial Action Work Plan
ASP	Analytical Services Protocol
BTEX	Benzene, Toluene, Ethyl Benzene and Xylene
CAMP	Community Air Monitoring Plan
CFR	Code of Federal Regulations
CLP	Contract Laboratory Protocol
CQAR	Chemical Quality Assurance Report
CRQL	Contract Required Quantitation Limits
CRZ	Contamination Reduction Zone
dBA	Decibels "A" Scale, A Measure of Sound Levels
DI	Deionized
DOH	Department of Health
DQCR	Daily Quality Control Reports
DQO	Data Quality Objectives
DUSR	Data Usability Summary Report
EAS	Environmental Assessment Statement
ELAP	Environmental Laboratory Approval Program
EPA	Environmental Protection Agency
ESQ	Attorney

EZ	Exclusion Zone
GC/MS	Gas Chromatograph/Mass Spectrometer
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HSP	Health and Safety Plan
IRMWP	Interim Remedial Measures Work Plan
LCS	Laboratory Control Samples
LTD	Limited
MD	Medical Doctor/ or Matrix Spiked Duplicate
mg/kg	Milligram/Kilogram
mg/l	Milligram/Liter
MTBE	Methyl Tert Butyl Ether
MSDS	Material Safety Data Sheets
NIOSH	National Institute of Occupational Safety and health
NYC	New York City
NYCDOT	New York City Department of Transportation
NYCRR	New York City Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OAC	Oxidizer and Activator Complexes
OSHA	Occupational Safety and Health Administration or Act
PARCC	Precision, Accuracy, Representativeness, Completeness and Comparability
PC	Professional Corporation

PE	Professional Engineer
pH	The Logarithm of the reciprocal of the Hydrogen-ion Concentration of a Solution. A measure of the Solution Acidity or Alkalinity
ppb	Parts Per Billion
PPE	Personal Protection Equipment
ppm	Parts Per Million
PID	Photoionization Detector
PVC	Poly Vinyl Chloride
QA	Quality Assurance
QAO	Quality Assurance Officer
QA/QCP	Quality Assurance/Quality Control Plan
QC	Quality Control
RAFR	Remedial Action Final Report
RAWP	Remedial Action Work Plan
RM	Remedial Measure
RBC	Risk-Based Concentrations
RPD	Relative Percent Difference
SOP	Standard Operating Procedures
SSHS	Site Safety and Health Supervisor
TAGM	Technical and Administrative Guidance Memorandum, issued by the NYS DEC
TLV	Threshold Limit Values
TWA	Time Weighted Average
ug	Micrograms

ug/kg	Micrograms/Kilogram
ug/l	Microgram/Liter
ug/m3	Micrograms/Cubic Meters
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Plan
VOC	Volatile Organic Compounds
WP	Work Plan

CERTIFICATION

The data produced in this Report is certified to be a true copy of the Field and Analytical Data.

SIGNED & SEALED

ROBERT A. LO PINTO, P.E., NSPE
NEW YORK #53312
MAY 10, 2007