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Work Plan



Interim Remedial Measure
Sub-Slab Depressurization
System
P&S Boyd Ave Site
Solvay, New York

BCP Site #C734102

March 2007

TABLE OF CONTENTS

SECTION 1 – INTRODUCTION	1
1.1 SITE DESCRIPTION	2
1.2 IRM OBJECTIVES	3
SECTION 2 – DESIGN REQUIREMENTS	4
2.1 GENERAL REQUIREMENTS	4
2.2 SYSTEM REQUIREMENTS	4
2.3 COMPONENT REQUIREMENTS	5
SECTION 3 – IMPLEMENTATION APPROACH	8
3.1 BUILDING INVESTIGATION AND PREPARATION	8
3.2 COMMUNICATION TEST	8
3.3 SYSTEM DESIGN	9
3.4 SYSTEM INSTALLATION	10
3.5 SITE-SPECIFIC MANAGEMENT PLAN	10
SECTION 4 – POST-INSTALLATION MONITORING & REPORTING	11
4.1 PRESSURE FIELD EXTENSION TEST	11
4.2 POST MITIGATION SAMPLING	11
4.3 MAINTENANCE CHECKS	12
4.4 ANNUAL MONITORING REPORT	12
SECTION 5 – SCHEDULE	13

LIST OF FIGURES

Figure	
<u>No.</u>	
1 - Site Location	
2 - Site Layout	
3 - Floor Plan of Lowest Building Level	
4 - Sub-Slab Depressurization System Components	

APPENDICES

<u>Appendix</u>	
A	Site Health and Safety Plan
B	Community Air Monitoring Plan

SECTION 1 - INTRODUCTION

This document presents an Interim Remedial Measure (IRM) Work Plan for the Pass & Seymour corporate property at 35 and 50 Boyd Avenue, in the Village of Solvay, New York (Figure 1); the P&S Boyd Ave BCP site. The site consists of 18.07 acres, and is currently owned and occupied by P&S, which has its corporate office on a portion of the premises. A single office building, consisting of approximately 45,000 square feet, occupies the eastern portion of the site. The rest of the site is currently vacant.

The existing office building is all that remains of a previously much larger building complex at the site. Past site operations occurred in a much larger former building footprint that existed west of the current office building (Figure 2). There is currently no manufacturing at the site, and all of the buildings involved in manufacturing operations have been demolished over the past 15 years. The most recent phase of demolition occurred in November 2005, during which the 660,000 square foot warehouse in the central portion of the site was razed.

The site has been accepted into the New York State Brownfield Cleanup Program (BCP Site No. C734102). A voluntary Remedial Investigation (RI) has been completed at the site in accordance with a Brownfield Cleanup Agreement (BCA), and indicates the presence of chlorinated organic compounds in soil vapor samples collected below the building floor slab. Although the results of indoor air testing do not conclusively indicate soil vapor intrusion is currently occurring, P&S has elected to complete an Interim Remedial Measure (IRM) as a precautionary measure to mitigate the future potential for soil vapor intrusion. This IRM Work Plan sets forth the conceptual design and implementation approach for a sub-slab depressurization (SSD) system at the P&S Boyd Ave BCP site, as a preemptive measure to prevent potential future soil vapor intrusion.

The SSD system will be designed and installed by a USEPA-certified mitigation contractor, Radon Home Services, Inc., who is qualified to install a SSD system consistent with NYSDOH Soil Vapor Intrusion (SVI) guidance (October, 2006).

1.1 – SITE DESCRIPTION

The site is currently used by P&S as corporate headquarters for management and administrative staff, who occupy the four-story office building on the eastern portion of the site. The building is between 90 to 100 years old. It has no basement, with a poured concrete slab-on-grade floor. The lowest level of the building is finished and used as office space, for product development, and product testing. The floor is partially covered in some areas with carpeting, primarily its eastern portion which is used for employee office space. The exposed concrete floor for the uncarpeted portions is covered with a sealant. The building's foundation walls are sealed, consisting of a combination of poured concrete and concrete block construction. The upper three floors of the building consist primarily of offices around the perimeter of the floor plan and partially partitioned space in the center.

The combination of heating systems used for the building include a heat pump, steam radiation, and electric baseboard. Natural gas fuels the non-electrical heating systems, as well as the building's hot water tank. Air conditioning is provided by central air.

The main areas of the building's lowest level include the model shop, testing laboratory, and office area (Figure 3). The model shop area is approximately 2,400 square feet, and used to build and modify fixtures and electrical equipment for testing. Materials used to build the fixtures/equipment are stored on shelves in the shop, and include primarily plastic, wiring, and metal components. A variety of electrical machine and hand-held tools are used throughout the shop.

The test lab is an L-shaped room of approximately 1,000 square feet, in the central portion of the lowest building level. Electrical fixtures built in the shop, such as switches, fuses, and circuits, are tested in the lab.

The majority of the lowest building level (~ 8,000 square feet) is used as office space, including perimeter offices and interior cubicles. This areas has typical office work stations (desks, chairs, desk-top computers, etc), with two lavatories, a print room, and library.

Beyond the office building, the site grounds are covered by a combination of paved and landscaped areas. Maintained landscape around the office building consists primarily of a grassy lawn with ornamental shrubs and planters adjacent to the building entrance. Approximately 3 acres of the paved parking space is located east of the office building.

The approximate elevation of the site is 410 feet above mean sea level. Site topography is generally flat, although topographic relief increases to the south, where ground elevations rise to greater than 500 feet.

1.2 - IRM OBJECTIVES

The objective of the IRM is to eliminate, or minimize to the extent practicable, the potential for future building occupants to be exposed to soil vapors potentially derived from soil and groundwater contamination at the site. In order to achieve this objective, vacuum extraction points will be installed through the floor slab at locations to be determined, and an in-line fan with an exhaust to the outside atmosphere will create a negative pressure field below the building floor slab that would minimize future intrusion of potential soil vapors.

The SSD system design will follow guidelines prescribed by the Environmental Protection Agency (USEPA), as presented in Appendix E of the New York State Department of Health (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006).

SECTION 2 - DESIGN REQUIREMENTS

The following describes the basic design concepts that will be incorporated into the SSD system, as prescribed by USEPA and NYSDOH. The final design of the SSD system will be based on findings of a sub-slab communication test and building inspection completed as the first step of the implementation process (see Section 3 – *Implementation Approach*). A final design document will be provided and submitted to the NYSDEC following the completion of the communication test, for approval prior to system installation.

2.1 - GENERAL REQUIREMENTS

The SSD system will be designed and installed by Radon Homer Services, Inc., a USEPA-certified radon mitigation contractor that the New York State Department of Health has accepted as qualified to install SSD systems.

Following installation of the SSD system, a documentation report will be prepared that establishes the SSD system was installed in accordance with the NYSDEC-approved design. An Operations, Monitoring, and Maintenance (OM&M) Plan (see Section 3) will be prepared and provided to the building owner and tenants, to facilitate understanding of the system's design and operation.

2.2 - SYSTEM REQUIREMENTS

The principal design and installation requirements of the SSD system are identified below, and incorporate many design aspects of systems to mitigate radon exposure.

- Sealing. The operating principle of the SSD will be to create negative pressure (i.e. a vacuum) below the building floor slab relative to inside the building, which will prevent vapors below the slab from entering the building. To improve system performance, visible cracks, holes, and gaps in the floor will be filled with compatible caulks, non-shrink mortar, grouts, or expanding foam to create a seal that will prevent short-circuiting of air. Materials used as sealants will not contain any VOCs.

- Operation. The system vent fan will run on electrical power, and designed in such a manner to avoid excess energy usage. The system shall be designed to avoid the creation of other health, safety, or environmental hazards to building occupants (e.g. backdrafting of natural draft combustion appliances), and shall also avoid compromising moisture and temperature controls and other comfort features, and to minimize noise.
- Vent Fan. The vent fan and discharge piping shall not be located within or below an occupied area of the building to avoid entry of subsurface vapors in the event of a fan leak.
- Exhaust. The vent pipe's exhaust shall be a minimum of 12 inches above the roof line of the building, and at least 10 feet above ground level. It shall be at least 10 feet (laterally) away from any openings in the building (i.e. doors, windows) that are less than 2 feet (vertically) below the exhaust point.
- Labeling. The SSD system shall be clearly labeled to identify its purpose, and a telephone number will be identified to call if there are any questions.
- Monitor. A pressure monitor shall be installed on the system to alert building occupants if the system stops working properly. The monitor may be a liquid gauge (a manometer), sound alarm, or needle display gauge. The monitor shall be placed in a visible location, and building manager will be made aware of it, how it works, and how it is read, and what to do if it indicates a problem.

2.3 - COMPONENT REQUIREMENTS

Figure 4 is a conceptual design schematic that identifies the main system components, which are discussed below.

2.3.1 Piping Requirements

- Piping will be schedule 40 PVC. All joints and connections shall be permanently sealed with adhesives as specified by the manufacturer of the pipe. Joints and connections shall be made air tight.

- External piping runs shall be insulated to avoid freezing and condensation.
- Vent pipes shall be fastened to the structure of the building with hangers, straps, or other supports that will secure the piping. Existing plumbing pipes, ducts, or mechanical equipment shall not be used to support SSD system pipe.
- Supports for vent pipes shall be installed at least every six (6) feet on horizontal runs. Vertical runs shall be secured either above or below the points of penetration through floors, ceilings, and roofs, or at least every 8 feet on runs that do not penetrate floors, ceilings or roofs.
- To prevent blockage of air flow into the bottom of the vent pipe (i.e. at the extraction point), the pipe shall be supported or secured in a permanent manner that prevents downward settlement into soil beneath the sub-slab aggregate material.
- Vent pipes shall be installed in a configuration that allows condensation and/or rainwater to drain downward into the ground beneath the slab.
- Vent pipes shall not block access to any areas requiring maintenance or inspection. Pipes shall not be installed in front of or interfere with any light sources, opening, door, window, or equipment access required by code.

2.3.2 Vent Fan Requirements

- The vent fan(s) shall be designed or otherwise sealed to reduce the potential for leakage of vapors from the vent fan housing.
- The vent fan(s) shall be installed in a configuration that avoids condensation buildup in the fan housing. Whenever possible, the fan should be installed in vertical runs on the vent pipe.
- Vent fan(s) mounted on the exterior of the building shall be rated for outdoor use.

- Vent fan(s) shall be installed in the vent pipe using removable couplings or flexible connections that can be tightly secured to both the fan and the vent pipe.
- The fan intake shall be screened to prevent intake of debris that could damage the fan. Screens shall be removable to enable cleaning and replacement.

2.3.3 Electrical

- Wiring of the vent fan shall conform to local regulations. The wiring may not be located in or chased through the installation ducting or any other heating or cooling ductwork.
- The fan(s) for this project will be mounted on the exterior side of the building. The use of an exterior fan prohibits the use of plugged cords to supply power to the fan. (If a plugged cord is used to supply power to the fan, it may not penetrate a wall or be concealed in a wall).
- High-flow vent fans typically rate at between 112 to 245 Watts. If the rated electricity requirements of the system fan exceeds 50 percent of the circuit capacity into which it will be connected, or if the total connected load on the circuit (including the vent fan) exceeds 80 percent of the circuit's rated capacity, a separate, dedicated circuit shall be installed to power the fan.
- An electrical disconnect switch or circuit breaker shall be installed to permit deactivation of the fan for maintenance or repair.

SECTION 3 - IMPLEMENTATION APPROACH

Currently P&S is taking steps to contract with Radon Home Services, Inc. to conduct a sub-slab communication test and subsequently design and install the SSD system. Radon Home Services, Inc. will follow the approach specified below for the preparation, design, and installation the SSD system.

3.1 - BUILDING INVESTIGATION & PREPARATION

A visual inspection of the building will take place prior to initiating any mitigation work. The inspection will identify building characteristics and conditions that may affect the design, installation, and effectiveness of the SSD system:

- Cracks in floor slab
- Exposed earth
- Floor penetrations (sumps, drains, French drains, etc)
- Foundation wall construction (hollow block wall vs. poured solid wall)

If cracks or other openings in the floor exist, they shall be sealed with a suitable material to create a permanent air-tight seal. Urethane caulk or non-shrink mortar is suitable for sealing floor cracks. Mortar or expandable foam may be appropriate for larger gaps, as may occur near the contact of the floor and sidewalls, and to seal the open tops of hollow block walls if present. Materials used to seal holes, cracks, and gaps shall not contain VOCs.

Openings, perimeter channel drains, or cracks that exist where the slab meets the foundation walls shall have a foam backer rod inserted prior to sealing (with urethane caulk or mortar) if the gap is greater than ½ inch in width. The sealing should be done in a way that maintains the channel feature as a water control system (if it determined that this is the function of the channel or gap).

3.2 - COMMUNICATION TEST

A sub-slab communication test will be completed to determine the radius of influence of a vacuum applied to the sub-slab aggregate. This will be done by drilling small diameter pilot holes (3/8 inch diameter) through the floor slab into the sub-slab aggregate material.

One and ¼ inch diameter vacuum extraction test holes will be drilled and a vacuum will be applied to determine the affected radius below the floor slab. The orientation of the pilot and vacuum test holes will be determined by the contractor based on an inspection of the premises.

Each pilot hole will be temporarily sealed with modeling clay after it is drilled. One of the vacuum extraction holes will remain open, and a vacuum will be applied to it using an industrial vacuum. The clay seals will be removed from one test hole at a time and a smoke tracer will be used to determine if air is drawn in through the monitoring hole as the vacuum is applied. After the monitoring hole is tested in this manner, it will be resealed, and then another hole will be unsealed for a similar test. Each of the monitoring holes will be tested individually, in sequence. The airflow patterns observed by the smoke tubes at each monitoring hole will be used to determine the radius of influence of the vacuum applied at each extraction hole. This data will be used to determine the number of extraction points that will be needed to maintain negative pressure in the sub-slab aggregate.

As the communication test is conducted a ppbRAE photoionization detector (PID) will be used to screen the vacuum exhaust for VOCs. If the exhaust contains more than 5 ppm VOCs then it will be exhausted outdoors by a hose.

Upon completion of the communication test, a communication map will be produced that shows the areas of influence achieved at each of the vacuum holes. This will substantiate that the sub-slab has been properly characterized and will provide a basis for the system design.

3.3 - SYSTEM DESIGN

The data from the communication test will be used as a basis for the system design. A design document will be prepared, and submitted to NYSDEC for approval, that will include a summary of the communication test results, design details, equipment specifications, and construction schedule. The number and location of extraction pipe rises will be determined, including the total length and diameter of pipe, the optimal layout of lateral connections, and the location of fans and external exhaust points. Specifications for the vent fan will be determined based on the number of extraction

points and the length of pipe. Both high-flow [250-350 cubic feet per minute (cfm)] fans and multiple vent fans with fewer laterals will be considered. The point(s) at which the vent pipe will penetrate the exterior building wall will be determined, with placement of the exterior vent fan and exhaust pipe.

The SSD system will be installed following NYSDEC approval of the design document. The installation approach will utilize a core drill to create holes in the floor slab for the vent pipes at each of the extraction points. The diameter of the cores will depend on the diameter of the vent pipe, which is likely to be 4 or 6 inches in diameter. The cores will be either 6 or 8 inches to provide ample space for the vent pipe to penetrate. A backer rod will be placed in the annulus between the pipe and the sidewall of the core, and the surface of the penetrations will be permanently sealed with air-tight urethane caulk (see Figure 4).

3.4 - SYSTEM INSTALLATION

The selected contractor will install the SSD system as designed, following NYSDEC review and acceptance of the system design. NYSDEC will be notified at least two weeks prior to installation. The installation is expected to be completed within two weeks of initiating construction.

3.5 - SITE-SPECIFIC MANAGEMENT PLAN

A Site-Specific Management Plan will be prepared and provided to the P&S building managers, with one copy provided to NYSDEC and one copy always on site. The Plan will describe the system design and operation, monitoring and maintenance requirements and schedule, provide troubleshooting guidance, points of contact for service, and manufacturer's information and specifications.

The Plan will provide a routine maintenance schedule that will commence within 18 months of SSD system start up, with maintenance checks and related activities occurring every 12 to 18 months thereafter (see Section 4).

SECTION 4 - POST-INSTALLATION MONITORING & REPORTING

The SSD system for the site is being installed as a preemptive and precautionary IRM. Although TCE was detected in indoor air and sub-slab air samples, its concentration in two of the three indoor air samples was below the current NYSDOH Guidance level of $5\mu\text{g}/\text{m}^3$, and in the third indoor air sample it was only marginally greater, at $6\mu\text{g}/\text{m}^3$.

The future potential for soil vapor intrusion will be addressed by the final remedy that is selected for implementation at this site, to further minimize the possibility that soil vapor intrusion may occur in the future.

The following sections describe the measures that will be taken to monitor and report the SSD system's effectiveness.

4.1 - PRESSURE FIELD EXTENSION TEST

Following SSD system installation, a qualitative pressure field extension (PFE) test will be completed, in accordance with NYSDOH guidance. This test will be conducted similar to the pre-installation communication test, by measuring the pressure differential between indoor air and sub-slab air through 3/8 inch pilot holes. The PFE test will be conducted as the SSD system operates, using a digital micromanometer or comparable instrument. The PFE test will verify the limits of suction achieved by the system after it is installed, and that the system maintains a minimum vacuum of 0.002 inches of water.

If adequate pressure is not occurring, the reason (e.g. improper fan operation) will be identified and corrected.

All communication/PFE test holes will be sealed with non-VOC containing concrete mix after the tests are done.

4.2 - POST MITIGATION SAMPLING

Indoor air samples will be collected within 30 days of SSD system installation and start up. Three (3) indoor air samples will be taken, from the same locations as previous RI and pre-installation samples.

Depending on analytical findings, additional indoor air sampling may be conducted, following the initial round of post mitigation sampling, as part of annual site management activities, while the final site remedy is selected, designed, and implemented.

4.3 - MAINTENANCE CHECKS

The SSD system monitor will be checked weekly, and a system log will be maintained at the site. The basic elements of the maintenance checks will include:

- A visual inspection of the complete system (e.g. vent fan, piping, pressure gages, labeling systems)
- Identification and repair of leaks
- Inspection of exhaust or discharge point to verify no air intakes have been located nearby

Any apparent SSD system malfunctions or other items requiring correction will be immediately reported to the building owner, who will immediately contact a service representative to correct the malfunction such that the system will properly operate.

Any potential soil vapor intrusion points that are identified will be documented and sealed with suitable material to provide an air tight seal.

4.4 - ANNUAL MONITORING REPORT

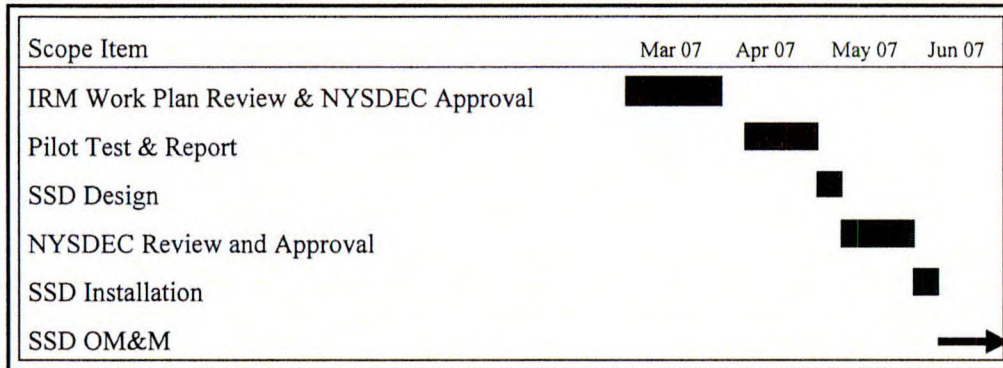
The Site Management Plan will include the preparation of an annual summary of monitoring and maintenance activities, as an Annual Monitoring Report which will be presented to NYSDEC. This Report will include weekly system maintenance logs, a description of any maintenance actions taken during the previous year, and a projection of probable maintenance needs for the following year, if any. The analytical results for indoor air samples collected during the previous 12 months, if any, will also be included.

The Annual Monitoring Reports will be submitted in the first quarter of the following year. The Report will include a statement that the SSD system is still in place, in

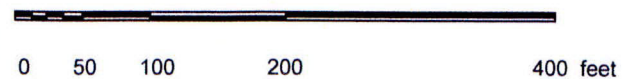
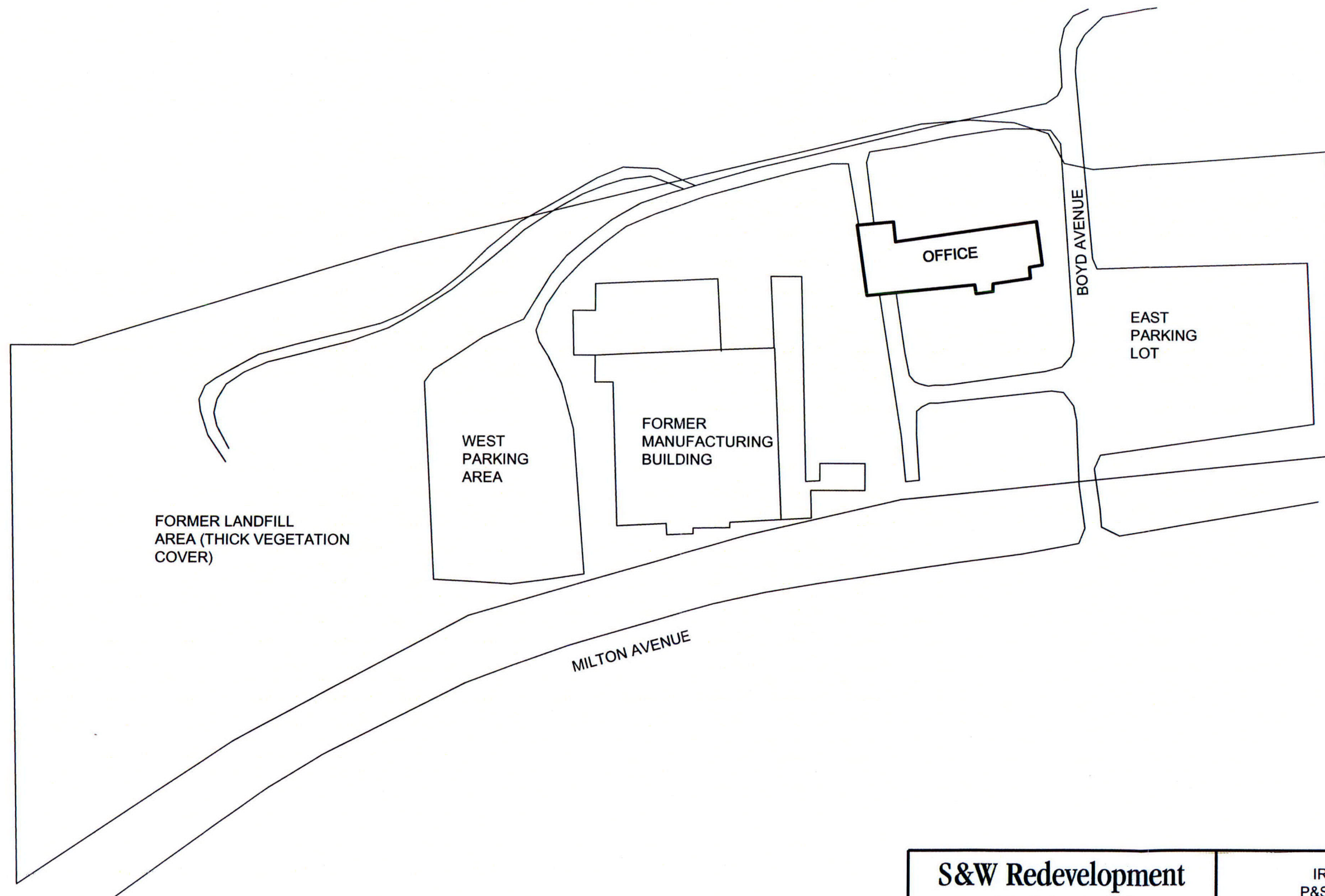
operation consistent with the OM&M Plan, and maintaining negative pressure in the sub slab.

SECTION 5 - SCHEDULE

The following schedule outlines the schedule for work plan approval, design, and installation of the proposed IRM SSD system.



Figures



S&W Redevelopment
of North America, LLC
Syracuse, New York

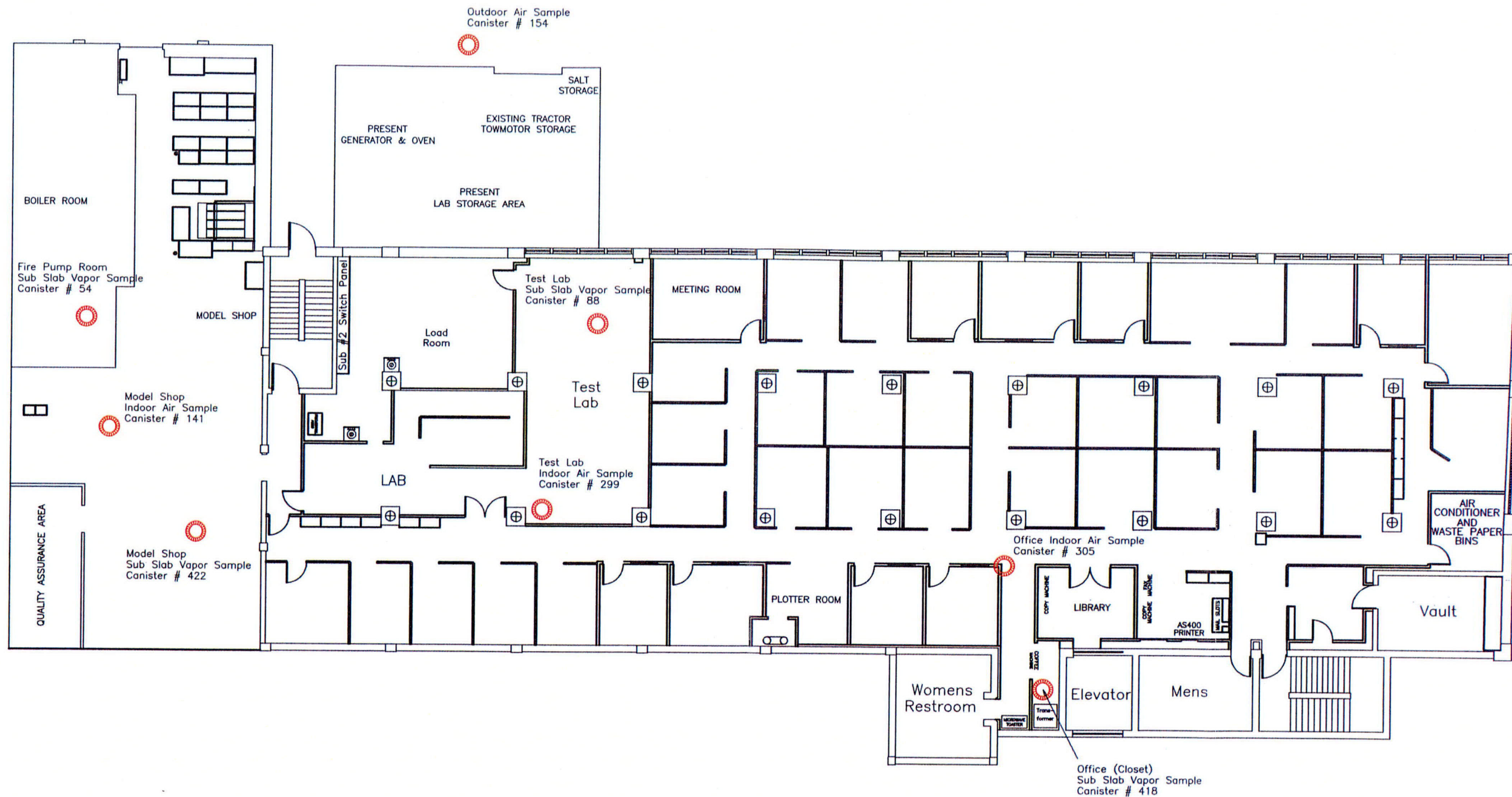
Feb 2007

N5005

IRM WORK PLAN
P&S BOYD AVE SITE
35 and 50 BOYD AVENUE
SOLVAY, NEW YORK

FIGURE 2
SITE LAYOUT

X-REF: NAMES?
 2006/Mar/Syr/IRK_2007/Feb/Syr/IRK
 J:\PROJECTS\N-xxxx\N5000\N5005-Remedial Investigation\N5005 Remedial Investigation\Site Survey\Air & Vapor Sampling Plan.dwg



○ Indoor/Outdoor/Sub-slab/Soil Vapor/Air sampling location.

Floor plan as provided by Pass & Seymour (2006).

SCALE in FEET



S&W Redevelopment
 of North America, LLC.

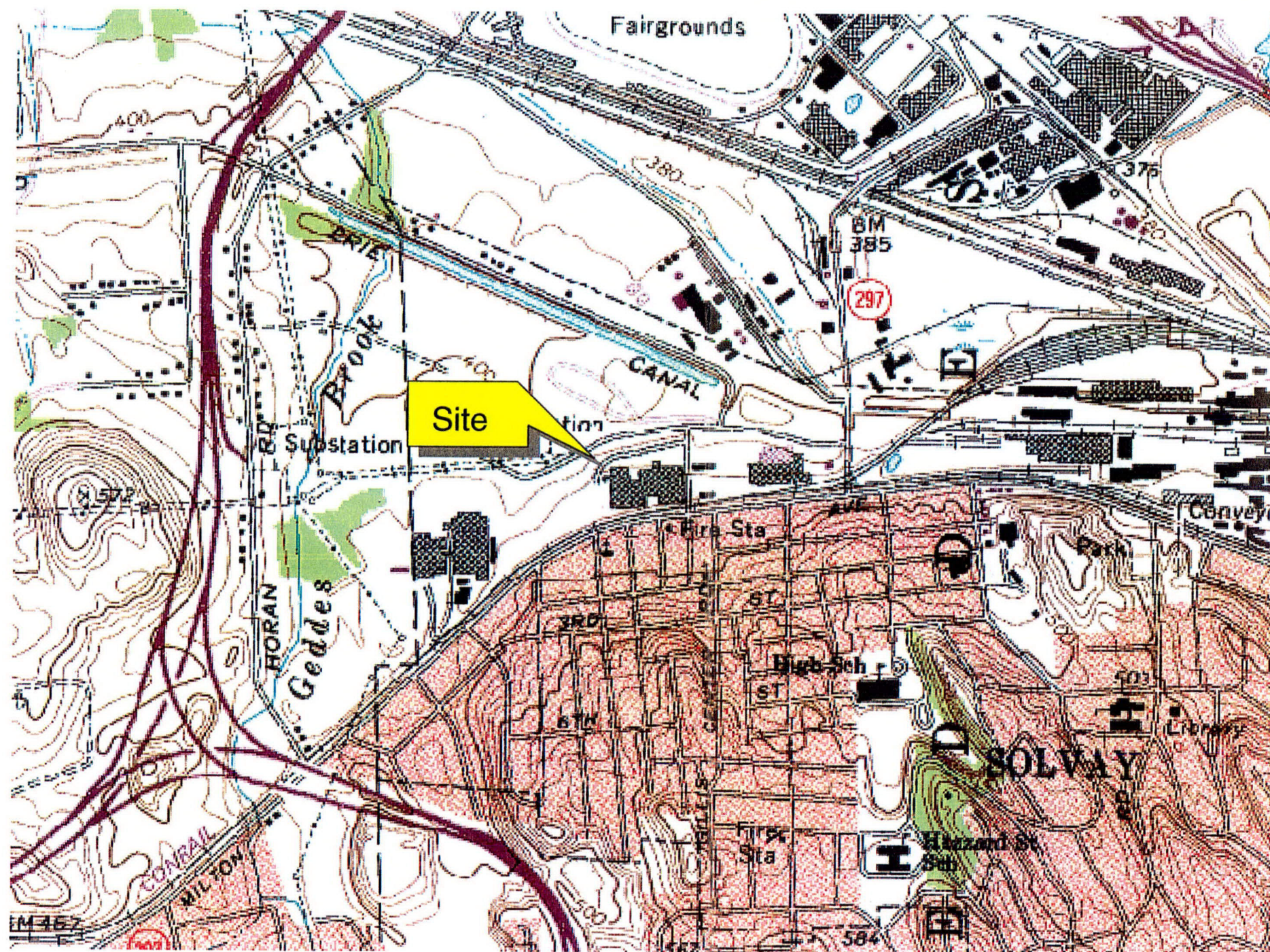
Syracuse, New York

DATE:2/2007

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IRM WORK PLAN
 P&S Boyd Ave Site
 35 and 50 Boyd Avenue
 Solvay, New York

Figure 3
 Floor Plan— Lowest Building Level



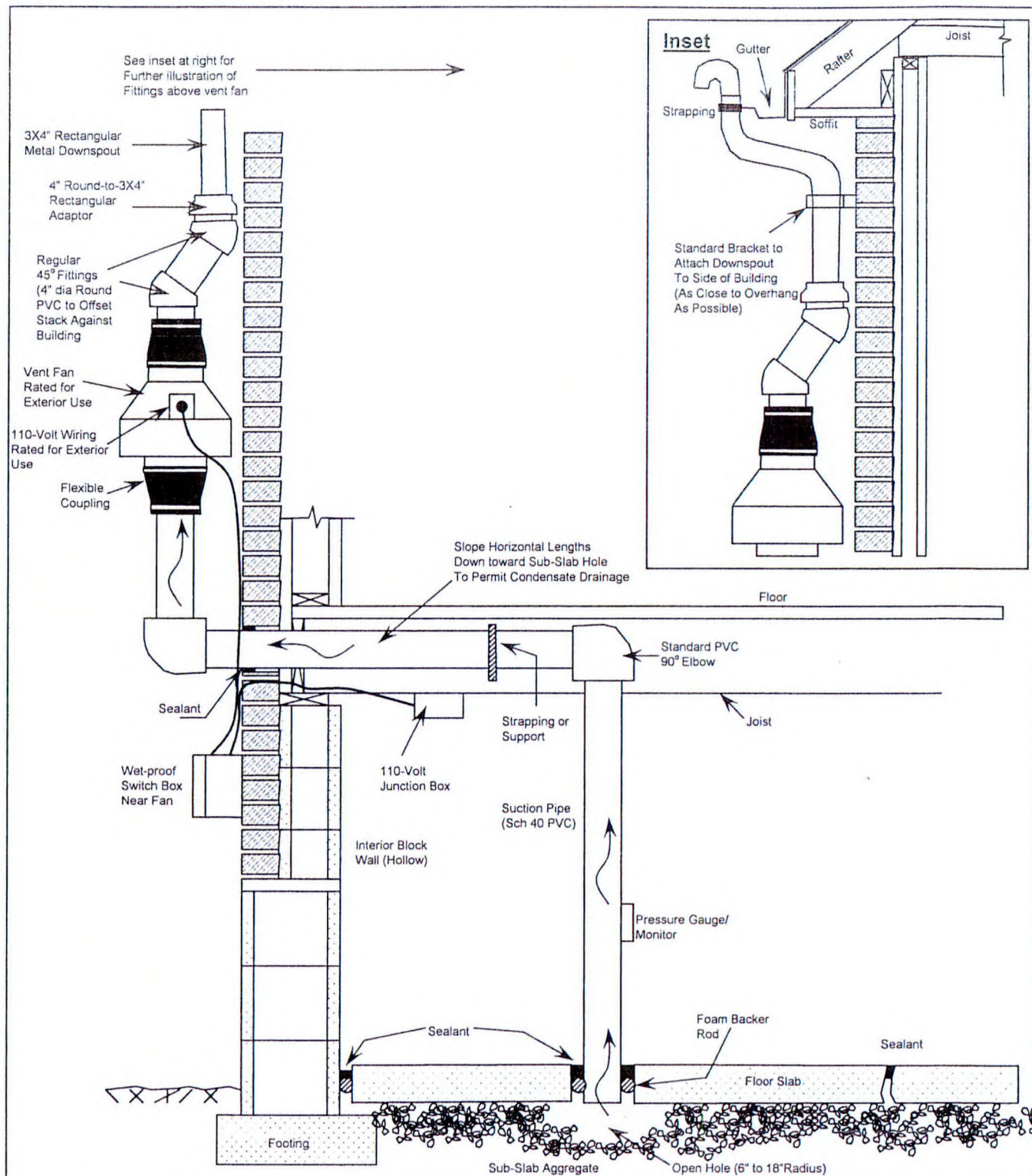
S&W Redevelopment
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Syracuse, New York

IRM WORK PLAN
P&S BOYD AVE SITE
35 and 50 BOYD AVENUE
SOLVAY, NEW YORK

Feb 2007

N5005

FIGURE 1
SITE LOCATION



S&W Redevelopment

of North America, LLC
Syracuse, New York

Source:
USEPA 625/
R-93/011

Not
To Scale

Feb 2007

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IRM WORK PLAN
P&S BOYD AVE SITE
35 and 50 BOYD AVENUE
SOLVAY, NEW YORK

FIGURE 4
TYPICAL SUB-SLAB DEPRESSURIZATION
SYSTEM COMPONENTS

APPENDICES

Appendix A
Site Health & Safety Plan

APPENDIX A SITE HEALTH AND SAFETY PLAN

A.1. SITE DESCRIPTION

Date Date: February 2007 Revised: _____
Location 35 & 50 Boyd Avenue, Solvay, NY
Hazards Physical hazards associated with operation of
electrical power tools and construction type work

A.2 ENTRY OBJECTIVES: The objective of site entry is to install a sub-slab depressurization system in the lowest level of the P&S Boyd Ave site building.

A.3 ON-SITE ORGANIZATION AND COORDINATION. The following personnel are designated to carry out the stated job functions on site. (Note: One person may carry out more than one job function.)

Project Team Leader:.....	Daniel Ours or designee	(315) 422-4949
Site Safety Officer:	Donald Sorbello or designee	(315) 422-4949
Field Team Leader:.....	Jeffrey Kiggins or designee	(315) 422-4949
Field Team Members:.....	Designated as needed	(315) 422-4949

A.4 ON-SITE CONTROL. P&S or its designated agent will coordinate access control and security for the work area for each day of on site work. No unauthorized personnel should be within the established work area.

A.5 HAZARD EVALUATION.

A. Physical Hazards. Work will take place primarily in the building interior, although some work elements will occur outdoors as the system is constructed. The principal hazards associated with this project are physical ones associated with typical building renovation work. The primary hazards are related to operation of electrical power tools including drills and saws; the potential inhalation of concrete and plaster dust; slip, trip, and fall accidents as may occur relative to climbing or ladders and scaffolds; and heavy lifting.

1. **Heavy Lifting Method.** Personnel conducting work that may require lifting of heavy objects should use the following proper lifting techniques:
 - Feet must be parted, with one foot alongside the object being lifted and one foot behind. When the feet are comfortably spread a more stable lift can occur and the rear foot is in a better position for the upward thrust of the lift.
 - Use the squat position and keep the back straight. A straight back means the spine, back muscles, and organs of the body in correct alignment.

- To grip the item being lifted, the fingers and the hand are extended around the object being lifted, using the full palm. Fingers have very little power – use the strength of the entire hand.
- The load must be drawn close, and the arms and elbows must be tucked into the side of the body. Holding the arms away from the body increases the strain on the arms and elbows. Keeping the arms tucked in helps keep the body weight centered.

The body must be positioned so that the weight of the body is centered over the feet. This provides a more powerful line of thrust and also ensures better balance. Start the lift with a thrust of the rear foot. Do not twist.

2. **Slip/Trip/Hit/Fall.** These injuries are the most frequent of all injuries to workers. They occur for a wide variety of reasons, but can be minimized by the following practices:

- Spot-check the work area to identify hazards;
- Establish and utilize pathways that are most free of slip and trip hazards. Avoid pathways that are more hazardous;
- Beware of trip hazards such as wet floors, slippery floors, and uneven terrain;
- Carry only loads you can see over;
- Keep work areas clean and free of clutter, especially in storage areas and walkways;
- Communicate observed hazards to site personnel.

3. **Heat Stress.** Work will take place primarily indoors, which reduces the chance of exposure to extreme temperatures. However, all field personnel engaged in site work shall have completed training to recognize and avoid heat related illness. Proper training and preventive measures will aid in averting loss of worker productivity and serious illness. Heat stress prevention is particularly important because once a person suffers from heat stroke or heat exhaustion, that person may be predisposed to additional heat-related illness. To avoid heat stress, the following steps may be taken:

- Adjust work schedules.

Modify work/rest schedules according to monitoring requirements.

Mandate work slowdowns as needed.

Perform work during cooler hours of the day if possible or at night if adequate lighting can be provided.

- Provide shelter (air conditioned, if possible) or shaded areas to protect personnel during rest periods.
- Maintain worker's body fluids at normal levels. This is necessary to ensure that the cardiovascular system functions adequately. Daily fluid intake must approximately equal the amount of water lost in sweat, i.e., eight fluid ounces (0.23 liters) of water must be ingested for approximately every eight ounces (0.23 kg) of weight lost. The normal thirst mechanism is not sensitive enough to ensure that enough water will be drunk to replace lost sweat. When heavy sweating occurs, encourage the worker to drink more. The following strategies may be useful:
- Members of each Work Crew shall be properly trained by each Crew's respective employer to recognize the symptoms of heat-related illnesses.

4. **Adverse Weather Conditions.** Adverse weather conditions will generally not be an issue for work performed indoors. Work that occurs outdoors on this project will be conducted mindful of the potential weather-related hazards. The Field Leader for each Work Crew will be responsible for deciding on the continuation or discontinuation of work for his/her Crew based on current and pending weather conditions. Electrical storms, tornado warnings, and strong winds are examples of conditions that would call for the discontinuation of outside work. Site operations should not be permitted during an electrical storm.

POTENTIAL HAZARD	PREVENTATIVE MEASURES
Slip/Trip/Falls	Use three points of contact to mount and dismount equipment. Continuously inspect work areas for slip, trip, & fall hazards. Be aware of surroundings. Practice good housekeeping.
Noise	Wear appropriate hearing protection.
Pinch Points	Keep hands, feet, & clothing away from moving parts/devices.
Utilities	Maintain proper utility clearances. All utilities should be properly located and marked out prior to start of work.
Heavy Lifting	Follow safe lifting practices. Lift items within your capabilities and assigned project role. Ask for assistance if necessary.
Heat/Cold Stress	Dress appropriately and follow HASP guidelines
Dangerous Weather	Consult local weather reports daily, watch for signs of

POTENTIAL HAZARD	PREVENTATIVE MEASURES
Conditions	severe weather, etc. Suspend or reduce work during severe weather.
Chemical hazards	Use ppbPID as indicated in HASP. Wear specified PPE. No smoking.

B. Chemical Hazards. A number of organic compounds have been identified at the site based on preliminary RI data, but these are not regarded as significant hazards associated with this particular work, or to building occupants in general. For general information purposes, the following substances are identified as known or suspected of being present on site, primarily as soil vapor and groundwater contamination. The primary hazards of each are identified, associated primarily with direct skin contact and inhalation.

SUBSTANCE	PRIMARY HAZARDS
<i>Volatile Organics</i>	
Trichloroethene	Eye & skin irritation, nausea, vomiting, headache
1,1 Dichloroethane	Skin irrit., liver, kidney, lung damage
1,2 Dichloroethene	Eye irrit, respiratory irrit, central nervous system
Vinyl chloride	Eye irrit, soar throat, dizziness, headache, nausea

A.6 PERSONAL PROTECTIVE EQUIPMENT. Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work areas or tasks:

LOCATION	JOB FUNCTION	LEVEL OF PROTECTION
Work zone	Site investigation	A B C (D) Other

Specific protective equipment for each level of protection is as follows:

Level A	Fully-encapsulating suit SCBA (disposable coveralls)
Level B	Splash gear (saranax-coated Tyvek suit) SCBA or airline respirators
Level C	Splash gear (Tyvek suit) Half-face canister respirator Safety glasses Boots Gloves Hard hat
<u>Level D</u>	Work boots (steel toes) Leather or canvas work gloves Hard hat Dust mask

Action Levels. Action levels shall be determined by monitoring of work zone breathing space with a portable photoionization detector (ppbPID) or comparable instrument. Measurement of a sustained concentration above ambient (background) conditions shall initiate action. The following criteria shall be used to determine appropriate action:

VOLATILE ORGANICS IN BREATHING ZONE (SUSTAINED AND ABOVE BACKGROUND)	LEVEL OF RESPIRATORY PROTECTION
0-5 ppm	Level D
5-200 ppm	Level C
200-1000 ppm	Level B - air line
1000+ ppm	Level B - SCBA

% LOWER EXPLOSIVE LIMIT (LEL)	ACTION
Above 10	Discontinue work and take remedial action

NO CHANGE TO THE SPECIFIED LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE APPROVAL OF THE SITE SAFETY OFFICER AND THE PROJECT TEAM LEADER.

If the above criteria indicate the need to increase from Level D to a higher level of personal protection, work will be immediately suspended in that particular site area until the required personal protective equipment is made available, or until Level D conditions return.

- A.7 ON-SITE WORK PLANS.** The following personnel or designated alternate(s) will perform the field investigation.

Project Team Leader: Jeffrey Kiggins or designee
Work Party Allison Menges or designee

The work party was briefed on the contents of this plan prior to commencement of work.

- A.8 COMMUNICATION PROCEDURES.** The Project Team Leader should remain in communication with the Field Team Leader. A cellular phone will be used in the field.

Continuous horn blast is the emergency signal to indicate that all personnel should leave the Work Zone.

In the event that radio communications are used, the following standard hand signals will be used in case of failure of radio communications:

Hand gripping throat	Out of air; can't breathe
Grip partner's wrist or both hands around waist.....	Leave area immediately
Hands on top of head	Need assistance
Thumbs up	OK; I am all right; I understand
Thumbs down.....	No; negative

A.9 SITE HEALTH AND SAFETY PLAN.

- A. A designated Site Safety Officer will be directly responsible to the Project Team Leader for safety recommendations on site. The Field Team Leader will be responsible for executing and enforcing the Site Health and Safety Plan.
- B. **Emergency Medical Care.** Upstate (University) Hospital is located 10 minutes from this location. A map of alternative routes to this facility is available at the field vehicle (attached).

First aid equipment is available on site at the following locations:

First aid kit

Field vehicle

List of emergency phone numbers:

AGENCY/FACILITY	PHONE NUMBER
Police (Solvay Police)	911
Fire	911
Ambulance	911
Upstate University Hospital	(315) 464-5540

- C. **Environmental Monitoring.** The following environmental monitoring instruments shall be used on site at the specified intervals:
- ppb RAE photoionization detector (PID). Continuous during installation of soil borings and soil gas monitoring probes.
 - Dust (particulate) monitor. Continuous during installation of soil borings per Community Air Monitoring Plan (CAMP)
- D. **Emergency Procedures.** The following standard procedures will be used by on-site personnel. The Site Safety Officer shall be notified of any on-site emergencies and be responsible for ensuring that the appropriate procedures are followed:
1. **Personnel Injury in the Work Zone.** Upon notification of an injury in the Work Zone, the designated emergency signal, a continuous horn blast, shall be sounded. A rescue team will enter the Work Zone (if required) to remove the injured person to safety. Appropriate first aid shall be initiated and contact should be made for an ambulance and with the designated medical facility (if required). No persons shall re-enter the Work Zone until the cause of the injury or symptoms is determined.
 2. **Fire/Explosion.** Upon notification of a fire or explosion on site, the designated emergency signal, a continuous horn blast, shall be sounded and all site personnel assembled at the decontamination line. The fire department shall be alerted and all personnel moved to a safe distance from the involved area.
 3. **Personal Protective Equipment Failure.** If any site worker experiences a failure or alteration of protective equipment that affects the protection factor, that person

and his/her buddy shall immediately leave the Work Zone. Re-entry shall not be permitted until the equipment has been repaired or replaced.

4. **Other Equipment Failure.** If any other equipment on site fails to operate properly, the Project Team Leader and Site Safety Officer shall be notified and then determine the effect of this failure on continuing operations on site. If the failure affects the safety of personnel or prevents completion of the Work Plan tasks, all personnel shall leave the Work Zone until the situation is evaluated and appropriate actions taken.

In all situations, when an on-site emergency results in evacuation of the Work Zone, personnel shall not re-enter until:

- a. The conditions resulting in the emergency have been corrected.
- b. The hazards have been reassessed.
- c. The Site Health and Safety Plan has been reviewed.
- d. Site personnel have been briefed on any changes in the Site Health and Safety Plan.

E. Personal Monitoring. The following personal monitoring will be in effect on site:

Personal exposure sampling: ppbRAE PID screening, sampling pumps/tubes , or organic vapor monitors.

Medical monitoring: The expected air temperature will be less than 70EF. If it is determined that heat stress monitoring is required (mandatory if over 70EF), the following procedures shall be followed: Monitoring body temperature, body weight, pulse weight.



S&W Redevelopment

of North America, LLC
Syracuse, New York

FEB 2007

N5005

IRM WORK PLAN
P&S BOYD AVE SITE
35 and 50 BOYD AVENUE
SOLVAY, NEW YORK

UNIVERSITY HOSPITAL
750 EAST ADAMS STREET

Appendix B
Community Air Monitoring Plan

APPENDIX B

COMMUNITY AIR MONITORING PLAN

B.1 - INTRODUCTION

Pass & Seymour's corporate property is located at 35 and 50 Boyd Avenue, in the Village of Solvay, New York. The site consists of 18.07 acres, and is currently owned and occupied by Pass & Seymour (P&S), which has its corporate office on a portion of the premises. A single office building, consisting of approximately 45,000 square feet, occupies the eastern portion of the site. The rest of the site is currently vacant.

P&S has completed a voluntary Remedial Investigation (RI) at the site in accordance with a Brownfield Cleanup Agreement (BCA). Based on RI results, P&S is taking the precautionary step of installing a sub-slab depressurization (SSD) system in the lowest level of the building to prevent potential future soil vapor intrusion. This work will occur as an Interim Remedial Measure under the Volunteer's BCA. As an Interim Remedial Measure (IRM), a Community Air Monitoring Plan (CAMP) is required to describe the measures that will be undertaken during work to monitor ambient air. Because the IRM work will be conducted indoors, the CAMP will address indoor air quality as the IRM is implemented.

B.2 - OBJECTIVES

The objective of this CAMP is to provide a measure of protection for building occupants from potential airborne contaminant releases that might arise as a result of the IRM work, which will include drilling holes through the floor slab and building foundation walls to install a SSD system. The principal contaminants of potential concern are volatile organic compounds that may exist as vapor below the floor slab, and small quantities of concrete dust that may be produced as holes are cored. It is anticipated that only small amounts of concrete dust may be generated in the immediate work area, and that occupants of adjoining building areas will have minimal risk of exposure to dust. The objective of the air monitoring program will therefore be to monitor for the presence of organic vapors in air as the work is being conducted.

B.3 - METHODS

The CAMP will include monitoring for volatile organic compounds (VOCs). Particulate matter (e.g. airborne "dust") will not be monitored because only small amounts of concrete dust will be produced by the work, and this dust can be easily controlled by typical measures taken during indoor construction projects (e.g. wetting the work surface or using a vacuum to capture dust), which will minimize the spread of dust and the need for monitoring.

A ppbRAE photoionization detector (PID) will be used to measure VOCs in air. VOCs will be monitored in the work area, and the occupied area closest to the work area, at the beginning of each workday.

VOC concentrations will be measured continuously in the work area. VOC concentrations will be checked periodically in the closest adjacent occupied area to provide a measure of assurance that contaminants are not being spread through the air. The PID will continuously record and store VOC measurements such that a 15-minute running average can be computed for the data each time the PID is checked.

- If the ambient air concentration for total organic vapors in the work area exceeds 5 parts per million (ppm) above background for a 15-minute average, work activity will be halted and monitoring will continue until levels decline to below 5 ppm over background. At this point, work will resume and monitoring will continue.
- If total organic vapor levels in the work area persist at levels above 5 ppm over background but less than 25 ppm, work activities will be halted, the source of the vapors will be identified, and corrective actions will be taken to abate emissions. Work will resume after organic vapor levels fall to below 5 ppm over background in the work area.
- If organic vapor levels exceed 25 ppm in the work area activities will be shut down. An appropriate course of action to abate emissions in order to resume work will be discussed with NYSDEC personnel.