

December 5, 2011

Michael J. Hinton P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Ave.
Buffalo, NY 14203-2999

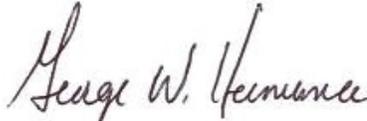
Re: Ekonol Polyester Resins Site #V00653-9
Sub-slab Depressurization System
Operations, Maintenance and Monitoring Plan

Dear Mr. Hinton:

Attached for your review is the Operation, Maintenance, and Monitoring (OM&M) plan for the sub-slab depressurization (SSD) system that was installed within the office area of the building currently occupied by St. Gobain at the Ekonol Site in Wheatfield, New York.

If you have any questions regarding this OM&M plan, feel free to contact William Barber at (216) 271-8038.

Sincerely,



George W. Hermance
Project Manager

Attachment

cc: W. Barber, Atlantic Richfield
Mike Kolar, Patriot Equities
G. Brown, RT Environmental
M. Forcucci, NYSDOH



SUB-SLAB DEPRESSURIZATION SYSTEM OPERATION, MAINTENANCE, AND MANAGEMENT PLAN

**Ekonol Polyester Resins, NYSDEC # V00653-9
6600 Walmore Rd.
Town of Wheatfield, Niagara County, New York**

Prepared for:

Atlantic Richfield Company

A BP affiliated company

**4850 East 49th Street
Cuyahoga Heights, Ohio 44125**

Prepared by:

PARSONS
40 LA RIVIERE DR, SUITE 350
BUFFALO, NY 14202

December 2011

SUB-SLAB DEPRESSURIZATION SYSTEM INSTALLATION

A sub-slab depressurization (SSD) system was installed within the office area of the building currently being leased by St. Gobain at the Ekonol Site in Wheatfield, New York. The purpose of the SSD system is to limit the potential for migration of volatile organic compounds (VOCs), primarily tetrachloroethene (PCE) from soil gas into indoor air in the office area of the building.

The SSD system was installed and began operation on November 17, 2010. The system was installed by Mitigation Tech of Brockport, New York, under the direction and oversight of Geosyntec of Guelph, Ontario, Canada. An as-built drawing of the SSD system is provided as Figure 1.

The SSD system consists of one suction point, centrally located within the office area at the St. Gobain building, as shown in Figure 1. A 3-inch diameter hole was drilled through the concrete, and sub-grade materials were excavated to a depth of about six inches below the bottom of the existing concrete floor. A Schedule 40 polyvinyl chloride (PVC) vent-pipe, three inches in diameter, was installed vertically within the sump. The bottom of the suction pipe was installed so that it is flush with the bottom of the concrete slab, and was sealed using polyurethane sealant.

The suction pipe was constructed to run vertically from the floor to the rafters, then horizontally overhead to the outer wall, where it exits the building. At the outer wall, the horizontal pipe connects to an electrically operated RadonAway[™] GP-501 fan mounted to the exterior of the building via flexible couplings for vibration suppression. The fan is used to draw vapors from beneath the building slab to the exterior of the building. The fan discharge is connected to a vertical pipe extending to approximately two feet above the roofline. The top of the pipe is fitted with a rain cap to limit water infiltration. The suction point is equipped with a U-tube manometer which indicates the measured vacuum induced at the suction point, and an audible alarm that notifies the facility management in the event that the fan stops operating.

ROUTINE MONITORING AND MAINTENANCE

Routine monitoring and maintenance visits are scheduled once each quarter (every three months). During each visit, inspections will be conducted to verify and document that the system is in good working order. The inspections will include a visual inspection of the system's interior and exterior components. Also, during each routine visit, operations monitoring will be conducted. This will consist of recording the U-Tube manometer measurement and comparing it to the existing data recorded during the system's original and/or latest system inspection. Anticipated operating condition of the system is 2 inches of H₂O as read from the U-tube manometer. The data will be used to evaluate whether the system is performing within an acceptable range of operation.

Additionally, a smoke stick will be used to check for the presence of back-drafts, leaky fittings, and flow into any visible cracks in the floor or walls. The smoke stick will be passed near the equipment near where possible leaks could occur. The behavior of the smoke will be observed if the smoke is sucked into or blown away from the equipment a possible leak will be noted and repairs made. The system will be shut down temporarily to confirm that the audible alarm functions as designed.

Items identified during the routine monitoring and maintenance visits pertaining to system design and/or performance will be addressed during the inspection visit if possible, or a follow-up visit will be scheduled. Any needed repairs or system modifications will be documented and the as-built diagram (Figure 1) will be updated as necessary. The attached inspection form will be used during the visit.

NON-ROUTINE ACTIVITIES

The owner/occupant will be provided with instructions and contact information in the event repairs may be required on the system, and for requesting maintenance activities. These instructions include the following:

- Problem with system operation, including an alarm condition, excessive noise or vibration, unexpected shut-down, etc.;
- Major renovations to the building structure; or
- Any system damage.

Upon being contacted by an owner/occupant of the site about a suspected problem with the system, a site visit will be scheduled. During on-site visits, the inspector will investigate reported problems, identify the potential causes, and implement the necessary repairs. To the extent practical, repairs will be made during the investigation visit. However, if repairs cannot be executed at that time, a follow-up visit will be scheduled for a later date that is convenient to the owner/occupant. Upon completion of the action, the investigation/repair activities will be documented and the as-built diagram (Figure 1) will be updated as needed.

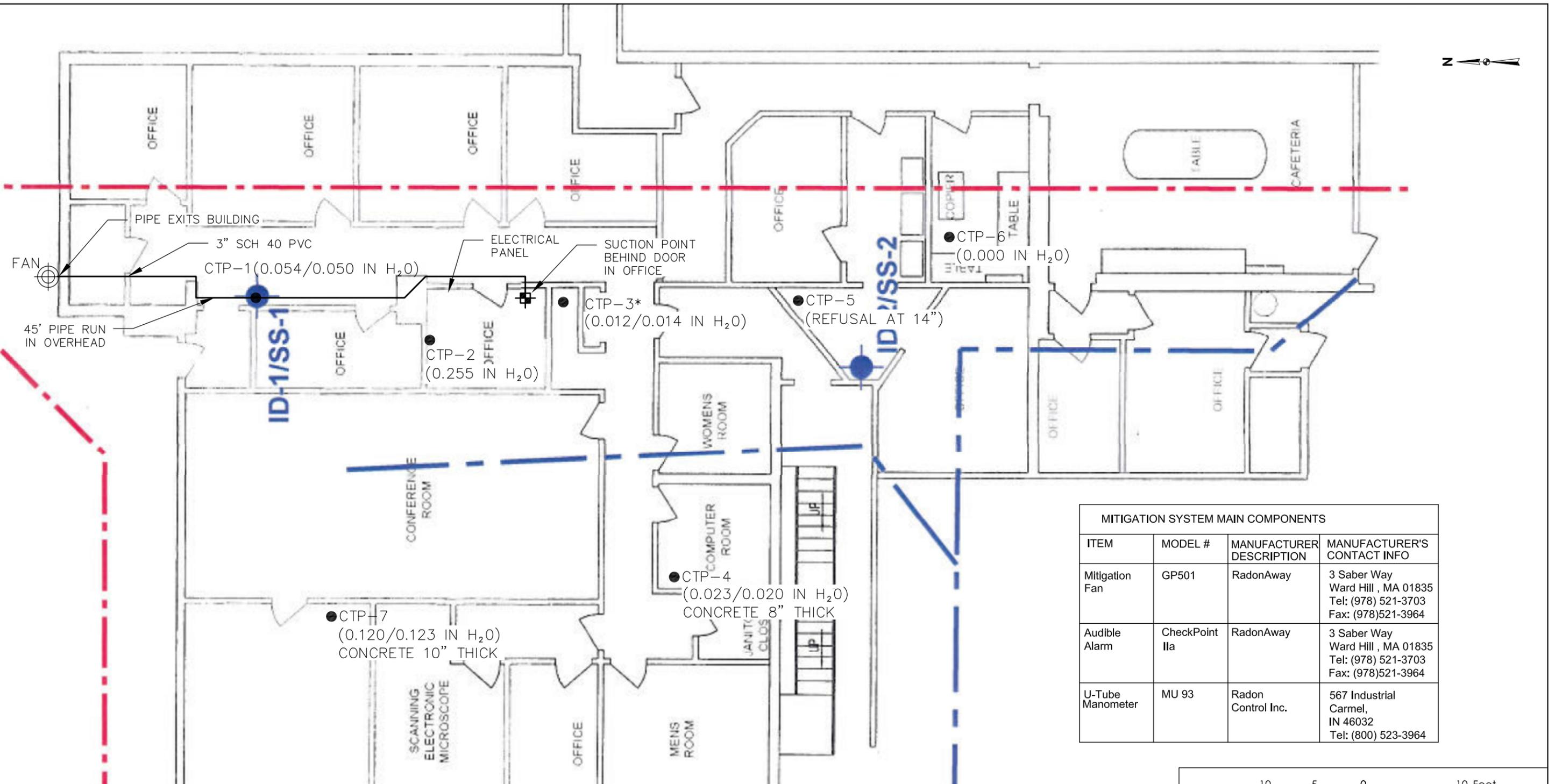
The table below shows the contact names and information for the owner/occupant to use if system maintenance is required or the systems stops running. .

Name	Contact Information
William Barber BP Project Manager	Office: 216-271-8038 Cell Phone: 216-408-1660
George Hermance Parsons-Buffalo Project Manger	Office: 716-541-0730 Direct: 716-407-4990 Cell Phone: 716-861-7882

SYSTEM SHUTDOWN/DECOMMISSIONING PLAN

After 2 years of operation a sample of the sub slab air will be collected and analyzed for VOCs. If the results are within acceptable levels the system will be shut down and retested in 24 hours. If sample results are still at acceptable levels a plan for decommissioning the system will be submitted to DEC.

\\guelph-01\data\PR\Projects\TR0318 - Atlantic Richfield_New York State\Eckona\AutoCAD\Cobain As-Built Figure 1.dwg



MITIGATION SYSTEM MAIN COMPONENTS			
ITEM	MODEL #	MANUFACTURER DESCRIPTION	MANUFACTURER'S CONTACT INFO
Mitigation Fan	GP501	RadonAway	3 Saber Way Ward Hill, MA 01835 Tel: (978) 521-3703 Fax: (978)521-3964
Audible Alarm	CheckPoint IIa	RadonAway	3 Saber Way Ward Hill, MA 01835 Tel: (978) 521-3703 Fax: (978)521-3964
U-Tube Manometer	MU 93	Radon Control Inc.	567 Industrial Carmel, IN 46032 Tel: (800) 523-3964

- LEGEND:**
- APPROXIMATE LOCATION AND DESIGNATION OF INDOOR AND SUB-SLAB AIR SAMPLES. COLLECTED BY GZA GEOENVIRONMENTAL
 - APPROXIMATE LOCATION OF SANITARY SEWER LINE
 - APPROXIMATE LOCATION OF STORM SEWER LINE
 - SUCTION POINT
 - CTP-1 COMMUNICATION TEST POINT. VACUUM MEASURED IN INCHES OF WATER (IN H₂O)
 - * COMMUNICATIONS TEST POINT WAS NOT DRILLED COMPLETELY THROUGH SLAB (>14" THICK)

- NOTES:**
1. BASE MAP ADAPTED FROM A SITE PLAN PROVIDED BY THE CLIENT AND FIELD OBSERVATIONS.
 2. THE SIZE AND LOCATIONS OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.
 3. UTILITY LOCATIONS ADAPTED FROM A COPIED PORTION OF A UTILITY DRAWING PROVIDED BY ST. GOBAIN.
 4. APPLIED VACUUM AT EXTRACTION POINT IS 2 IN H₂O.
 5. CONCRETE AT EXTRACTION POINT IS 6" THICK.

As-Built Sub-Slab Depressurization System

Saint Gobain Office Area
6600 Walmore Road Facility
Wheatfield, New York

Guelph	07-Dec-2010	Figure: 1
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OPERATION, MONITORING AND MAINTENANCE CHECKLIST

Date: _____

Checklist Completed By: _____

Project Number: _____

Property Location: _____

System Installation Date: _____

The purpose of this form is to document the operation and maintenance of the sub-slab depressurization system to provide assurance that the system is functioning as designed or identify and execute any actions required to achieve the mitigation of subsurface vapor intrusion of volatile organic compounds to indoor air

1. MITIGATION SYSTEM INSPECTION

Occupant Interview

Any concerns identified by the building occupants? YES NO

Comments / Action Items

Occupant's Initials: _____

External Piping

Vent pipes securely fastened to building	YES	NO	
Are there any visible openings or breaks in the pipe system	YES	NO	
Is the rain cap present and intact at discharge point	YES	NO	N/A
Inspection of the exhaust point verified that no air intakes have been located nearby	YES	NO	
The sealing/caulking around wall penetrations is intact	YES	NO	

Comments / Action Items

Mitigation Fan

Fan is mounted securely to building (no excessive vibrations during operation)	YES	NO	
Fan cover is installed	YES	NO	
No visible damage to fan or cover	YES	NO	

Comments / Action Items

OPERATION, MONITORING AND MAINTENANCE CHECKLIST

Internal Piping

Vertical and horizontal pipe runs are secured, including at all penetration points	YES	NO	
The sealing/caulking is intact around the extraction point or points through the basement floor, crawlspace floor, and/or crawlspace/basement wall interface.	YES	NO	
Vibration dampener installed and intact (pertains to fan mount)	YES	NO	N/A
Mitigation system operation placard present and visible/legible	YES	NO	
Contains description of major components, valid contact number and instructions for occupant inquiries and/or system failure	YES	NO	
Mitigation system maintenance tag present and filled out	YES	NO	
Date of last inspection shown on tag: _____			
U-tube manometer present and intact at each extraction point	YES	NO	

Comments / Action Items

Electrical

Electrical connections secured	YES	NO	
Junction boxes are closed	YES	NO	
Conduit is supported	YES	NO	
Circuit breakers controlling the mitigation fan and alarm circuits operate and are labeled "Mitigation System"	YES	NO	
Power switch tagged with intact tamper proof seal	YES	NO	
Audible alarm present	YES	NO	
Audible alarm switch in "on" position (light on alarm is green)	YES	NO	

Comments / Action Items

2. OPERATIONAL CHECKS

Fan is operating			
Noise and Vibration within normal range	YES	NO	
Alarm sounds when fan is turned off	YES	NO	
U-Tube manometer indicating negative sub slab pressure	YES	NO	
U-Tube Manometer Reading: Location: _____ Vacuum _____ in H ₂ O			
U-Tube Manometer Reading: Location: _____ Vacuum _____ in H ₂ O			
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U-Tube Manometer Reading: Location: _____ Vacuum _____ in H ₂ O			
U-Tube Manometer Reading: Location: _____ Vacuum _____ in H ₂ O			
Smoke test performed on internal penetrations and pipe joints			
Smoke test indicated no leaks	YES	NO	N/A
Smoke test confirms air flow into sump	YES	NO	N/A
Back draft test confirms proper air flow at combustion appliances	YES	NO	N/A
Smoke test indicated no leaks	YES	NO	N/A

OPERATION, MONITORING AND MAINTENANCE CHECKLIST

3. MAINTENANCE

Fan last replaced on (date): _____

Fan due to be replaced; _____

Additional Maintenance Action Items Performed

4. ADDITIONAL ACTION ITEMS/ COMMENTS/COMPLETION DATES

5. CERTIFICATION

I certify that the information on this form is true, accurate and complete (all blanks filled in) to the best of my knowledge and ability, and that I have the appropriate training and experience to perform this monitoring/inspection:

Name: _____ Affiliation: _____

Signature: _____ Date (dd/mm/yy): _____/____ am/pm