



REMEDIAL LETTER REPORT

SUMMARY OF THE INSTALLATION OF THE SUB-SLAB DEPRESSURIZATION SYSTEM INSTALLATION AT VFW POST 2674

WORK ASSIGNMENT D003825-09.5

**NORTH FRANKLIN STREET SITE
WATKINS GLEN (V)**

**SITE NO. 8-49-002
SCHUYLER (C), NY**

Prepared for:
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 Broadway, Albany, New York 12233

Denise M. Sheehan, Commissioner

DIVISION OF ENVIRONMENTAL REMEDIATION

URS Corporation
77 Goodell Street
Buffalo, New York 14203

**Draft
August 2006**

**REMEDIAL LETTER REPORT
SUMMARY OF THE INSTALLATION
OF THE SUB-SLAB DEPRESSURIZATION SYSTEM
AT VFW POST 2674
NORTH FRANKLIN STREET SITE
SITE #8-49-002
VILLAGE OF WATKINS GLEN, NEW YORK**

Prepared For:

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
WORK ASSIGNMENT D003825-09.5**

DRAFT

Prepared By:

**URS CORPORATION
77 GOODELL STREET
BUFFALO, NEW YORK 14203**

AUGUST 2006

August 1, 2006

Mr. David J. Chiusano, Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
12th Floor
Albany, New York 12233-7017

**RE: NYSDEC Standby Contract
Active Venting System Operation and Maintenance # D003825-09.5
North Franklin Street Site, Site No. 8-49-002
Remedial Letter Report: Summary of the Installation of the Sub-Slab Depressurization
System Installation at VFW Post 2674**

Dear Mr. Chiusano:

URS Corporation (URS) has prepared this letter report to summarize the installation of a sub-slab depressurization (SSD) system at the VFW Post 2674 located at 30 North Franklin Street in the Village of Watkins Glen, Schuyler County, New York. The work was performed in accordance with the Project Management Work Plan/ Budget Estimate (URS, May 2005) and the NYSDEC approved Scope of Work (URS, August 2005). The contractor performed all the work in substantial compliance with the contract specifications developed by URS and NYSDEC for this project.

Geologic NY, Inc. of Cortland, New York (Geologic), a Women-Owned Business Enterprise (WBE), was contracted to install the SSD system in the storage room of the Seneca Market Building. The installation of the SSD system was sole sourced to Geologic due the value of the installation being less than \$10,000.00.

A site visit was conducted on April 5, 2006, as per the SOW, and was attended by representatives of URS, Geologic, and the VFW Post 2674 commander. The purpose of the site visit was to estimate the material quantities needed to install the SSD system. A Trip Report summarizing the activities of the site visit is provided in Attachment A. The layout of the SSD system discussed during the site visit was later revised to the present configuration.

A URS representative provided oversight during the mitigation activities. This letter report is provided to summarize and document the installation of the SSD system.

Site Description

The North Franklin Street inactive hazardous waste disposal site is an approximately 0.3 acre parcel of land situated in the Village of Watkins Glen, Schuyler County. The site is located in an urban area approximately 400 feet south of Seneca Lake (Figure 1). Two (2) structures formerly existed on site. The building referred to as the "Former Auto Museum" was a single-story metal building on a concrete slab. The second structure was referred to as the "Former Dry Cleaning Building." This was a two-story brick building that also included two (2) unoccupied single-story brick sheds to the east and the "VFW Building attached to the south." The former dry cleaning building and former auto museum were vacant

and were demolished during June of 2006 under the Brownfield Cleanup Program. The cleanup is necessary to address groundwater beneath the site that has been contaminated with dry cleaning chemicals known as volatile organic compounds (VOCs), primarily tetrachloroethene (perchloroethene or PCE).

VFW Post 2674 (30 North Franklin Street) is located south of and adjacent to the North Franklin Street site (Figure 1). An indoor air investigation conducted during the winter of 2006 detected elevated concentrations of PCE in the soil vapor beneath the VFW Post building slab exceeding the NYSDOH sub-slab criteria for PCE. The findings of that investigation may be found in the *Field Investigation Letter Report: Soil-Gas Conduit Sampling and Indoor Air Sampling at VFW Post 2674 and the Seneca Market Building* (April 2006). Based upon these results, NYSDOH has recommended the installation of a mitigation system to minimize the potential exposure associated with soil vapor intrusion.

Mitigation Activities

Mitigation activities were performed at VFW Post 2674 from June 19 through 21, 2006. Geologic performed the following mitigation services in accordance with the specification found in the SOW:

- Installed three suction-points and nine vapor-points through the interior concrete slab. A ten-inch deep pit was excavated below each suction point.
- Connected the suction points using 4-inch diameter Schedule 40 PVC piping. The PVC piping was installed through the interior drop ceiling, and out of the building through the east wall. Gate valves were installed in the piping from each suction point to control vacuum pressure at each suction point. The PVC piping was pitched so that any condensation from below the fan would run down the piping and into the suction points.
- A Fantech blower model HP 220 was mounted vertically on the outside of the east wall. The blower's discharge pipe runs vertically three-stories and terminates two feet above the roofline. The exhaust pipe was installed above and greater than 10 feet from any window.
- Geologic sealed around the suction points, apparent slab cracks, and all penetrations through the building structure with silicone caulk.
- Mounted three magnehelic vacuum gauges (one for each suction point), a vacuum switch, and a red indicator light are connected to the system piping. The vacuum switch will activate the red indicator light if there is a system failure (i.e., no vacuum).
- A dedicated electrical circuit was installed to the fan, vacuum switch, and red indicator light. A dedicated breaker was installed in the breaker box.

Following the installation of the SSD system, URS performed post-mitigation testing. The post-mitigation testing consisted of turning the system on and allowing it to run for 1-hour prior to drilling nine test holes to confirm that the system was producing a negative pressure beneath the concrete slab. A ½-inch drill bit was used to drill through the concrete slab. An Engineering Solutions Omniguard III differential pressure recorder was used to check for adequate vacuum in each test hole. The vacuum readings at nine test holes ranged from -0.004 to -0.058 inches of water, which meet or exceed the minimum of -0.004 inches of water required in the specification found in the Scope of Work. All test holes were filled with hydraulic cement at the completion of the vacuum testing. A detailed sketch of the storage room may be found in the field notes included in Attachment B.

Mr. Bob Estes (VFW Post 2674 Commander) was present at the completion of the post-mitigation testing. The URS representative instructed Mr. Estes on the operation of the SSD system, and how to determine if the system was operating properly.

A copy of the URS representative's field notes and Daily Construction Reports may be found in Attachment B. The URS field notes documents the daily work performed, includes a detailed field sketch and includes the vacuum testing results. A photographic log of the mitigation activities may be found in Attachment C. A copy of a report provided by Geologic may be found in Attachment D. The Geologic report documents the quantities of supplies used and includes a sketch of the mitigation system layout.

Cost

The estimated budget for the installation of four SSD systems is \$20,000 and may be found in the Project Management Work Plan/ Budget Estimate (URS, May 2005). The amount of the Geologic subcontract was \$6,875.00. However, their actual cost was \$5,875.00. There were no change orders for this work assignment.

The following tables, figures and attachments are included as part of this field investigation letter report:

Figures

Figure 1	Project Site
Figure 2	VFW Post – SSD Point Locations

Attachments

Attachment A	Trip Report
Attachment D	URS Field Notes
Attachment C	Photographic Log
Attachment D	Contractor Report

Should you have any questions or comments, please do not hesitate to contact me at 716-856-5636.

Sincerely,

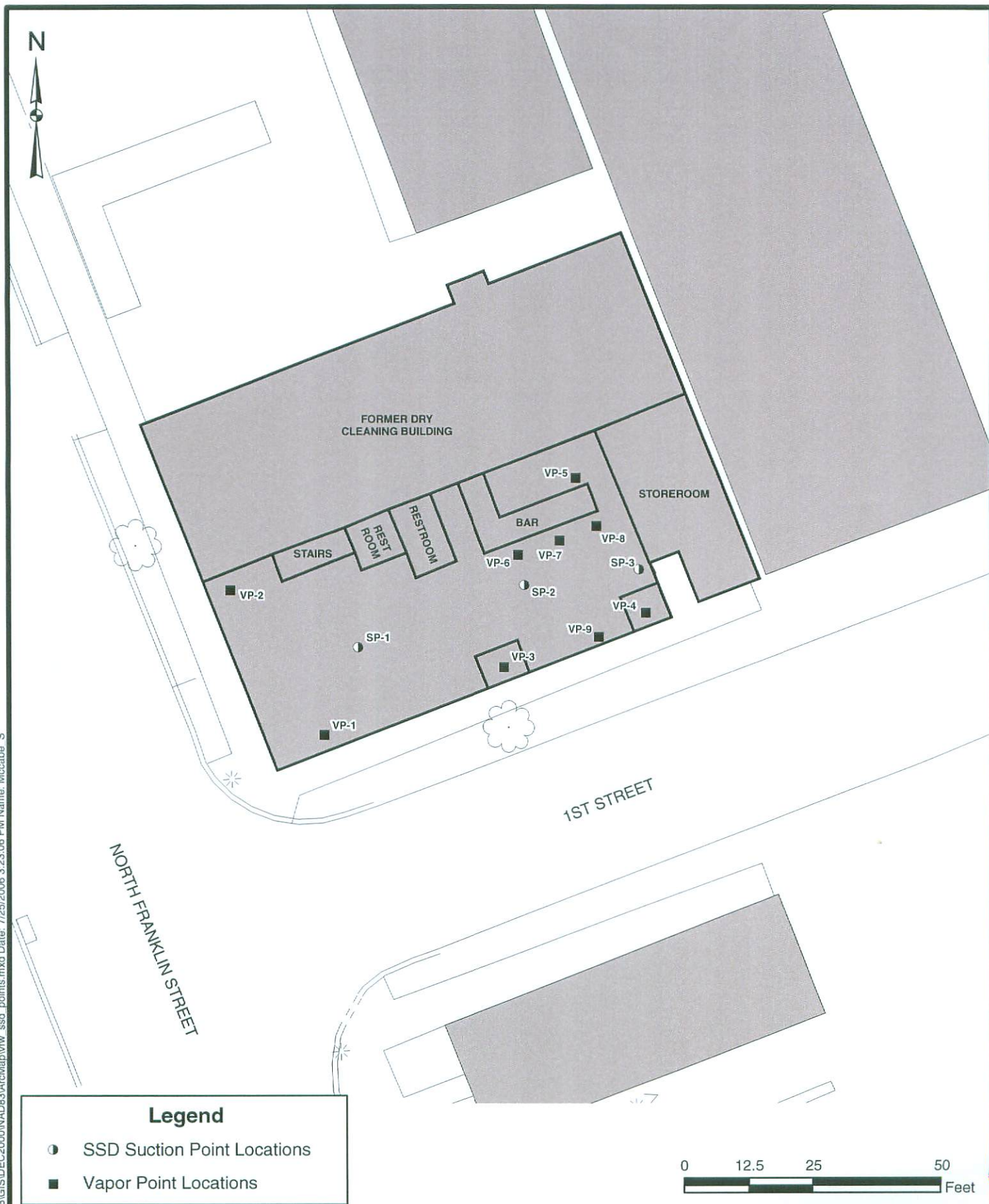
URS Corporation

Charles E. Dusel, Jr.
Sr. Project Manager

cc: File: 05.35388 (C-1) (11173258)

FIGURES

N:\1173258.00\0000\DE\GIS\DEC2000\NAD83\ArcMap\vwfwd_ssd_points.mxd Date: 7/25/2006 3:23:06 PM Name: McCabe S



URS

VFW POST
SSD POINT LOCATIONS

FIGURE 2

ATTACHMENT A

TRIP REPORT

URS Corporation

77 Goodell Street
Buffalo, New York 14203
Telephone: (716)-856-5636
Fax: (716)-856-2545

DATE 4/5/2006

DAY	S	M	T	W	TH	F	S
				X			

DAILY CONSTRUCTION REPORT

PROJECT: VFW Post SSD System Pre-Bid Meeting
CONTRACTOR: Geologic NY, Inc.
URS JOB No. 11174211
URS PROJECT MANAGER: Chuck Dusel

WEATHER	Bright Sun	Clear	Overcast	Rain	Snow
TEMP	To 32	32-50 X	50-70	70-85	85 and up
WIND	Still	Moder X	High	Report No.	
HUMIDITY	Dry	Moder X	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
Geologic NY, Inc.			Joe Menzel
of backfill material would be conducive to a one point suction system. A test hole to determine the type of backfill beneath the slab could be made in the closet of the womens restroom which is located under the stairway.			

VISITORS

Time	Personnel	Representing	Remarks
	Bob Estes	VFW Post	Post Commander

EQUIPMENT AT THE SITE:

CONSTRUCTION ACTIVITIES:

6:00	Leave Buffalo, NY.
9:00	Arrive at VFW Post in Watkins Glen, NY. Joe Menzel of Geologic New York, Inc. arrives at site and meet up with Mr. Bob Estes - Commader of the VFW Post. Scott and Joe explain to Mr. Estes the basic design and operation of the proposed sub-slab depressurization (SSD) system. Scott explains that the NYSDEC will be responsible for the cost of installing the SSD system but the VFW will be responsible with the operation cost of the system which is on the order of approximately \$75 to \$100/ year. Mr. Estes is OK with the cost of running the system which once turned on shall be operational 24 hours a day and 365 days a year. URS will perform a diagnostic test by drilling holes in the corner of the floor slab to measure the amount of vacuum present and make sure that there is sufficient vacuum.
9:15	Perform walk over of building and inspect potential placement and routing of 4-inch diameter PVC suction lines. Inspect the outside of the building and the second and third floors of the building also. The inspection has indicated that there may be 2 possible SSD system construction configurations. These are described below:
1.	The first SSD system set up would run the suction pipes down the support columns which may be found along the central axis of the first floor. Initially, Geologic would install 2 suction points. A third or fourth point would be installed depending on the results of the vacuum testing. The suction pipe would be run up the support columns and then connected running along the cental axis of the room to the rear (east side) of the building. The suction pipe would then be run through the building wall (20-inches of brick) into the cinder block addition and on to the outside of the building. After exiting the rear of the

SHEET 1 OF 2

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backside of page

BY: Scott McCabe Title: Sr. Geologist
REVIEWED BY: Chuck Dusel Project Manager: Chuck Dusel

DAILY CONSTRUCTION REPORT (cont'd)

REPORT No: _____

PROJECT: VFW Post SSD System Pre-Bid MeetingCONTRACTOR: Geologic NY, Inc.URS JOB No. 1174211DATE: 4/5/2006**CONSTRUCTION ACTIVITIES (cont'd):**

building, the suction pipe would be connected to a suction fan and the exhaust pipe would be run vertically to above the roof of the building. The only problem with this set up would be that a pitch of the pipe back to the suction points may be lost when going through the brick wall. Geologic suggested the installation of a drain line which would go through the floor and beneath the slab. The drain would be installed at the point where the suction line enters the cinder block addition. A check with Jon Sundquist of URS indicated that this would be acceptable and has been done at other sites.

2. The second SSD system set up would run a single suction pipe through the south east corner floor of the mens restroom. The suction pipe would be run up through the ceiling and into the second floor. Once the suction pipe is run to the ceiling of the second floor it will be run along the central axis to the rear of the building where it will be run through the building brick wall. The suction pipe would be connected to a suction fan once outside the building and the exhaust pipe would be run vertically to above the roof of the building. This set up would allow for the installation of only one suction point, which would be limited by the backfill material encountered directly beneath the floor slab. A gravel type of backfill material would be conducive to a one point suction system. A test hole to determine the type of backfill beneath the slab could be made in the closet of the womens restroom which is located under the stairway.

11:00 Scott and Joe go next door to Former Dry Cleaners and remove the SSD fan. The wire from the fan was disconnected and covered with wire nuts and electrical tape. A 4-inch PVC cap was placed on the exhaust pipe. The electrical service to the Former Dry Cleaners was shut off on 4-3-06 by the Village of Watkins Glen at the request of URS.

12:00 Off site for Buffalo, NY

Note: A field sketch of the VFW Building is attached.

SHEET 2 OF 2

BY: Scott McCabe
REVIEWED BY: Chuck Dusel

Title: Sr. Geologist
Project Manager: Chuck Dusel

ATTACHMENT B
URS FIELD NOTES

4-11-06

0600 S. McCarrie Leaves Buffalo for trip to VFW Post
 0900 S. McCarrie arrives at VFW Post in Watkins Glen
 WX: clear, sunny, 50°F

Personnel	Affiliation	ON	OFF
Scott McCarrie	URS-Buffalo	0900	1200
Joe Mazzal	Georgic NY, INC.	0900	1100
Bob Restes	VFW Post Commander	0900	1100

0900 - START TO WALK OVER VFW & BUILDING LOCATIONS at possible suction points. Scott & Joe explain to Bob the purpose & operation of SSD system. Bob would like us to make as many cosmetic repairs as possible to attempt to hide suction pipes → VFW is open to public & interior is nicely finished w/ finished ceiling.

1000 WE HAVE 2 options to run the suction lines

- ① Run suction lines up the support columns in the bar area, starting with the north side of the 1st & 2nd column from the east. The suction lines would be run along the side of wall on each side to the back (east) side of the building, out through the side-back addition (around the window frames) up the back of the building and above the roof. (Took photos). (and add 3rd suction point)
- ② Run single suction point up through SE corner of mezz. bathroom, up through ceiling to 2nd floor, to the back of the building, out and then up above the roof line. This will be dependent upon the sub slab condition (what was used to build basement). A test hole may be drilled in the closest of the columns near what goes under the stair way.

Continued on Page _____

Read and Understood By

Scott McCarrie

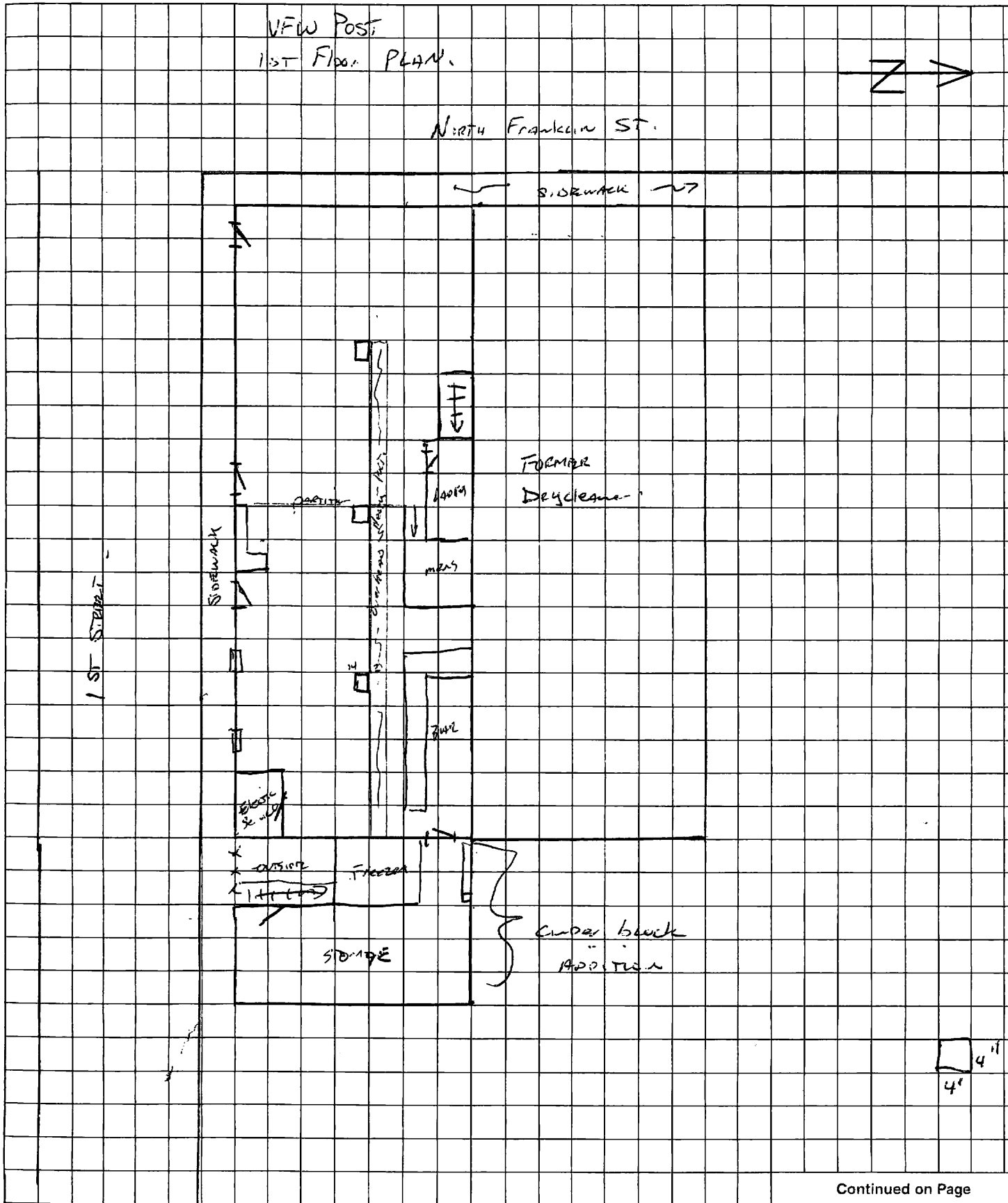
Signed

4/5/06

Date

Signed

Date



Continued on Page _____

Read and Understood By _____

Scott M. Cooke

Signed

4/5/06

Date

Signed

Date

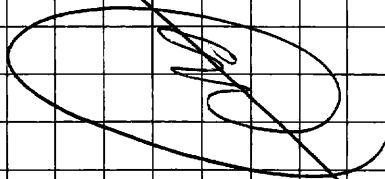
PROJECT MFS - VFW SSD BID USIT

Continued From Page _____

NOTE - can we put in drain at where pipe goes thru rear (exterior) wall into corner block addition. THE wall is ~ 20" THICK, we may loose patch; A drain would solve this problem.

1140 SCOUT & JOR get VFW neighbor (Ding Chasen) & remove SSD fan from exterior OF THE BUILDING.

1240 JPP SITE



Continued on Page _____

Read and Understood By _____

Scott McE
Signed

4/5/06
Date

Signed _____

Date _____

WATKINS GLEN.

6/19/06

0530 LEAVE BUFFALO.

wx: clear, sunny, 78°F

0715 Stop in garage, NY TO TAKE photos
at NYSEG - Border City Site for
2 additional manure cells.0830 Arrive at VFW - Watkins Glen to
meet Grady, NY Inc personnel
for installation of SSD system.1000 Joe Mansel → Grady outside
- will put test hole in lawn
room closed to assess what1100 Speed fill material is below floor
Bob Long - NYSEG outsideSays Joe coring at 1st column
(South side of column) near NES2 TEST TO SEE VACUUM in
funnel room (2 middle of bell)Have -.002 inch of H_2O OK, actual blow will have no
cfm1130 Move to 3d column (South side of
column) near NES

Vacuum is -.004 just under

Stop vac.

1630 → 50% OF Garage drops

PVC cleaner on floor, removes

mat from ~20 tiles,

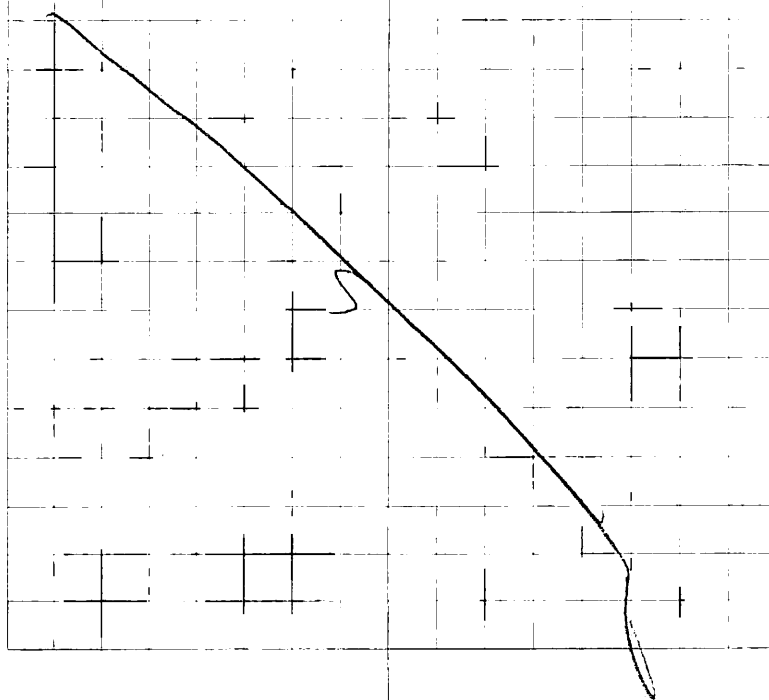
puts on go outside, open

doors to building to air out

smell - will need to get floor washed

1730 smell still present,
pump up set, keep putting
pipe together.

1820 OFF SITE



6/20/06

0730 Arrive on site.

George onsite. - Joe Mangel & Tim (over gas).

→ going to install fan and exhaust pipe on outside of building.

Tim - going to turn out suction pipe.

Scott talks w/ Pete or VFW will try & work over area affected by MC down.

0800 Davis Chusman - NYSDEC onsite, going to look at demolition of Drycleaners.

0830 Chuck David onsite (JRS PM)

→ walk over former Drycleaners.

→ need to find wells buried or wicker by contractor.

→ go to VFW to inspect work.

0900 go w/ Dave & Chuck to look at BTEX heavy locations over all Chloro Motors (cover report)

Chloro Motors and cores over to talk Dave.

- He bought property in 1980 from Exxon mobile, formerly owned by "Sonny" who folded in 1978.

→ Dave would like to do

Gpl - En 31 to find tanks.

at all 3, found gas stations

→ Dave asks owner for any historic documents w/ tanks.

→ owner says contracts removed tanks & stands before he bought building.

→ Scott check note full per.

- Dave & Chuck to look at Sonthe else.

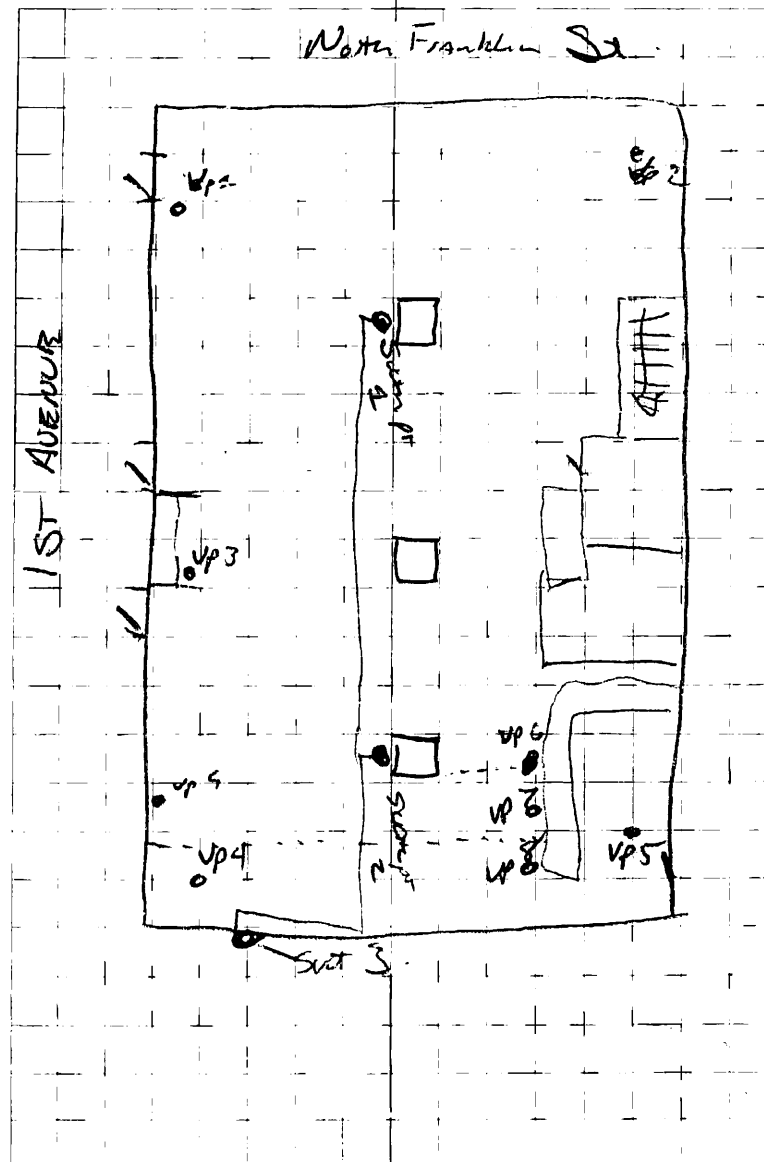
→ Scott open port is ~5' deep, all 3' of used motor oil on top.

→ probe of location

- 0930 Bob Log - MYSELF OUTSIDE
 1100 Bob, Chuck & Dave OFF SITE.
 TOR working on hauling up FAN
 & electrical. waiting for 4"
 gate valves to arrive (VPS)
 → Tim working on making wood
 covers still.
 1515 VPS ARRIVES WITH GATE VALVES
 TOR & Tim work on installing gate
 valves.
 1620 VALVES INSTALLED, START UP.
 SYSTEM.
 1720 PERFORM VACUUM TEST OK

VP-1	-0.016	inches of H ₂ O
VP-2	-0.007	" "
VP-3	-0.006	" "
VP-4	-0.000	" "
VP-5	-0.000	" "

USE OMNI GUARD III
 Differential Pressure Recorder.



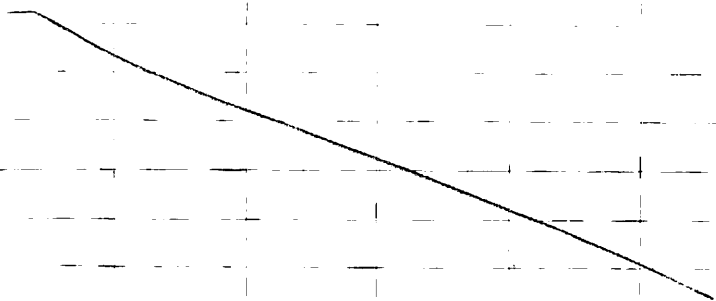
1745 Call Jon Sundquist, TOLD
TO STOP EAST at 5' intervals
From Section 2 to find
when loss of suction ins.

VP-6	- 0.008	units of flow
VP-7	- 0.017	" "
VP-08	- 0.000	" "
VP-09	- 0.004	" "

NOTE: Rodgers in Floor map indicate
Subsurface structure. That is
a vapor barrier.

→ Jon Sundquist says to clear in
Area, if no vacuum add 3'0
section put
→ clear up

1815 OFF SITE



6/21/06

0730 ARRIVE AT VFW.

WX: Clear, sunny 80°

JOE 2. Tilt of Gravelly sand

→ South checks vacuum in

VP-08 & VP-09 = 0.000 and 4.0

will add 3'0 section put
below where suction line leaves
Building.

0830 JOE pulls out concrete cone,

There is a 2" steel pipe at
Bottom of Hole.

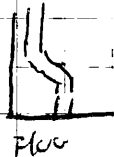
→ Try & insert pipe auger,
no luck

East wall



→ TRAP drain line to unused &
cut off line in back room.

→ move ahead 4" & use 45°
to bring suction port away from
wall



0930 Start System
1030 measure vacuum at Filler
pump

VP-05 - - 0.008 inch of H_2O
VP-08 - - 0.008 inch of H_2O ✓
VP-04 - - 0.058 inch H_2O

→ Joe installs sample port Bolen
fan on outside of Bolen

1100 Josh - getting access to
help frame in piping
Joe OFF SITE

1230 install sample port & moisture
bypass on SSD system at
Severus Market building.

1300 - get sample of TCR (vinyl)
to replace where floor was
ruined by PVC cleaner (20 times),
site finished

1545 - 7 need to put rollers under
Raton for BETX investigation
& replace floor tile

→ Grading of site
Get plan to burials

6/30/06

DASNY Omit WA/Roch. PC
Well Decom.

Contacts

Dave Viggiani (MOC) 585-241-2630
Bob Halley (RPC) 585-241-1725
Dan Gaffney (DASNY) 585-245-5156
Sheldon Nozik (URS) 716-908-5805
O: 716-923-1160

Rocky Baye (Am. Aug.) 315-436-8694

Ryan Baye 315-436-0991

Jeremy Baye 315-436-1238

James Pavone (Crane Oper.) 315-623-7189

6/30 Mileage: 94,696 - 94,980 = 284.0 mi

0730: Arrive on site, sign in @
RPC & Contact Bob Halley.

- Pick up Security Badge & Pump house
key from dispatch office.

- Bob H. will not be in on 7/3/06.

0800: Called Dave Viggiani & left
a message w/ cell #.

0830: Call Rocky, they are to
arrive shortly.

0840: Meet Crane operator @ site

**77 Goodell Street
Buffalo, New York 14203
Telephone: (716)-856-5636
Fax: (716)-856-2545**

DAY	S	M	T	W	TH	F	S
	X						

PROJECT: VFW Post 2674 SSD system Install
CONTRACTOR Geologic NY, Inc.
URS JOB No. 11174211
URS PROJECT MANAGER: Chuck Dusel

R	Bright Sun	Clear X	Overcast	Rain	Snow
P	To 32	32-50	50-70	70-85 X	85 and up
D	Still	Moder X	High	Report No.	
Y	Dry	Moder X	Humid		

Name of Contractor	Non-manual	Manual	Remarks
Geologic NY, Inc.		X	Joe Menzel

Time	Name	Representing	Remarks
1100	Bob Long	NYSDEC	

Core drill and hand tools	
---------------------------	--

Geologic cored concrete slab in two locations with 4-inch core bit for the installation of two suction points.

A ten-inch deep pit was excavated below the bottom of the concrete slab at each core hole.

Geologic installed 4-inch diameter Schedule 40 PVC through the core hole at each suction point. The PVC was run vertically to the ceiling from each suction point. A horizontal 4-inch PVC piping was installed connecting the two suction points.

The horizontal piping was pitched back towards each of the suction points for drainage purposes.

BY: Scott McCabe
REVIEWED BY: Scott Fischer

N\11173258\Excel6-19to21-06 dailyI con.

URS Corporation

77 Goodell Street
Buffalo, New York 14203
Telephone: (716)-856-5636
Fax: (716)-856-2545

DATE 6/20/2006

DAY	S	M	T	W	TH	F	S
			X				

DAILY CONSTRUCTION REPORT

PROJECT: VFW Post 2674 SSD system Install
CONTRACTOR: Geologic NY, Inc.
URS JOB No. 11174211
URS PROJECT MANAGER: Chuck Dusel

WEATHER	Bright Sun	Clear X	Overcast	Rain	Snow
TEMP	To 32	32-50	50-70	70-85 X	85 and up
WIND	Still	Moder X	High	Report No.	
HUMIDITY	Dry	Moder X	Humid		

AVERAGE FIELD FORCE

Name of Contractor	Non-manual	Manual	Remarks
Geologic NY, Inc.		X	Joe Menzel

VISITORS

Time	Name	Representing	Remarks
800	Dave Chiusano	NYSDEC	
	Bob Long	NYSDEC	

EQUIPMENT AT THE SITE:

Core drill and hand tools

CONSTRUCTION ACTIVITIES:

A gate valve was placed in-line of the vertical piping from each suction point prior to the connection with the horizontal pipe. The horizontal pipe was run through the east wall of the VFW. A Fantech blower model HP220 was mounted vertically on the outside of the VFW at the point where the horizontal pipe penetrated the east wall. A 4-inch diameter, PVC discharge pipe was run vertically from the blower to approximately 2 feet above the top of the roof. The pipe was fastened to the outside of the VFW with anchor bolts. The discharge point is located greater than 10 feet from all windows. All cracks, slab penetrations and wall penetrations were sealed with silicone caulk. Geologic installed 12-3 wiring in 3/4-inch PVC conduit from the breaker box to the suction fan. A red indicator light, hooked up to a vacuum pressure switch were also hooked up to the fan circuit. The red light will go on if there is a loss of vacuum pressure in the discharge piping. The red light and vacuum pressure switch were mounted on the east wall. The fan, red indicator light and vacuum pressure switch were connected to a dedicated circuit breaker installed in the breaker box. The breaker was labeled indicating that it was for the SSD system. A magnehelic guage was also attached to the suction pipe from each suction pint. The SSD system was started and allowed to run for 1 hour and 5 minutes. After the hour and 5 minutes, nine test holes were drilled through the concrete slab to test each suction point. Nine vapor points were vacuum tested. Vapor points VP-1 through VP-3, VP-6, VP-7, and VP-9 exhibited vacuums ranging from -0.004 to -0.016 inches of water. Vacuum testing was conducted using an Omni Guard III differential pressure recorder. Vapor points VP-4, VP-5, and VP-8 did not register a vacuum possibly due to a vapor barrier in the subsurface structure.

SHEET 1 OF 1

☐ X - designates info on
backside of page

BY: Scott McCabe
REVIEWED BY: Scott Fischer

Title: Sr. Geologist
Title: Geologist

URS Corporation

77 Goodell Street
Buffalo, New York 14203
Telephone: (716)-856-5636
Fax: (716)-856-2545

DATE 6/21/2006

DAY	S	M	T	W	TH	F	S
				X			

DAILY CONSTRUCTION REPORT

PROJECT: Seneca Market SSD system Install
CONTRACTOR Geologic NY, Inc.
URS JOB No. 11174211
URS PROJECT MANAGER: Chuck Dusel

WEATHER	Bright Sun	Clear X	Overcast	Rain	Snow
TEMP	To 32	32-50	50-70	70-85 X	85 and up
WIND	Still	Moder X	High	Report No.	
HUMIDITY	Dry	Moder X	Humid		

AVERAGE FIELD FORCE			
Name of Contractor Geologic NY, Inc.	Non-manual	Manual X	Remarks Joe Menzel
VISITORS			
Time	Representing	Representing	Remarks

EQUIPMENT AT THE SITE:
Hand tools
CONSTRUCTION ACTIVITIES:
Due to a lack of suction from three vapor points, a third suction point was installed.
Geologic cored concrete slab at third location with 4-inch core bit for the installation of suction point #3 which is located directly below the point where the horizontal pipe penetrates the east wall fo the VFW.
A ten-inch deep pit was excavated below the bottom of the concrete slab at the 3rd core hole.
Geologic installed 4-inch diameter Schedule 40 PVC through the core hole at suction point #3. The PVC was connected to to suction points #1 and #2. The slab penetration was sealed with silicone caulk.
After installing suction point number three, vapor points VP-4, VP-5, and VP-8 exhibited vacuums of -0.058, -0.008, and -0.008 inches of water respectively.
The vapor points were sealed, and the SSD system was left running.
Mr. Bob Estes (VFW Post 2674 Commander) was instructed on operation of the SSD system by URS, and that the red indicator light would signify the loss of vacuum.

SHEET 1 OF 1

☒ X - designates info on
backside of page

BY: Scott McCabe
REVIEWED BY: Scott Fischer

Title: Sr. Geologist
Title: Geologist

ATTACHMENT C
PHOTOGRAPHIC LOG

North Franklin Street - VFW Post 2674 Sub-Slab Depressurization System Installation



Cored slab at suction point #1.

North Franklin Street - VFW Post 2674 Sub-Slab Depressurization System Installation



Suction point #1.

North Franklin Street - VFW Post 2674 Sub-Slab Depressurization System Installation



Final suction point #1 with magnahelic.

North Franklin Street - VFW Post 2674 Sub-Slab Depressurization System Installation



Suction point #2.

North Franklin Street - VFW Post 2674 Sub-Slab Depressurization System Installation



Suction point #2 completed with magnahelic.

North Franklin Street - VFW Post 2674 Sub-Slab Depressurization System Installation



VFW suction point #3 with indicator light.

North Franklin Street - VFW Post 2674 Sub-Slab Depressurization System Installation



VFW suction point #3, magnahelic, and indicator light.

North Franklin Street - VFW Post 2674 Sub-Slab Depressurization System Installation



Fantech blower installed on east side of VFW.

North Franklin Street - VFW Post 2674 Sub-Slab Depressurization System Installation



Suction point #3.



Top of VFW blower stack.JPG

ATTACHMENT D

CONTRACTOR REPORT

July 3, 2006

Scott McCabe
URS Greiner Woodward Clyde
77 Goodell Street
Buffalo, NY 14203

Reference: SSD System Installation
VFW
30 North Franklin St.
Watkins Glen, NY

Dear Mr. McCabe:

This letter documents the installation of an SSD system (Sub-Slab Depression) at the above referenced site.

The SSD system was installed over a three (3)-day period, June 19 through June 21, 2006.

System Installation

Three (3) - 4.25" diameter holes were cored through the concrete floor; see attached Drawing #1. The locations were selected by Scott McCabe (URS) and Joe Menzel (GNY). To increase the extraction point surface area, the hole was excavated to 0.8 feet below the bottom of the concrete slab.

The ventilation pipe was installed into the hole. The bottom of the pipe is recessed into the floor slab. System piping is constructed of 4-inch diameter schedule 40 PVC pipe. The pipe is sealed to the concrete floor with silicone sealant, runs vertically to the ceiling and then across the ceiling. The horizontal runs are connected to a manifold where each exaction point has a vacuum control valve (see Photo #1).

The ventilation pipe exits the first floor east wall. A "Fantech" blower model 220 is mounted vertically on the outside of the east wall (see photo #2). The blowers discharge pipe runs vertically 3 stories and terminates 2 feet above the roofline (see photo #2). The discharge point is above all windows and greater than ten (10) feet away from any windows. The piping is pitched to allow condensation to drain to the extraction points.

The system has visual references to indicate proper operation (see photo #3). A magnehelic gauge, vacuum switch and a red indicating light are connected to the system piping. The magnehelic gauge reads 2 inches of water at proper operation. The vacuum switch will activate a red indicating light if there is a system failure. These system interlocks were tested and operate properly.

SSD System Installation
July 3, 2006
Page 2

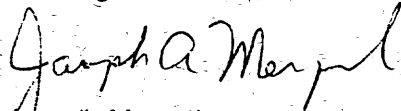
Communication Testing

A communication test was conducted after the SSD system was installed. Several one-half-inch diameter holes were drilled through the concrete floor (see Drawing # 1) and fitted with a digital magnehelic gauge. A vacuum was detected at all locations.

If you have any questions please do not hesitate to call me at (607) 749-5000.

Sincerely,

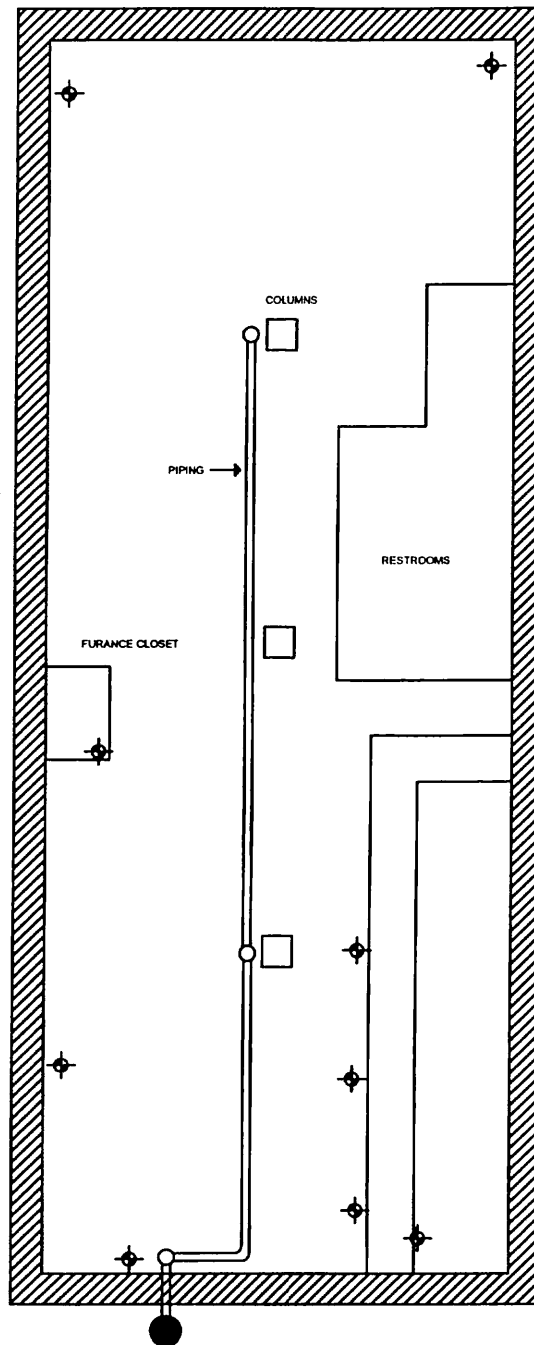
GeoLogic NY, Inc.



Joseph Menzel
Geologist

Enc: Floor Plan, Photos

CC: File: F:\...205004B-D\REPORT\Asbuilt vfw.doc



LEGEND

- EXTRACTION POINT
- BLOWER, HP 220
- ⊕ COMUNICATION TEST POINT

GeoLogic

GeoLogic NY, Inc.

FLOOR PLAN
V F W
30 NORTH STREET
WATKINS GLENN, NY

DR. BY: JAM	SCALE: NTS	PROJ. NO: 9505004d
REVD BY:	DATE: JUNE 2006	DRWG. NO: 1

Sub-Slab Depressurization System
VFW
30 North Street, Watkins Glenn

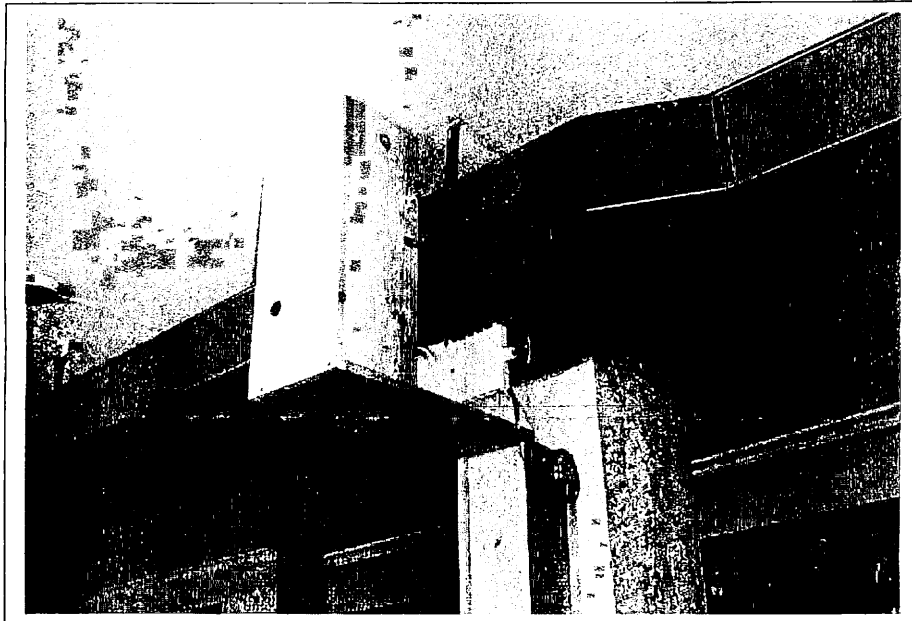


Photo #1: Valve and Magnehelic.

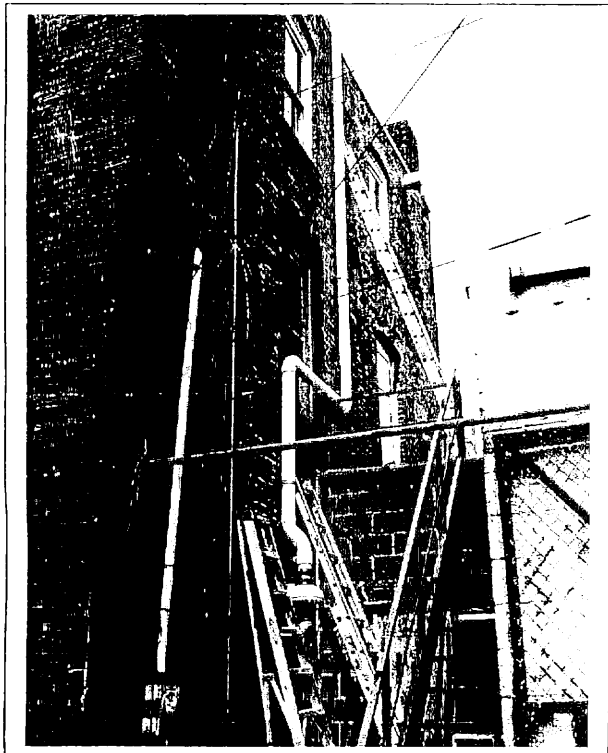


Photo #2: "Fantech" Blower and Discharge Piping.

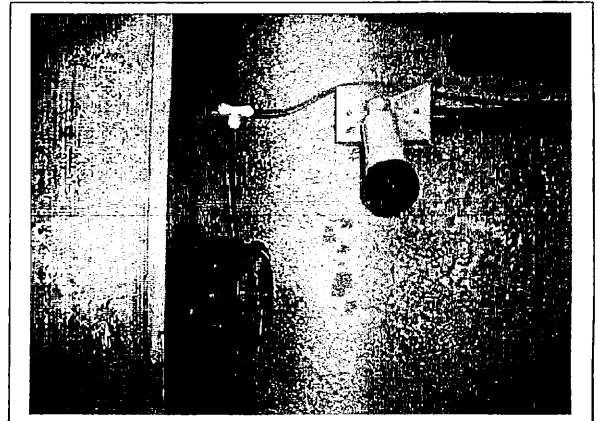


Photo #3: Indicating Light and Magnehelic.



Fantech

**Trust the
Industry
Standard!**

Improved UV resistance!

for Radon Applications

Why put your reputation at stake by installing a fan you know won't perform like a Fantech? For nearly twenty years, Fantech has manufactured quality ventilation equipment for Radon applications. Fantech is the fan Radon contractors have turned to in over 1,000,000 successful Radon installations worldwide.

Fantech HP Series Fans Provide the Solutions to meet the challenges of Radon applications:

HOUSING

- UV resistant, UL listed durable plastic
- UL Listed for use in commercial applications
- Factory sealed to prevent leakage
- Watertight electrical terminal box
- Approved for mounting in wet locations - i.e. Outdoors

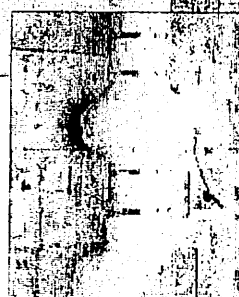
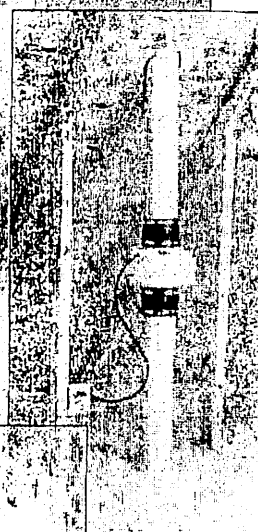
MOTOR

- Totally enclosed for protection
- High efficiency EBM motorized impeller
- Automatic reset thermal overload protection
- Average life expectancy of 7-10 years under continuous load conditions



RELIABILITY

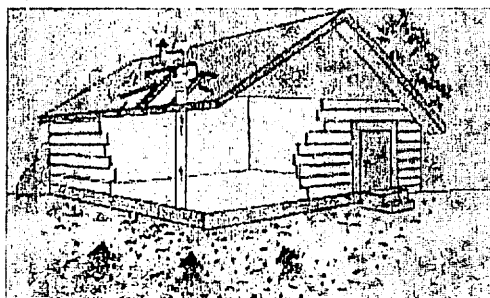
- Three Year Full Factory Warranty
- Over 1,000,000 successful radon installations worldwide





HP Series Fans are specially designed with higher pressure capabilities for Radon Mitigation applications

Fantech has developed the HP Series fans specifically to suit the higher pressure capability requirements needed in Radon Mitigation applications. Most Radon Mitigators who previously used the Fantech FR Series fans have switched to the new HP Series.



Performance Data

Fan Model	Volts	Wattage Range	Max. Amps	0"	0.5"	0.75"	1.0"	1.25"	1.5"	1.75"	2.0"	Max. Ps
HP2133	115	14 - 20	0.17	134	68	19	-	-	-	-	-	0.84
HP2190	115	60 - 85	0.78	163	126	104	81	58	35	15	-	1.83
HP175	115	44 - 65	0.57	151	112	91	70	40	12	-	-	1.66
HP190	115	60 - 85	0.78	157	123	106	89	67	45	18	1	2.01
HP220	115	85 - 152	1.30	344	260	226	193	166	137	102	58	2.46

HVI
MEMBER™

Performance Curves

Fantech provides you with independently tested performance specifications.

The performance curves shown in this brochure are representative of the actual test results recorded at Texas Engineering Experiment Station/Energy Systems Lab, a recognized testing authority for HVI. Testing was done in accordance with AMCA Standard 210-85 and HVI 915 Test Procedures. Performance graphs show air flow vs. static pressure.

Use of HP Series fans in low resistance applications such as bathroom venting will result in elevated sound levels. We suggest FR Series or other Fantech fans for such applications.

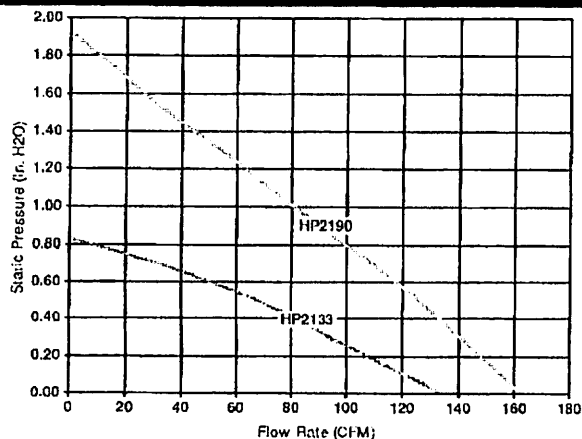


HP FEATURES INCLUDE

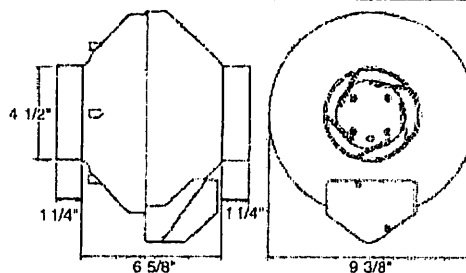
- Improved UV resistant housings approved for commercial applications.
- UL Approved for Wet Locations (Outdoors)
- Sealed housings and wiring boxes to prevent Radon leakage or water penetration
- Energy efficient permanent split capacitor motors
- External wiring box
- Full Three Year Factory Warranty



HP2133 and 2190 Radon Mitigation Fans



Tested with 4" ID duct and standard couplings.

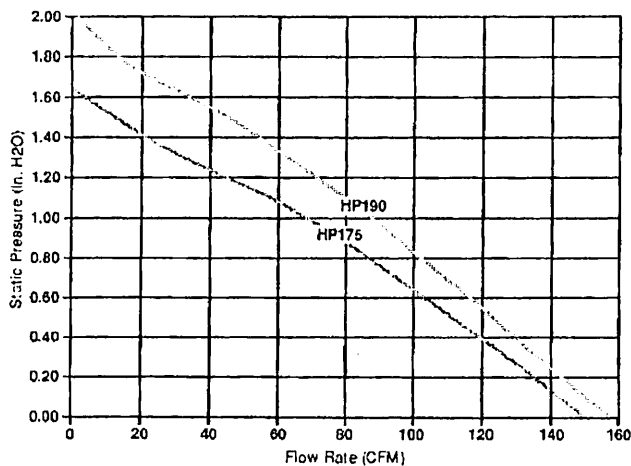


HP2133 – For applications where lower pressure and flow are needed. Record low power consumption of 14-20 watts! Often used where there is good sub slab communication and lower Radon levels.

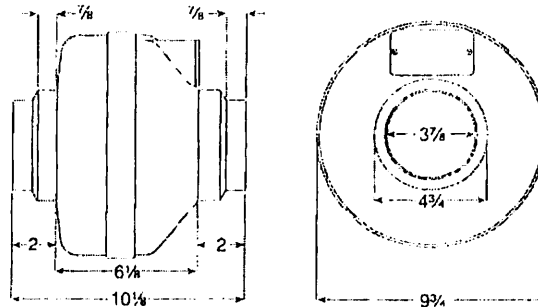
HP2190 – Performance like the HP190 but in a smaller housing. Performance suitable for the majority of installations.

Fans are attached to PVC pipe using flexible couplings.
For 4" PVC pipe use Indiana Seals #156-44, Pipeconx PCX 56-44 or equivalent.
For 3" PVC pipe use Indiana Seals #156-43, Pipeconx PCX 56-43 or equivalent.

HP175 and HP190 Radon Mitigation Fans



Tested with 4" ID duct and standard couplings.



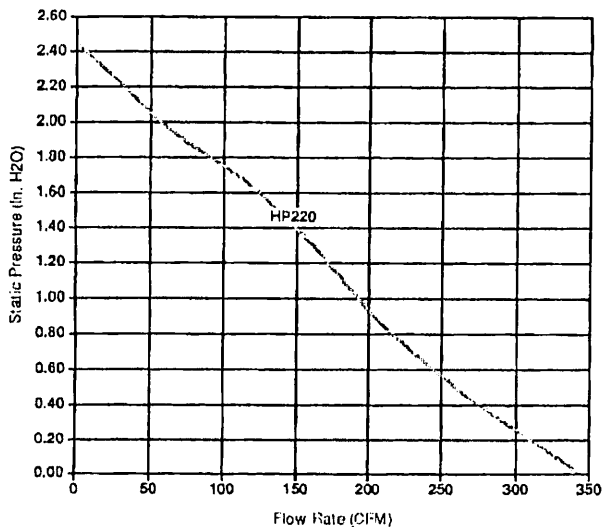
HP175 – The economical choice where slightly less air flow is needed. Often used where there is good sub slab communication and lower Radon levels.

HP190 – *The standard for Radon Mitigation.* Ideally tailored performance curve for a vast majority of your mitigations.

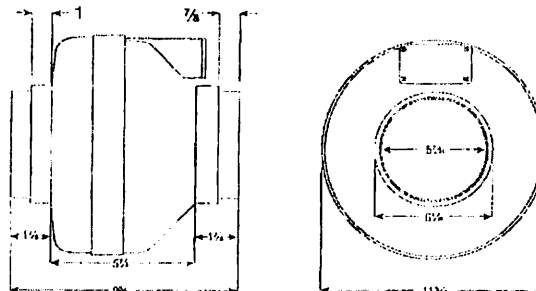
Fans are attached to PVC pipe using flexible couplings. For 4" PVC pipe use Indiana Seals #151-44, Pipeconx PCX 51-44 or equivalent.

For 3" PVC pipe use Indiana Seals #156-43, Pipeconx PCX 56-43 or equivalent.

HP220 Radon Mitigation Fan



Tested with 6" ID duct and standard couplings.

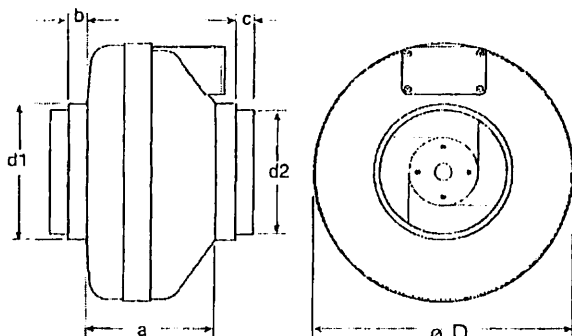


HP 220 – Excellent choice for systems with elevated radon levels, poor communication, multiple suction points and large subslab footprint. Replaces FR 175.

Fans are attached to PVC pipe using flexible couplings. For 4" PVC pipe use Indiana Seals #156-64, Pipeconx PCX 56-64 or equivalent.

For 3" PVC pipe use Indiana Seals #156-63, Pipeconx PCX 56-63 or equivalent.

The Original Mitigator – Fantech's FR Series Fans



Dimensional Data

model	øD	d1	d2	a	b	c
FR100	9 1/2	3 7/8	4 7/8	6 1/8	7/8	7/8
FR110	9 1/2	3 7/8	4 7/8	6 1/8	7/8	7/8
FR125	9 1/2	—	4 7/8	6 1/8	7/8	—
FR140	11 3/4	5 7/8	6 1/4	5 7/8	1	7/8
FR150	11 3/4	5 7/8	6 1/4	5 7/8	1	7/8
FR160	11 3/4	5 7/8	6 1/4	6 3/8	1	7/8
FR200	13 1/4	7 7/8	9 7/8	6 1/4	1 1/2	1 1/2
FR225	13 1/4	7 7/8	9 7/8	6 1/4	1 1/2	1 1/2
FR250	13 1/4	—	9 7/8	6 1/4	—	1 1/2

All dimensions in inches



Performance Data

Fan Model	Energy Star	RPM	Volts	Rated Watts	Wattage Range	Max. Amps	Duct Size (inches)								Max. Ps	Duct Dia.
							0"	2"	4"	6"	8"	1.0"	1.5"			
FR100	✓	2900	115	19	13 - 19	0.18	122	100	78	55	15	-	-	0.87"	4"	
FR110	-	2900	115	80	62 - 80	0.72	167	150	133	113	88	63	41	0.60"	4"	
FR125	✓	2950	115	18	15 - 18	0.18	148	120	88	47	-	-	-	0.79"	5"	
FR140	✓	2850	115	61	47 - 62	0.53	214	190	162	132	99	46	-	0.15"	6"	
FR150	✓	2750	120	71	54 - 72	0.67	263	230	198	167	136	106	17	1.58"	8"	
FR160	-	2750	115	129	103 - 130	1.14	289	260	233	206	179	154	89	2.32"	6"	
FR200	✓	2750	115	122	106 - 128	1.11	408	360	308	259	213	173	72	2.14"	8"	
FR225	✓	3100	115	137	111 - 152	1.35	429	400	366	332	297	260	168	2.48"	8"	
FR250*	-	2850	115	241	146 - 248	2.40	649	600	553	506	454	403	294	2.58"	10"	

FR Series performance is shown with ducted outlet. For HVI's Certified Ratings Program, charted air flow performance has been derated by a factor based on actual test results and the certified rate at .2 inches WG.

* Also available with 8" duct connection. Model FR 250-8. Special Order.

Three (3) Year Warranty

DURING ENTIRE WARRANTY PERIOD:

FANTECH will repair or replace any part which has a factory defect in workmanship or material. Product may need to be returned to the Fantech factory, together with a copy of the bill of sale and identified with RMA number.

FOR FACTORY RETURN YOU MUST:

- Have a Return Materials Authorization (RMA) number. This may be obtained by calling FANTECH either in the USA at 1.800.747.1762 or in CANADA at 1.800.565.3548. Please have bill of sale available.
- The RMA number must be clearly written on the outside of the carton, or the carton will be refused.
- All parts and/or product will be repaired/replaced and shipped back to buyer; no credit will be issued.

OR

The Distributor may place an order for the warranty part and/or product and is invoiced. The Distributor will receive a credit equal to the invoice only after product is returned prepaid and verified to be defective.

FANTECH WARRANTY TERMS DO NOT PROVIDE FOR REPLACEMENT WITHOUT CHARGE PRIOR TO INSPECTION FOR A DEFECT.

REPLACEMENTS ISSUED IN ADVANCE OF DEFECT INSPECTION ARE INVOICED, AND CREDIT IS PENDING INSPECTION OF RETURNED

MATERIAL DEFECTIVE MATERIAL RETURNED BY END USERS SHOULD NOT BE REPLACED BY THE DISTRIBUTOR WITHOUT CHARGE TO THE END USER, AS CREDIT TO DISTRIBUTOR'S ACCOUNT WILL BE PENDING INSPECTION AND VERIFICATION OF ACTUAL DEFECT BY FANTECH.

THE FOLLOWING WARRANTIES DO NOT APPLY:

- Damages from shipping, either concealed or visible. Claim must be filed with freight company.
- Damages resulting from improper wiring or installation.
- Damages or failure caused by acts of God, or resulting from improper consumer procedures, such as:
 - Improper maintenance
 - Misuse, abuse, abnormal use, or accident, and
 - Incorrect electrical voltage or current.
- Removal or any alteration made on the FANTECH label control number or date of manufacture.
- Any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss or property, revenues, or profit, or costs of removal, installation or reinstallation, for any breach of warranty.

WARRANTY VALIDATION

- The user must keep a copy of the bill of sale to verify purchase date.
- These warranties give you specific legal rights, and are subject to an applicable consumer protection legislation. You may have additional rights which vary from state to state.

Distributed by:



For more information contact:

Fantech

web: www.fantech.net

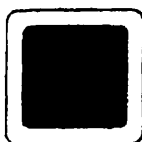
e-mail: info@fantech.net

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Phone: 800-565-3548; 506-743-9500
Fax: 877-747-8116; 506-743-9600



Cleveland Controls
Division of UniControl Inc.

Model
AFS-222

AIR PRESSURE SENSING SWITCH WITH ADJUSTABLE SET POINT RANGE

APPLICATION

Model AFS-222 Air Pressure Sensing Switch is a general purpose proving switch designed for HVAC and Energy Management applications. It may be used to sense positive, negative, or differential air pressure.

GENERAL DESCRIPTION & OPERATION

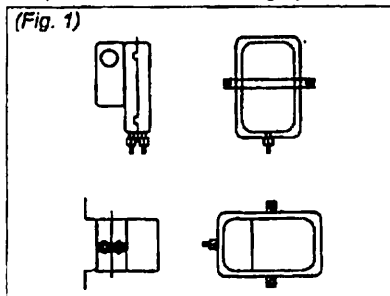
The plated housing contains a diaphragm, a calibration spring and a snap-acting SPDT switch. The sample connections located on each side of the diaphragm accept $\frac{1}{4}$ " OD metallic tubing via the integral compression ferrule and nut.

An enclosure cover guards against accidental contact with the live switch terminal screws and the set point adjusting screw. The enclosure cover will accept a $\frac{1}{2}$ " conduit connection.

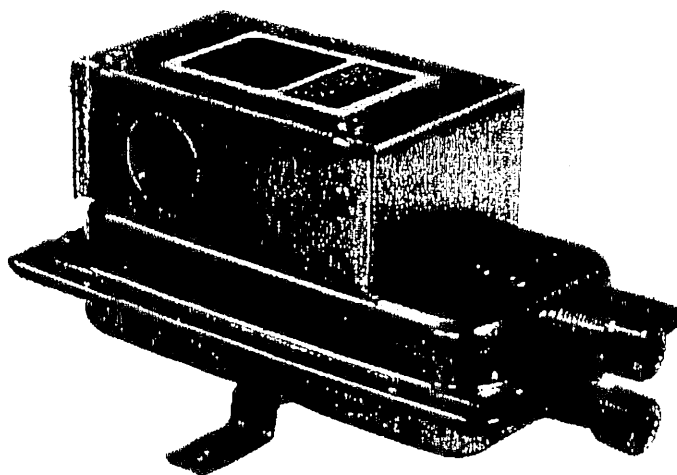
MOUNTING (SEE FIGURE 1)

Select a mounting location which is free from vibration. The AFS-222 must be mounted with the diaphragm in any vertical plane in order to obtain the lowest specified operating set point. Avoid mounting with the sample line connections in the "up" position. Surface mount via the two $\frac{3}{16}$ " diameter holes in the integral mounting bracket. The mounting holes are 3-7/8" apart.

The AFS-222 is designed to accept firm-wall sample lines of $\frac{1}{4}$ " OD tubing by means of



(Fig. 1)



AIR SAMPLING CONNECTION (SEE FIGURE 2)

ferrule and nut compression connections. For sample lines of up to 10 feet, $\frac{1}{4}$ " OD tubing is acceptable. For lines up to 20 feet, use $\frac{1}{2}$ " ID tubing. For lines up to 60 feet, use $\frac{1}{2}$ " ID tubing. A $\frac{1}{4}$ " OD adapter, suitable for slip-on flexible tubing is available: order part number 18311.

Locate the sampling probe a minimum of 1.5 duct diameters downstream from the air source. Install the sampling probe as close to the center of the airstream as possible. Refer to Figure 2 to identify the high pressure inlet (H) and the low pressure inlet (L). Select one of the five application options listed below, and connect the sample lines as recommended.

POSITIVE PRESSURE ONLY: Connect the sample line to inlet H; inlet L remains open to the atmosphere.

NEGATIVE PRESSURE ONLY: Connect the sample line to inlet L; inlet H remains open to the atmosphere.

TWO NEGATIVE SAMPLES: Connect the higher negative sample to inlet L. Connect the lower negative sample to inlet H.

TWO POSITIVE SAMPLES: Connect the higher positive sample to inlet H. Connect the lower positive sample to inlet L.

ONE POSITIVE AND ONE NEGATIVE SAMPLE: Connect the positive sample to inlet H. Connect the negative sample to inlet L.



Cleveland Controls
DIVISION OF UNICONTROL INC.
1111 Brookpark Rd
Cleveland OH 44109

Tel: 216-398-0330

Fax: 216-398-8558

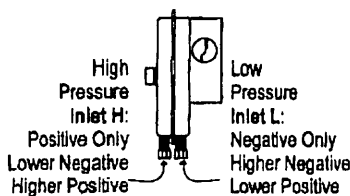
Email: sales@vac@unicontrolinc.com

Web page: <http://www.clevelandcontrols.com>

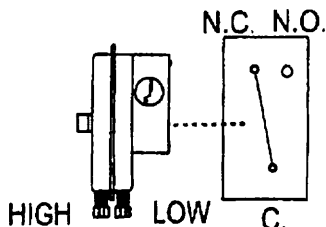
Bulletin AFS-222.07

Are you
reading a FAX
or a COPY of this
bulletin? DOWNLOAD
the full-color PDF ver-
sion of this and other
literature at our
website!

(Figure 2)

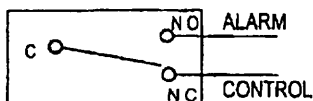


(Figure 3)

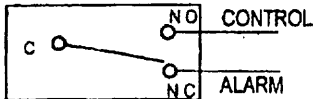


(Figure 4)

To prove excessive air flow or pressure:



To prove insufficient air flow or pressure:



ELECTRICAL CONNECTIONS (SEE FIGURE 3)

Before pressure is applied to the diaphragm, the switch contacts will be in the normally closed (NC) position. The snap switch has screw top terminals with cup washers. Wire alarm and control applications as shown in Figure 4.

FIELD ADJUSTMENT

The adjustment range of an AFS-222 Air Switch is 0.05 ± 0.02 w.c. to 12.0" w.c. To adjust the set point, turn the adjusting screw counterclockwise until motion has stopped. Next, turn the adjusting screw 4 complete turns in a clockwise direction to engage the spring. From this point, the next ten turns will be used for the actual calibration. Each full turn represents approximately 1.2" w.c.

Please note: To properly calibrate an air switch, a digital manometer or other measuring device should be used to confirm the actual set point.

SPECIFICATIONS

MODEL AFS-222 AIR PRESSURE SENSING SWITCH WITH ADJUSTABLE SET POINT RANGE

Mounting Position

Mount with the diaphragm in any vertical plane.

Set Point Range

0.05 to 0.02" w.c. to 12.0" w.c.

Field Adjustable Operating Range

0.05 to 0.02" w.c. to 12.0" w.c.

Field Adjustable Release Range

0.05 to 0.02" w.c. to 12.0" w.c.

Approximate Switching Differential

Progressive increase from 0.02

to 0.05" w.c. minimum set point to

approximately 12.0" w.c. at maximum

set point.

Material of Construction

All of construction by products that will not corrode in use.

Maximum Pressure

12.0" w.c.

Operating Temperature Range

-40°F to 180°F (-40°C to 82°C)

Life

10,000 cycles minimum at 11.2 psi

maximum pressure each cycle and at

maximum rated electrical load.

Electrical Rating

3.0 A Amps at 115 to 277 VAC

resistance non-inductive at 277 VAC

60 Hz 50/60 Hz

Contact Arrangement

SPST

Electrical Connections

Screw-type terminals with cup washers.

Conduit Opening

17/32" diameter opening accepts 1/2"

conduit.

Sample Line Connection

Male, externally threaded 1/16" - 28

UNS 2A thread complete with nuts

and self-aligning ferrules.

Sample Line Connections

Connections will accept 1/4" OD rigid or

semi-rigid tubing.

Approved UL, FM, CSA

Shipping Weight 1.2 lbs

Accessories

1/4" (6.35 mm) Slip-on 1/2" OD Tubing

Adaptor suitable for slipping on flex-

ible plastic tubing.

Sample line probes.

Orifice plugs (pulsation dampers).

