

January 25, 2022
File No. 25220120.00

Mr. Jeff Ackerman
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Madison, WI 53711

Subject: Interim Action Report for Vapor Mitigation Systems
Weber's Dry Cleaners
BRRTS No. 02-53-550524

Dear Mr. Ackerman:

SCS Engineers (SCS) is providing the following Interim Action Report for vapor mitigation systems (VMSs) installed at the residences located at 245 East Gage Street and 725 Sextonville Road, Richland Center, Wisconsin (**Figure 1**). The report summarizes VMS construction details and required maintenance activities. The work was performed consistent with the Wisconsin Department of Natural Resources (WDNR) Change Order 1, dated January 19, 2021. The VMSs were required due to the presence of tetrachloroethylene (PCE) in soil gas under the homes at concentrations exceeding the residential indoor air vapor action level (VAL).

VAPOR MITIGATION SYSTEM CONSTRUCTION

The VMSs were installed by Zander Solutions (Zander) of Verona, Wisconsin, under the supervision of SCS. System details are provided on **Figures 2** and **3**. Photos of the VMSs are included in **Attachment A**. The VMSs are sub-slab depressurization systems designed to minimize migration of vapors into the homes by creating a vacuum underneath the basement floor slab.

Zander constructed the 725 Sextonville Road VMS on August 31, 2021, and the 245 East Gage Street VMS on September 1, 2021. The work included construction of vacuum pickup points through floor slabs, installation of pickup point piping and radon fans, electrical hookup for the fans, installation of VMS vacuum manometers, and sub-slab pressure field extension (PFE) testing to verify adequate sub-slab vacuum distribution. The VMSs were temporarily powered up following installation to conduct initial PFE testing. Permanent power connections were made for 725 Sextonville Road on September 29, 2021, and 245 East Gage Street on September 30, 2021.

PFE vacuum observation points include the VMS pickup point manometers, sub-slab vapor sample ports (SB-2 and SB-4), and vacuum observation points (P-1 and P-2 for 725 Sextonville Road, and P-1 through P-3 for 245 East Gage Street).

POST-MITIGATION TESTING

SCS conducted post-mitigation testing November 30 through December 1, 2021. The testing included checking VMS operation, measuring sub-slab PFE, and performing indoor air sampling. The indoor air sampling included collection of one indoor air sample from the basement of each home. The samples were collected using laboratory-supplied 6-liter Summa canisters equipped with 24-hour flow controllers. The sample canisters were submitted under chain of custody to



Pace Analytical of Minneapolis, Minnesota, for analysis of chlorinated volatile organic compounds (CVOCs), including PCE, trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride. PFE vacuum readings are summarized in **Table 1**. Laboratory reports are included in **Attachment B**, and indoor air sample results, including pre- and post-mitigation results, are summarized in **Table 2**.

The PFE testing showed good vacuum under the floor slabs with vacuums ranging from 0.006 to 2.0 inches of water column (inches WC) for 245 East Gage Street and 0.033 to 2.0 inches WC for 725 Sextonville Road during the November 2021 post-mitigation event. The PFE vacuums exceed WDNR's depressurization performance standard of 0.004 inches WC.

CVOCs, including PCE and trans-1,2-DCE, had been detected in the pre-mitigation sample for 245 East Gage Street at concentrations less than the VALs. No CVOCs were detected in the post-mitigation indoor air sample.

PCE was detected below the VAL in the pre-mitigation indoor air sample for 725 Sextonville Road, and PCE and trans-1,2-DCE were detected below the VALs in the post-mitigation indoor air sample. The presence of these constituents with good sub-slab PFE suggests there may be an indoor air source for these CVOCs.

Based on the post-mitigation testing it appears that the two VMSs are operating as intended.

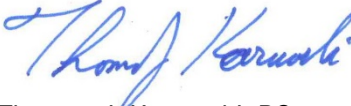
OPERATION MONITORING AND MAINTENANCE

VMS maintenance plans are provided in **Attachment C**.

Please contact Robert Langdon at (608) 212-3995 if you have any questions concerning this letter.

Sincerely,


Robert Langdon
Senior Project Manager
SCS Engineers


Thomas J. Karwoski, PG
Project Director
SCS Engineers

REL/lmh/TK

Attachments: Table 1 – Pressure Field Extension Testing Results
Table 2 – Indoor Air Analytical Results Summary
Figure 1 – Location Map
Figure 2 – Site Plan 245 East Gage Street
Figure 3 – Site Plan 725 Sextonville Road
Attachment A – Photos
Attachment B – Laboratory Report
Attachment C – Maintenance Plans

Tables

- 1 Pressure Field Extension Testing Results
- 2 Indoor Air Analytical Results Summary

**Table 1. Pressure Field Extension Testing Results
245 E. Gage Street and 725 Sextonville Road, Richland Center, Wisconsin
SCS Engineers Project #25220120.00**

Date	245 E. Gage Street							725 Sextonville Road				
	P-1	P-2	P-3	SB-4	Pickup 1	Pickup 2	Pickup 3	P-1	P-2	SB-2	Pickup 1	Pickup 2
8/31/2021	NM	NM	NM	NM	NM	NM	NM	0.174	0.080	NM	2.0	2.0
9/1/2021	0.204	0.197	0.0063	NM	NM	NM	NM	NM	NM	NM	NM	NM
11/30/2021	0.209	0.181	0.006	0.22	2.0	2.0	2.0	0.097	0.033	0.601	2.0	2.0
Performance Standard	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004

Abbreviations:
NM = Not Measured

Notes:
 Vacuums in inches of water.
 Pickup vacuums from manometer on pickup point. All other vacuum points measured using digital manometer.
 Performance standard from Wisconsin Department of Natural Resources January 2018 RR-800 vapor intrusion guidance document, Appendix D Commissioning Guidelines for Active Depressurization Systems.

Created by: REL Date: 12/21/2021
 Last Rev by: REL Date: 12/21/2021
 Checked by: AJR Date: 12/23/2021
 Proj Mgr QA/QC: REL Date: 12/27/2021

I:\25220120.00\Data and Calculations\Tables\[Table 1_Pressure Field Extension Testing Summary.xlsx]Vapor Intrusion

Table 2. Indoor and Outdoor Air Analytical Results Summary
Weber's Dry Cleaners, Richland Center, WI / SCS Engineers Project #25220120.00
 (Results are in $\mu\text{g}/\text{m}^3$)

Sample	Building Type	Date	Lab Notes	Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
IA-1 711 S. Church	Commercial	9/18/2020	--	<u>399</u>	0.94	<0.24	<0.25	<0.15
AR-1 711 S. Church	Commercial	9/18/2020	--	7.3 C8	<0.26	<0.24	<0.24	<0.15
IA-2 725 Sextonville	Residential	9/18/2020	--	0.88 J	<0.27	<0.24	<0.26	<0.15
	Residential	12/1/2021	--	1.4	<0.30	<0.30	1.5	<0.13
IA-3 735 Sextonville	Residential	9/18/2020	--	0.95 J	<0.26	<0.24	<0.25	<0.15
IA-4 245 E. Gage	Residential	9/18/2020	--	1.8 J	<0.26	<0.24	0.70 J	<0.15
	Residential	12/1/2021	--	<0.44	<0.30	<0.30	<0.26	<0.13
IA-5 678 S. Park	School	9/18/2020	--	0.62 J	<0.26	<0.24	<0.25	<0.15
Indoor Air Vapor Action Level (Residential Building)				42	2.1	NE	42	1.7
Indoor Air Vapor Action Level (Small Commercial Building)				180	8.8	NE	180	28

Abbreviations:

$\mu\text{g}/\text{m}^3$ = micrograms/cubic meters

trans-1,2-DCE = trans-1,2-dichloroethylene

NE = No Standard Established

cis-1,2-DCE = cis-1,2-dichloroethylene

Notes:

1. Samples were collected in 6-liter summa canisters over a 24-hour period and analyzed using the USEPA TO-15 analytical method.
2. Vapor Action Levels are from Wisconsin Department of Natural Resources' WI Vapor Quick Look-Up Table, which is based on May 2021 USEPA Regional Screening Level Tables.
3. **Bold & underlined** values exceed Indoor Air Vapor Action Levels.

Lab Notes:

C8 = Results may be biased high due to carryover from previously analyzed sample.

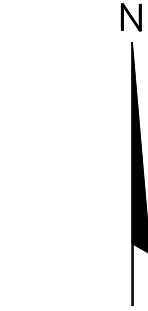
J = Estimated concentration at or above the LOD and below the LOQ.

Created by:	JSN	Date:	10/1/2020
Last revision by:	LMH	Date:	12/28/2021
Checked by:	REL	Date:	12/28/2021
Proj Mgr QA/QC:	REL	Date:	12/28/2021

I:\25220120.00\Data and Calculations\Tables\[Table 2_Indoor and Outdoor Air Analytical Results Summary.xlsx]Results

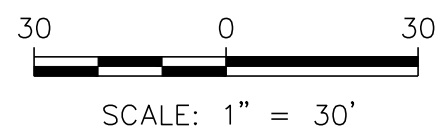
Figures


- 1 Location Map
- 2 Site Plan 245 East Gage Street
- 3 Site Plan 725 Sextonville Road

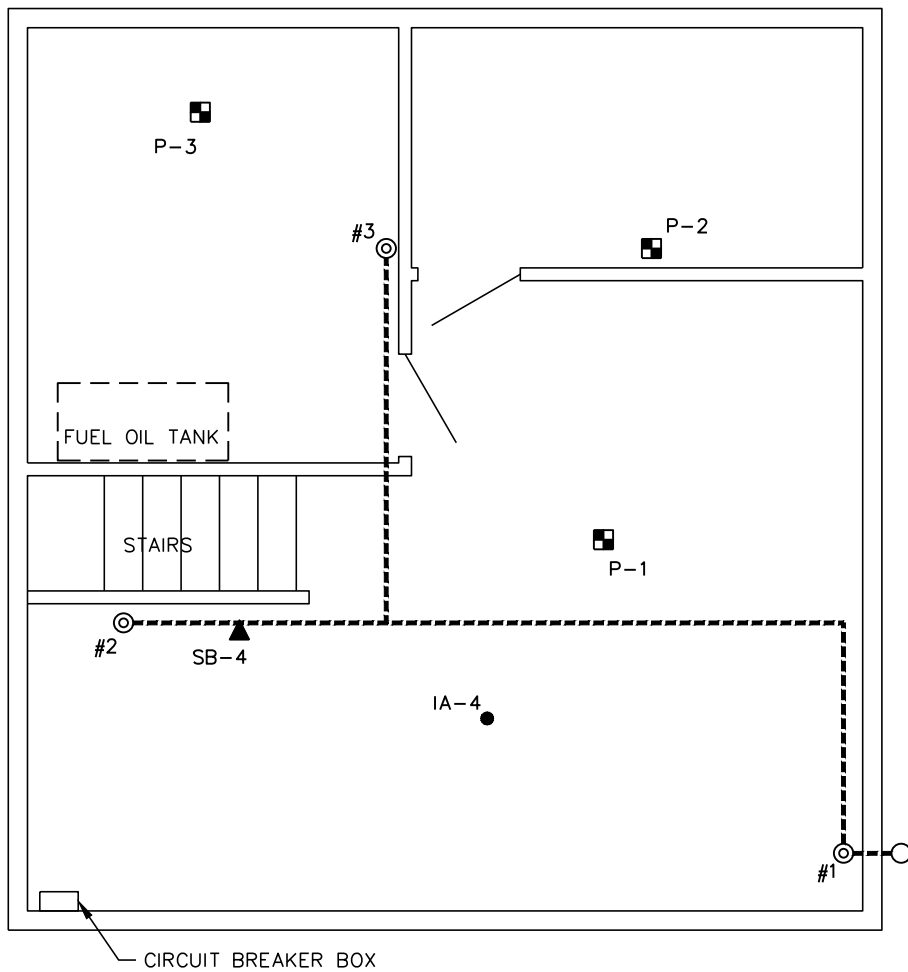


LEGEND
 - - - - - PROPERTY LINE

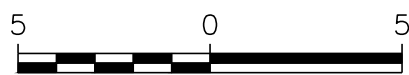
- NOTES:
1. BACKGROUND AERIAL IMAGE FROM GOOGLE MAPS, IMAGE DATE UNKNOWN.
 2. PROPERTY LINES FROM RICHLAND COUNTY ARCGIS WEB APPBUILDER. LOCATIONS ARE APPROXIMATE.




CLIENT			WEBER'S DRY CLEANERS 711 SOUTH CHURCH STREET RICHLAND CENTER, WISCONSIN		LOCATION MAP	FIGURE
	PROJECT NO.	25220120.00	DRAWN BY:	KP	SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	1
DRAWN:	09/30/2020	CHECKED BY:	REL			
REVISED:	11/02/2021	APPROVED BY:	REL 12/27/2021			

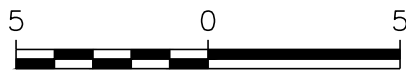
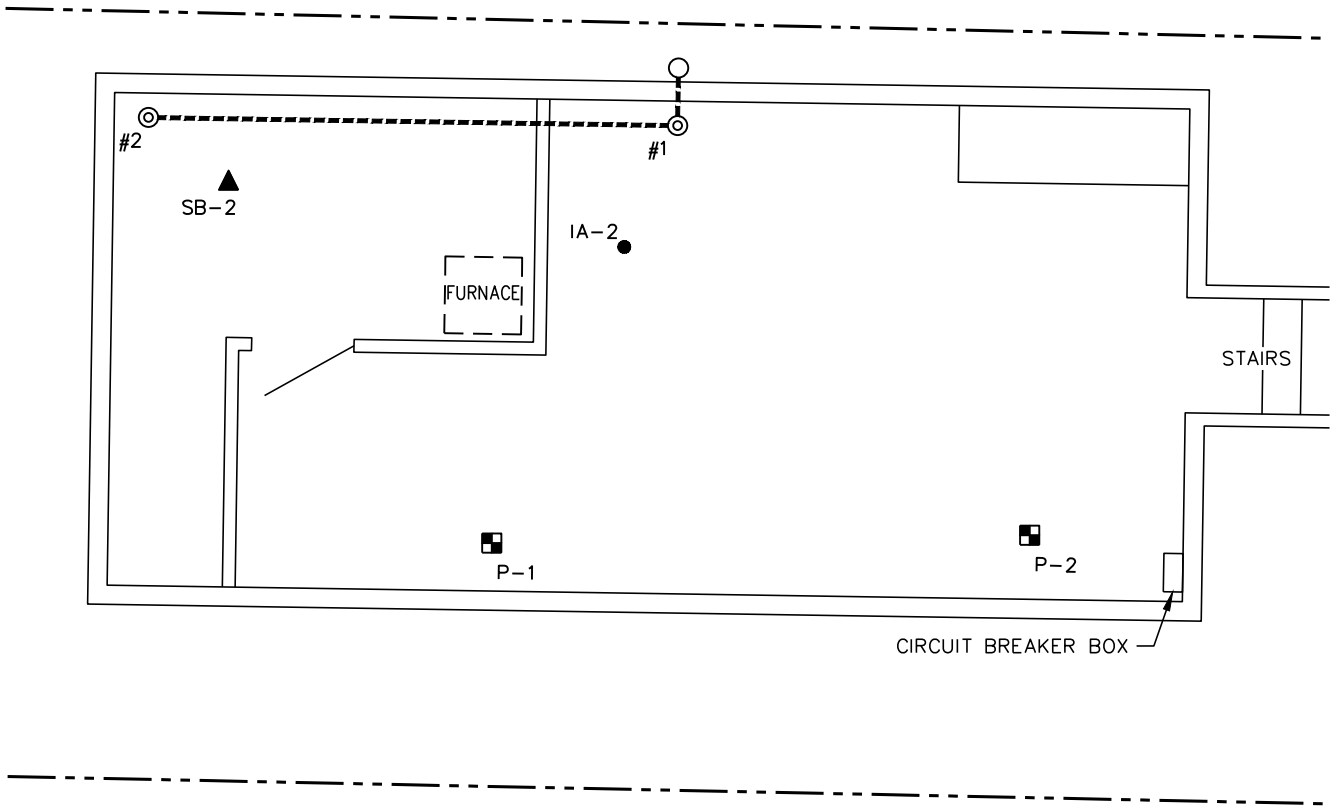


- LEGEND
- ▲ SUB-SLAB VAPOR TESTING LOCATION
 - INDOOR AMBIENT AIR TESTING LOCATION
 - VACUUM OBSERVATION POINT
 - ⊙ VAPOR MITIGATION SYSTEM PICKUP POINT
 - VAPOR MITIGATION SYSTEM PIPING
 - VAPOR MITIGATION SYSTEM FAN/EXHAUST



SCALE: 1" = 5'

CLIENT			SITE	WEBER'S DRY CLEANERS 711 SOUTH CHURCH STREET RICHLAND CENTER, WISCONSIN		SITE PLAN 245 E. GAGE STREET		
	PROJECT NO.	25220120.00		DRAWN BY:	KP	ENGINEER	<div style="background-color: #800000; color: white; padding: 2px; text-align: center; font-weight: bold;">SCS ENGINEERS</div> 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	
DRAWN:	11/02/2021	CHECKED BY:	REL	FIGURE	2			
REVISED:	11/02/2021	APPROVED BY:	REL 12/27/2021					



SCALE: 1" = 5'

- LEGEND
- PROPERTY LINE
 - ▲ SUB-SLAB VAPOR TESTING LOCATION
 - INDOOR AMBIENT AIR TESTING LOCATION
 - VACUUM OBSERVATION POINT
 - ⊙ VAPOR MITIGATION SYSTEM PICKUP POINT
 - VAPOR MITIGATION SYSTEM PIPING
 - VAPOR MITIGATION SYSTEM FAN/EXHAUST



CLIENT
 WEBER'S DRY CLEANERS
 711 SOUTH CHURCH STREET
 RICHLAND CENTER, WISCONSIN

SITE PLAN
 725 SEXTONVILLE ROAD

PROJECT NO.	25220120.00
DRAWN:	11/02/2021
REVISED:	11/02/2021

DRAWN BY:	KP
CHECKED BY:	REL
APPROVED BY:	REL 12/27/2021

ENGINEER

SCS ENGINEERS
 2830 DAIRY DRIVE MADISON, WI 53718-6751
 PHONE: (608) 224-2830

FIGURE	3
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Attachment A

Photos

**Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00**



Photo 1: Pickup Point 1. September 1, 2021.

Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00

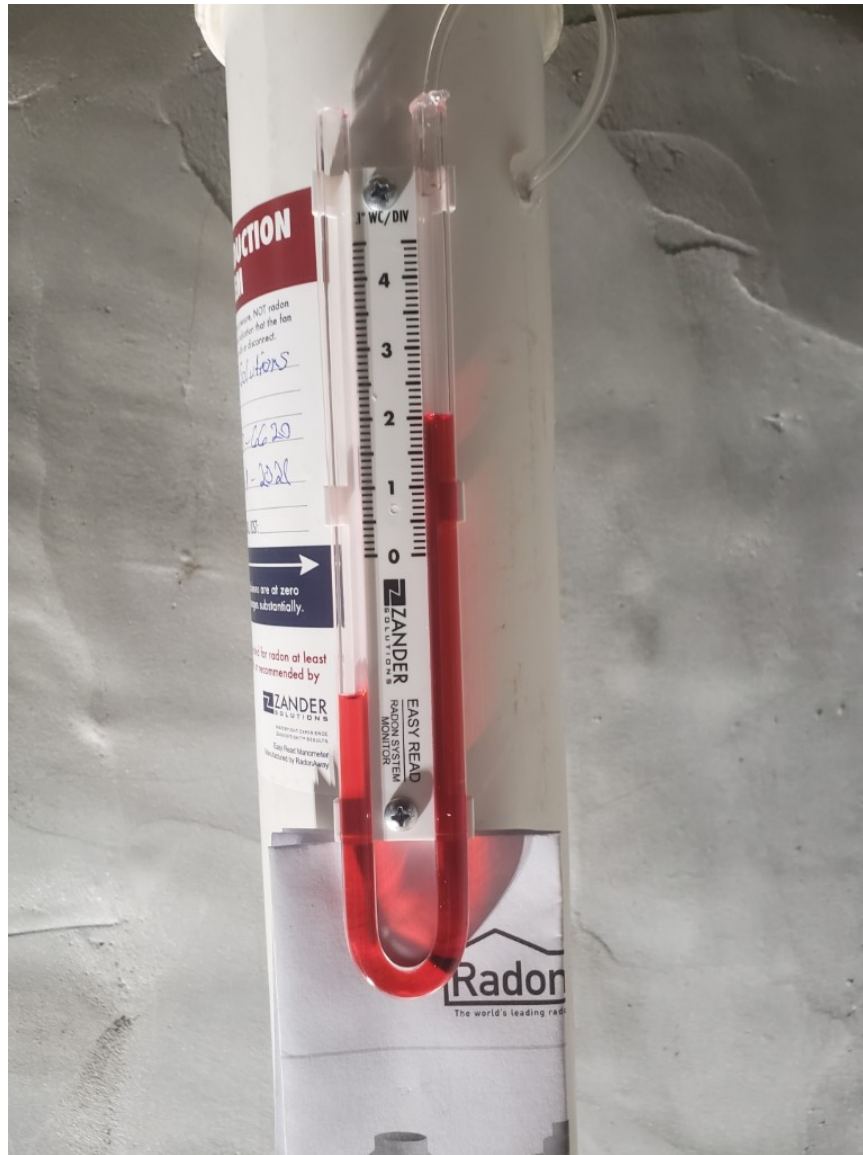


Photo 2: Pickup Point 1 manometer (typical). September 1, 2021.

**Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00**



Photo 3: Pickup Point 2. September 1, 2021.

**Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00**



Photo 4: Pickup Point 3. September 1, 2021.

**Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00**



Photo 5: Vacuum Observation Point 1. September 1, 2021.

Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 6: Vacuum Observation Point 2. September 1, 2021.

Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 7: Vacuum Observation Point 3. September 1, 2021.

Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00

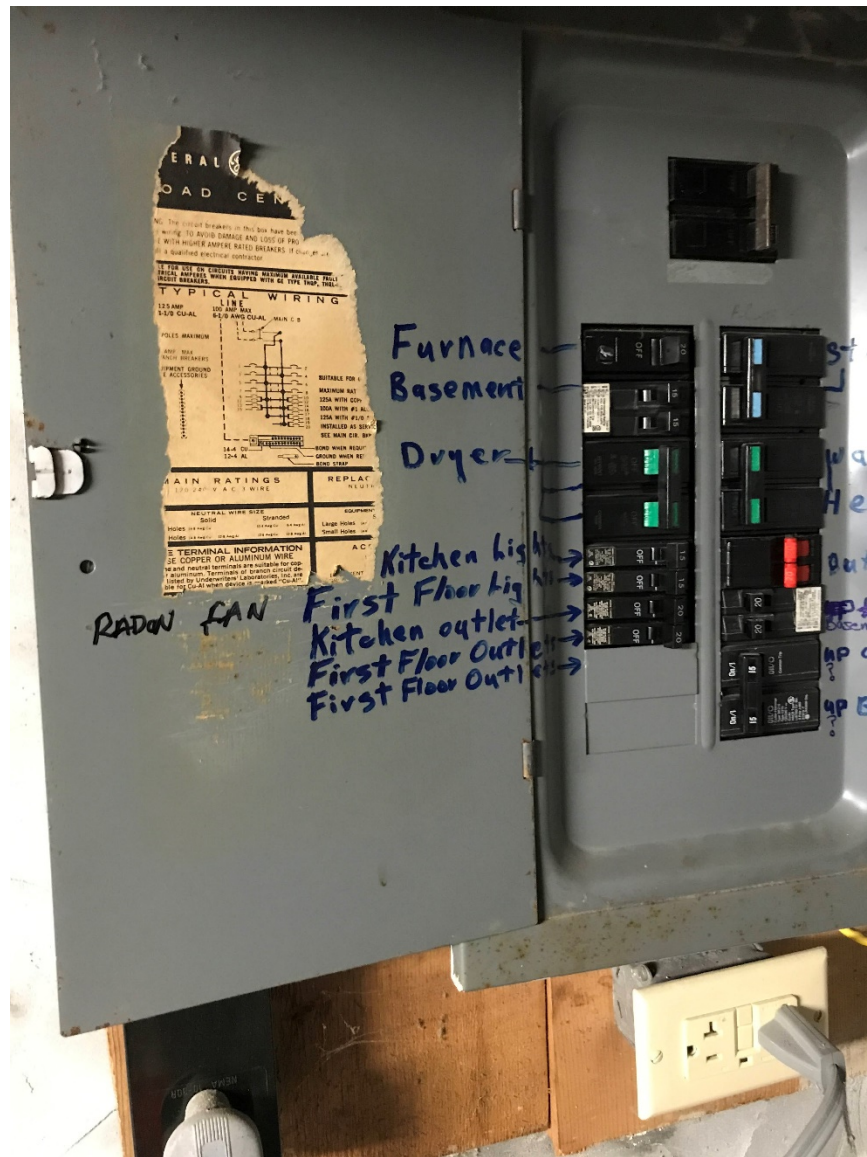


Photo 8: Circuit breaker box. December 1, 2021.

Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 9: Blower and exhaust line. November 30, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 1: Basement access. August 31, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 2: Pickup Point 1. August 31, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 3: Pickup Point 1 (typical). August 31, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 4: Pickup Point 2. August 31, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 5: Vacuum Observation Point 1. August 31, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00




Photo 6: Vacuum Observation Point 2. August 31, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 8: Blower and exhaust line. August 31, 2021.



Attachment B
Laboratory Report

December 14, 2021

Rob Langdon
SCS Engineers
2830 Dairy Dr.
Madison, WI 53718

RE: Project: 25220120-00 Weber's Dry Clean
Pace Project No.: 10590002

Dear Rob Langdon:

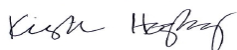
Enclosed are the analytical results for sample(s) received by the laboratory on December 03, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kirsten Hogberg
kirsten.hogberg@pacelabs.com
(612)607-1700
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 25220120-00 Weber's Dry Clean

Pace Project No.: 10590002

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064

Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 25220120-00 Weber's Dry Clean

Pace Project No.: 10590002

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10590002001	245 E. Gage St. IA-4	Air	12/01/21 14:15	12/03/21 11:15
10590002002	725 Sextonville Rd IA-2	Air	12/01/21 14:41	12/03/21 11:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 25220120-00 Weber's Dry Clean
Pace Project No.: 10590002

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10590002001	245 E. Gage St. IA-4	TO-15	GT	5	PASI-M
10590002002	725 Sextonville Rd IA-2	TO-15	GT	5	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

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SUMMARY OF DETECTION

Project: 25220120-00 Weber's Dry Clean

Pace Project No.: 10590002

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10590002002	725 Sextonville Rd IA-2					
TO-15	trans-1,2-Dichloroethene	1.5	ug/m3	1.2	12/13/21 22:48	
TO-15	Tetrachloroethene	1.4	ug/m3	1.1	12/13/21 22:48	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25220120-00 Weber's Dry Clean

Pace Project No.: 10590002

Sample: 245 E. Gage St. IA-4 **Lab ID: 10590002001** Collected: 12/01/21 14:15 Received: 12/03/21 11:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
cis-1,2-Dichloroethene	<0.30	ug/m3	1.2	0.30	1.52		12/13/21 21:36	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/m3	1.2	0.26	1.52		12/13/21 21:36	156-60-5	
Tetrachloroethene	<0.44	ug/m3	1.0	0.44	1.52		12/13/21 21:36	127-18-4	
Trichloroethene	<0.30	ug/m3	0.83	0.30	1.52		12/13/21 21:36	79-01-6	
Vinyl chloride	<0.13	ug/m3	0.40	0.13	1.52		12/13/21 21:36	75-01-4	

Sample: 725 Sextonville Rd IA-2 **Lab ID: 10590002002** Collected: 12/01/21 14:41 Received: 12/03/21 11:15 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
cis-1,2-Dichloroethene	<0.30	ug/m3	1.2	0.30	1.55		12/13/21 22:48	156-59-2	
trans-1,2-Dichloroethene	1.5	ug/m3	1.2	0.26	1.55		12/13/21 22:48	156-60-5	
Tetrachloroethene	1.4	ug/m3	1.1	0.45	1.55		12/13/21 22:48	127-18-4	
Trichloroethene	<0.30	ug/m3	0.85	0.30	1.55		12/13/21 22:48	79-01-6	
Vinyl chloride	<0.13	ug/m3	0.40	0.13	1.55		12/13/21 22:48	75-01-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25220120-00 Weber's Dry Clean

Pace Project No.: 10590002

QC Batch: 788696

Analysis Method: TO-15

QC Batch Method: TO-15

Analysis Description: TO15 MSV AIR Low Level

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10590002001, 10590002002

METHOD BLANK: 4198135

Matrix: Air

Associated Lab Samples: 10590002001, 10590002002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.098	0.40	12/13/21 17:12	
Tetrachloroethene	ug/m3	<0.15	0.34	12/13/21 17:12	
trans-1,2-Dichloroethene	ug/m3	<0.084	0.40	12/13/21 17:12	
Trichloroethene	ug/m3	<0.098	0.27	12/13/21 17:12	
Vinyl chloride	ug/m3	<0.043	0.13	12/13/21 17:12	

LABORATORY CONTROL SAMPLE: 4198136

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/m3	41	39.9	97	70-137	
Tetrachloroethene	ug/m3	69.9	69.8	100	70-130	
trans-1,2-Dichloroethene	ug/m3	40.8	38.3	94	70-130	
Trichloroethene	ug/m3	55.7	54.0	97	70-130	
Vinyl chloride	ug/m3	26.6	27.3	103	70-137	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 25220120-00 Weber's Dry Clean

Pace Project No.: 10590002

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25220120-00 Weber's Dry Clean

Pace Project No.: 10590002

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10590002001	245 E. Gage St. IA-4	TO-15	788696		
10590002002	725 Sextonville Rd IA-2	TO-15	788696		

REPORT OF LABORATORY ANALYSIS

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Document Name: Sample Condition Upon Receipt (SCUR) - Air

Document Revised: 13Oct2021 Page 1 of 1

Document No.: ENV-FRM-MIN4-0113 Rev.01

Pace Analytical Services - Minneannic

WO#: 10590002

PM: KNH

Due Date: 12/10/21

CLIENT: SCS Engineer

Air Sample Condition Upon Receipt

Client Name: SCS ENG.

Project #:

Courier: [X] FedEx [] UPS [] USPS [] Client [] Pace [] SpeeDee [] Commercial

Tracking Number: 9753 8446 1626 [] See Exception

Custody Seal on Cooler/Box Present? [] Yes [X] No

Seals Intact? [] Yes [X] No

Packing Material: [] Bubble Wrap [] Bubble Bags [X] Foam [] None [] Tin Can [] Other:

Date & Initials of Person Examining Contents: 12-3-21 CMY

Comments:

Table with 13 rows of custody and analysis questions, including Chain of Custody Present, Samples Arrived within Hold Time, and Tedlar bags not acceptable container for TO-15 or APH.

Table for canister data with columns for Sample Number, Can ID, Flow Controller, Initial Pressure, and Final Pressure. Includes handwritten entries for samples IA-4 and IA-2.

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? [] Yes [] No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Kristen Hogberg

Date: 12/6/2021

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).



Pace Analytical Services, LLC
 1700 Elm Street, Suite 200
 Minneapolis, MN 55414
 Phone: 612.607.1700
 Fax: 612.607.6444

ANALYTICAL RESULTS

Client: SCS Engineers Lab Project Number: 10590002
 Phone: 843.746.8525 Project Name: 25220120-00 Weber's Dry Clean
 Lab Sample No: 10590002002 ProjSampleNum: 10590002002 Date Collected: 12/01/21 14:41
 Client Sample ID: 725 Sextonville Rd IA-2 Matrix: Air Date Received: 12/03/21 11:15

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
Air							
TO-15							
cis-1,2-Dichloroethene	<0.074	ppbv	0.3	1.55	12/13/21 22:48 GT	156-59-2	
Tetrachloroethene	0.2	ppbv	0.16	1.55	12/13/21 22:48 GT	127-18-4	
trans-1,2-Dichloroethene	0.37	ppbv	0.3	1.55	12/13/21 22:48 GT	156-60-5	
Trichloroethene	<0.055	ppbv	0.16	1.55	12/13/21 22:48 GT	79-01-6	
Vinyl chloride	<0.05	ppbv	0.15	1.55	12/13/21 22:48 GT	75-01-4	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT
 Units Conversion Request



Pace Analytical Services, LLC
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

ANALYTICAL RESULTS

Client: SCS Engineers
Phone: 843.746.8525

Lab Project Number: 10590002
Project Name: 25220120-00 Weber's Dry Clean


PARAMETER FOOTNOTES

SUPPLEMENTAL REPORT

Units Conversion Request

Date: 12/14/2021

Page 3



Attachment C
Maintenance Plans

VAPOR MITIGATION SYSTEM MAINTENANCE PLAN

245 East Gage Street, Richland Center, Wisconsin

January 25, 2022

Property Located at: 245 East Gage Street, Richland Center, Wisconsin

WDNR BRRTS/Activity # 02-53-550524

Legal Description: HASELTINE ADD. BLOCK 75 LOT 1: W 30' LOT 2: N 46' OF E 46' & S20' OF E43.1'

Parcel ID # 276-2100-7521

INTRODUCTION

This document is the Maintenance Plan for an active vapor mitigation system (VMS) at the above-referenced property in accordance with the requirements of s. NR 724.13 (2), Wisconsin Administrative Code (Wis. Adm. Code). More site-specific information about this property may be found in:

- The case file in the Wisconsin Department of Natural Resources (WDNR) South Central Region office
- BRRTS on the Web (WDNR's internet-based database of contaminated sites) for the link to a PDF for site-specific information at the time of closure and on continuing obligations
- RR Sites Map/GIS Registry layer for a map view of the site
- The WDNR project manager for Richland County

Descriptions

System Description, Purpose, and Location

The VMS was constructed by Zander Solutions for the 245 East Gage Street residence and was started up on September 30, 2021. The VMS was designed to reduce the potential for vapor intrusion by depressurizing the basement sub-slab where tetrachloroethylene (PCE) vapor was detected in excess of the WDNR's vapor risk screening level.

The sub-slab PCE vapor at 245 East Gage Street appears to have originated from a release of PCE dry cleaning solvent at the neighboring property located at 711 South Church Street. The locations of various VMS components are shown on **Figure 1**.

System Design and Construction Documentation

Photographs of the VMS are included in **Attachment 1**. The VMS construction included installation of three vacuum pickup points. The pickup points were constructed with 3-inch-diameter schedule 40 PVC pipe and sealed into the basement floor. The PVC pipe was extended through the basement wall and above the roofline at the east side of the home.

A RadonAway RP 145 vacuum fan capable of producing up to approximately 3 cubic feet per minute flow at 2.0 inches of water column (WC) vacuum was mounted to the exterior pipe.

Power was supplied to the fan and tied to a labeled circuit breaker inside the basement. The fan can be turned on and off at the breaker box or with a switch located on the fan.

A manometer was fitted to each pickup point to show vacuum at the pickup points and to check fan operation. At startup the manometers read approximately 2.0 inches WC, which is at the upper end of the fan range (0 to 2.0 inches WC).

Additional fan details are provided in **Attachment 2**.

System Maintenance

Minimal operator control or maintenance is required. There are no service requirements for the fan. The fan status is checked using the manometer mounted on the pickup points.

The potential for vapor intrusion of vapors should be reevaluated if there are changes to the floor, HVAC system, or other changes that may influence the sub-slab vacuum distribution. If changes are made, pressure field extension testing of the sub-slab should be completed to make sure that adequate sub-slab vacuum is maintained.

Malfunctioning or damaged system components should be replaced as soon as possible, and any changes or repairs should be documented in the attached inspection and maintenance log (**Attachment 3**).

Inspections

The VMS manometers should be inspected monthly as follows:

- Inspect manometer:
 - If manometer vacuum reads zero:
 - Check to make sure the tube from the manometer to the pickup point is properly seated and sealed into the manometer and pickup point. Reseat/reseal with silicone caulk as necessary.
 - Check the on/off switch next to the fan and the fan circuit breaker at the southwest corner of the basement to make sure the fan has power.
 - If manometer shows low vacuum (e.g., less than 1.5 inch of WC) check for vacuum leaks in the manometer tubing as noted above or pickup point piping and repair as necessary.
 - If fan vacuum cannot be rectified contact the WDNR Project Manager.
- Record manometer readings on Form 4400-321, Vapor Mitigation System Inspection Log (**Attachment 3**).

The remaining items should be inspected at least once per year during the heating season (e.g., December) as follows:

- Inspect fan exhaust line to prevent clogging of fan exhaust, and remove any accumulated debris.

- Inspect floors and maintain as necessary to prevent vapor migration and vacuum loss.
- Document repairs to the VMS, floors, or HVAC system on Form 4400-321, Vapor Mitigation System Inspection Log (**Attachment 3**).
- Keep copies of the Vapor Mitigation System Inspection Log at the residence and available for submittal or inspection by WDNR representatives upon request.

Any system components found to be ineffective or malfunctioning need to be replaced immediately by a mitigation professional and the system recommissioned, documented, and stored on site with the inspection information. Any changes need to be communicated with WDNR (ideally in advance).

A copy of the Maintenance Plan should be put in a plastic sleeve and zip-tied to the VMS piping.

Prohibition of Activities and Notification of WDNR Prior to Actions Affecting the VMS

The following activities are prohibited unless prior written approval has been obtained from the WDNR:

1. Shutdown or removal of the VMS.
2. Replacement of the VMS, other than replacement of the vacuum fan.
3. Construction or placement of a building or other structure.

If removal, replacement, or other changes are considered, the property owner will contact WDNR at least 45 days before taking such an action, to determine whether further action may be necessary to protect human health, safety, or welfare or the environment, in accordance with s. NR 727.07, Wis. Adm. Code.

Amendment or Withdrawal of Maintenance Plan

This Maintenance Plan can be amended or withdrawn by the property owner and its successors with the written approval of WDNR.

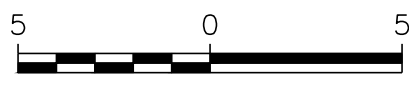
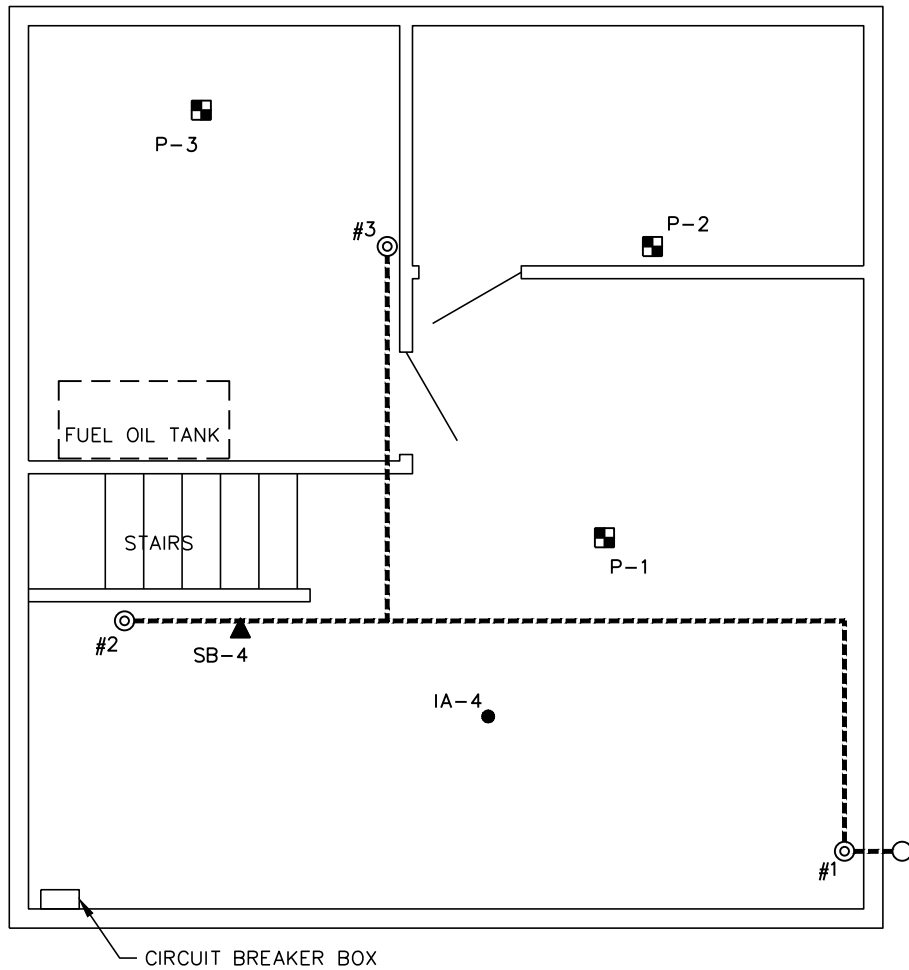
Contact Information

Property Owner: Jeana Newberry
245 East Gage Street
Richland Center, WI 53581
(608) 647-5654

Consultant: Robert Langdon, SCS Engineers
2830 Dairy Drive
Madison, WI 53718
(608) 224-2830
rlangdon@scsengineers.com

WDNR: Jeff Ackerman, WDNR
3911 Fish Hatchery Rd
Fitchburg, WI 53711-5367
(608) 219-2302
Jeffrey.Ackerman@wisconsin.gov


N



SCALE: 1" = 5'

LEGEND

- ▲ SUB-SLAB VAPOR TESTING LOCATION
- INDOOR AMBIENT AIR TESTING LOCATION
- VACUUM OBSERVATION POINT
- ⊙ VAPOR MITIGATION SYSTEM PICKUP POINT
- VAPOR MITIGATION SYSTEM PIPING
- VAPOR MITIGATION SYSTEM FAN/EXHAUST

CLIENT			SITE	WEBER'S DRY CLEANERS 711 SOUTH CHURCH STREET RICHLAND CENTER, WISCONSIN		SITE PLAN 245 E. GAGE STREET	
	PROJECT NO.	25220120.00		DRAWN BY:	KP	ENGINEER	SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830
DRAWN:	11/02/2021	CHECKED BY:	REL				
REVISED:	11/02/2021	APPROVED BY:	REL 12/27/2021	FIGURE	1		

ATTACHMENT 1

Photos

**Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00**



Photo 1: Pickup Point 1. September 1, 2021.

Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00

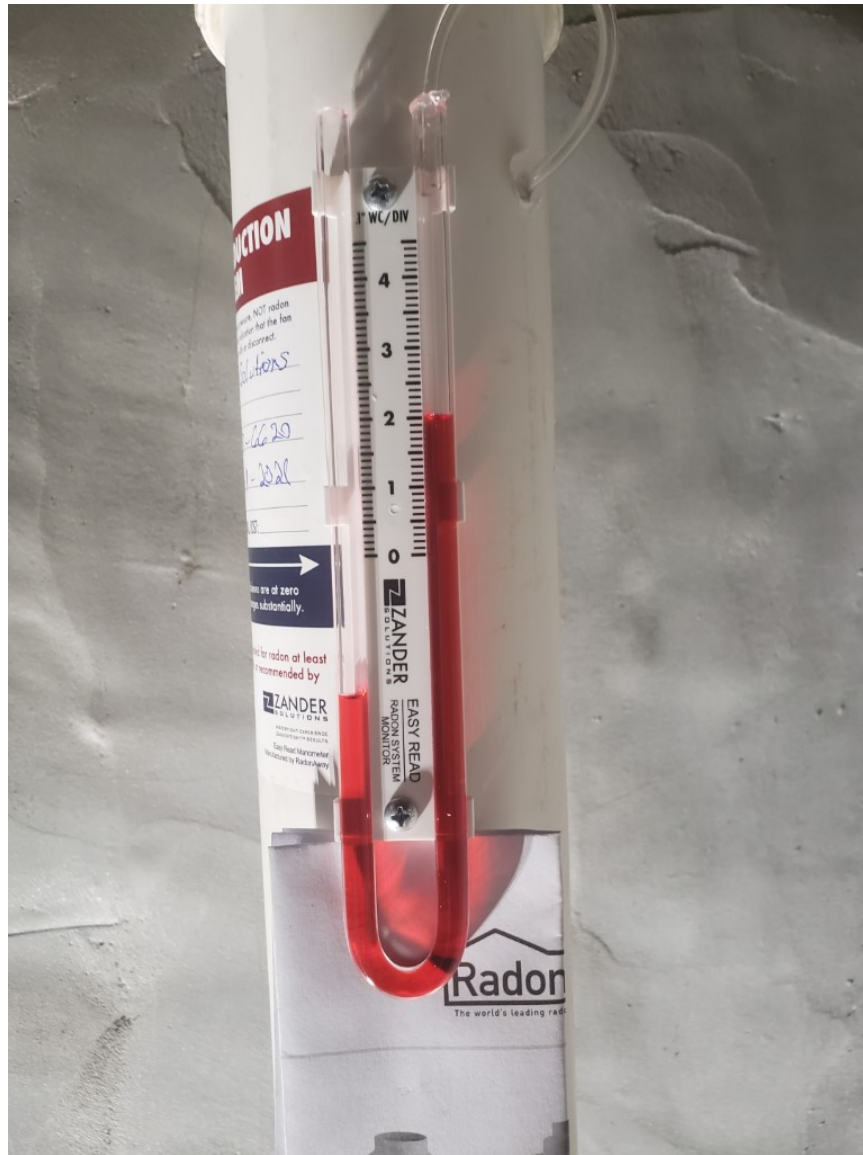


Photo 2: Pickup Point 1 manometer (typical). September 1, 2021.

**Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00**



Photo 3: Pickup Point 2. September 1, 2021.

**Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00**



Photo 4: Pickup Point 3. September 1, 2021.

**Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00**



Photo 5: Vacuum Observation Point 1. September 1, 2021.

**Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00**



Photo 6: Vacuum Observation Point 2. September 1, 2021.

Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 7: Vacuum Observation Point 3. September 1, 2021.

Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00

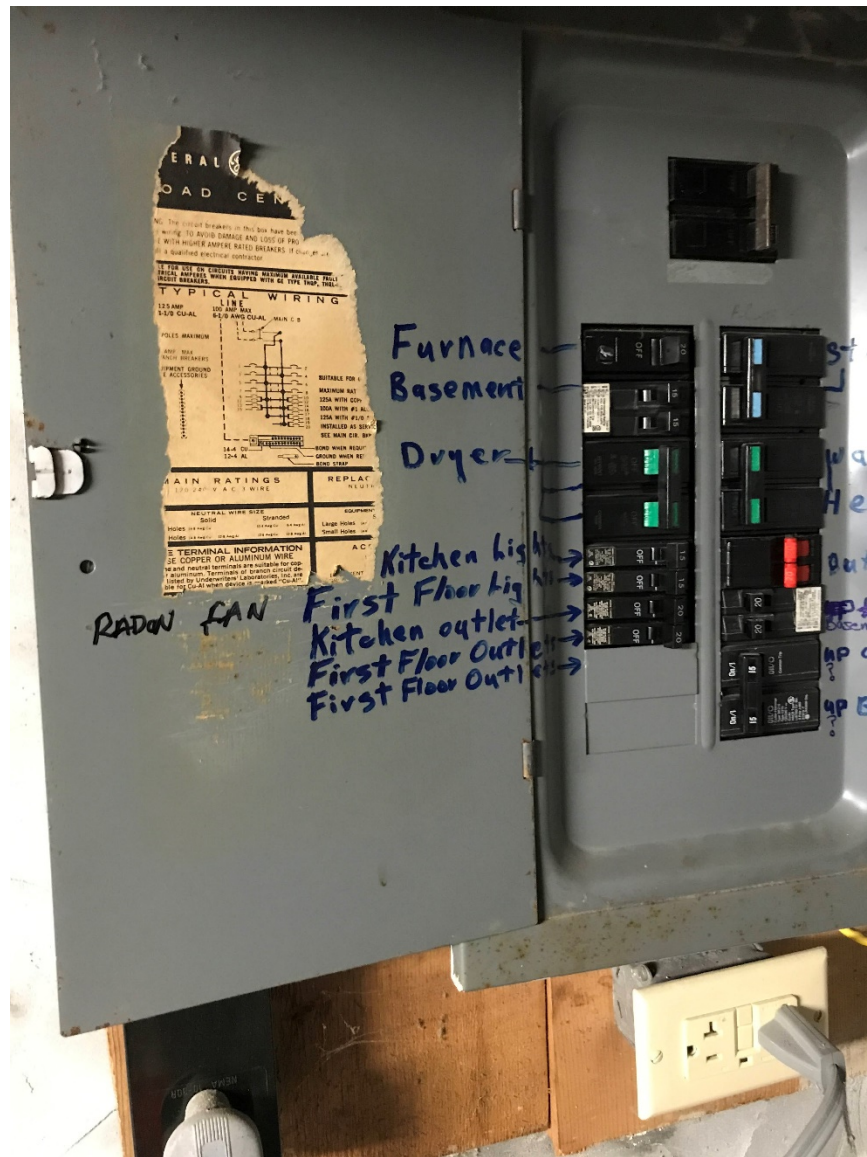


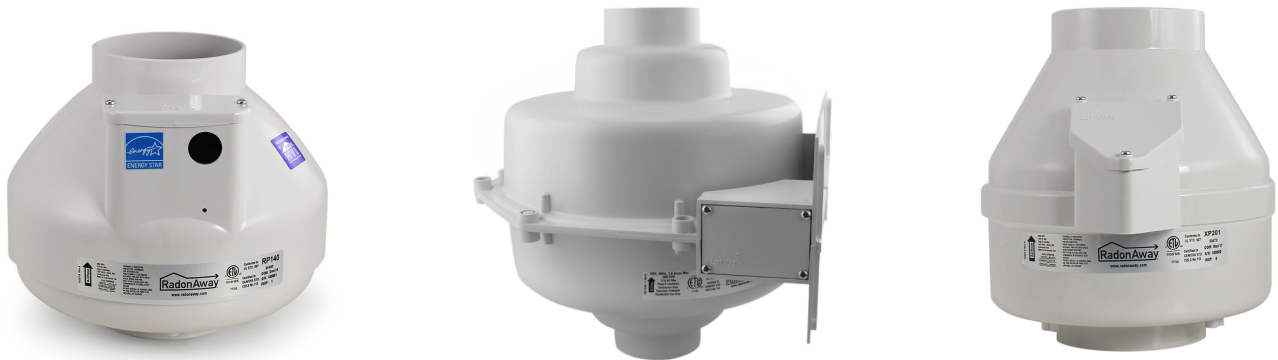
Photo 8: Circuit breaker box. December 1, 2021.

Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 9: Blower and exhaust line. November 30, 2021.

ATTACHMENT 2
Additional Fan Details



RP, GP, XP Pro Series Installation Instructions



Fan Installation & Operating Instructions
RP, GP, XP Pro Series Fans
Please Read and Save These Instructions.

DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED. MAKE SURE ELECTRICAL SERVICE TO FAN IS LOCKED IN “OFF” POSITION. DISCONNECT POWER BEFORE SERVICING FAN.

1. **WARNING!** For General Ventilating Use Only. Do Not Use to Exhaust Hazardous, Corrosive or Explosive Materials, Gases or Vapors. See Vapor Intrusion Application Note #AN001 for important information on VI Applications. RadonAway.com/vapor-intrusion
2. **NOTE:** Fan is suitable for use with solid state speed controls; however, use of speed controls is not generally recommended.
2. **WARNING!** Check voltage at the fan to insure it corresponds with nameplate.
3. **WARNING!** Normal operation of this device may affect the combustion airflow needed for safe operation of fuel burning equipment. Check for possible backdraft conditions on all combustion devices after installation.
4. **NOTICE!** There are no user serviceable parts located inside the fan unit.
Do NOT attempt to open. Return unit to the factory. (See Warranty, p. 8, for details.)
5. **WARNING!** Do not leave fan unit installed on system piping without electrical power for more than 48 hours. Fan failure could result from this non-operational storage.
6. **WARNING!** TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:
 - a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer. (See p. 8.)
 - b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
 - c) Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire rated construction.
 - d) Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturers' guidelines and safety standards such as those published by any National Fire Protection Association, and the American Society for Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), and the local code authorities.
 - e) When cutting or drilling into a wall or ceiling, do not damage electrical wiring and other hidden utilities.
 - f) Ducted fans must always be vented to outdoors.
 - g) If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) protected branch circuit.



Fan Installation & Operating Instructions

RP Pro Series		GP Pro Series		XP Pro Series	
RP140	P/N 28460	GP201	P/N 28465	XP151	P/N 28469
RP145	P/N 28461	GP301	P/N 28466	XP201	P/N 28470
RP260	P/N 28462	GP401	P/N 28467		
RP265	P/N 28463	GP501	P/N 28468		
RP380	P/N 28464				

1.0 SYSTEM DESIGN CONSIDERATIONS

1.1 INTRODUCTION

The RP, GP and XP Pro Series Radon Fans are intended for use by trained, professional, certified/licensed radon mitigators. The purpose of these instructions is to provide additional guidance for the most effective use of RP, GP and XP Series Fans. These instructions should be considered supplemental to EPA/radon industry standard practices, state and local building codes and regulations. In the event of a conflict, those codes, practices and regulations take precedence over these instructions.

1.2 FAN SEALING

The RP, GP and XP Pro Series Fans are factory sealed; no additional caulk or other materials are required to inhibit air leakage.

1.3 ENVIRONMENTALS

The RP, GP and XP Pro Series Fans are designed to perform year-round in all but the harshest climates without additional concern for temperature or weather. For installations in an area of severe cold weather, please contact RadonAway for assistance. When not in operation, the fan should be stored in an area where the temperature is never less than 32 degrees F or more than 100 degrees F.

1.4 ACOUSTICS

The RP, GP and XP Pro Series Fans, when installed properly, operate with little or no noticeable noise to the building occupants. The velocity of the outgoing air should be considered in the overall system design. In some cases the “rushing” sound of the outlet air may be disturbing. In these instances, the use of a RadonAway Exhaust Muffler is recommended.

(To ensure quiet operation of inline and remote fans, each fan shall be installed using sound attenuation techniques appropriate for the installation. For bathroom and general ventilation applications, at least 8 feet of insulated flexible duct shall be installed between the exhaust or supply grille(s) and the fan(s). RP, GP and XP Pro Series Fans are not suitable for kitchen range hood remote ventilation applications.)

1.5 GROUND WATER

In the event that a temporary high water table results in water at or above slab level, water may be drawn into the riser pipes, thus blocking air flow to the RP, GP and XP Pro Series Fan. The lack of cooling air may result in the fan cycling on and off as the internal temperature rises above the thermal cutoff. Should this condition arise, it is recommended that the fan be turned off until the water recedes, allowing for return to normal operation.

1.6 SLAB COVERAGE

The RP, GP and XP Pro Series Fans can provide coverage up to 2000+ sq. ft. per slab penetration. This will primarily depend on the sub-slab material in any particular installation. In general, the tighter the material, the smaller the area covered per penetration. Appropriate selection of the RP, GP and XP Pro Series Fan best suited for the sub-slab material can improve the slab coverage. The RP, GP and XP Pro Series have a wide range of models to choose from to cover a wide range of sub-slab materials. The RP140 and 145 are best suited for general purpose use. The RP 260 can be used where additional airflow is required, and the RP265 and RP 380 are best suited for large slab, high airflow applications. Additional suction points can be added as required. It is recommended that a small pit (5 to 10 gallons in size) be created below the slab at each suction hole.

1.7 CONDENSATION & DRAINAGE

Condensation is formed in the piping of a mitigation system when the air in the piping is chilled below its dew point. This can occur at points where the system piping goes through unheated space such as an attic, garage or outside. The system design must provide a means for water to drain back to a slab hole to remove the condensation. The RP, GP and XP Pro Series Fan MUST be mounted vertically plumb and level, with the outlet pointing up for proper drainage through the fan. Avoid mounting the fan in any orientation that will allow water to accumulate inside the fan housing. The RP, GP and XP Pro Series Fans are NOT suitable for underground burial.

For RP, GP and XP Pro Series Fan piping, the following table provides the minimum recommended pipe diameter and pitch under several system conditions.

Pipe Diameter	Minimum Rise per Ft of Run*		
	@25 CFM	@50 CFM	@100 CFM
4"	1/8"	1/4"	3/8"
3"	1/4"	3/8"	1 1/2"



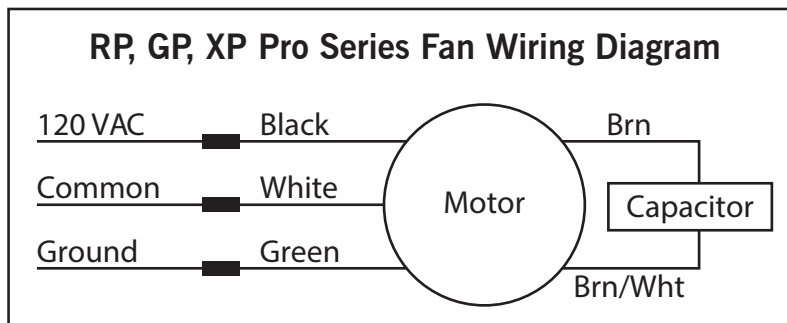
See p. 7 for detailed specifications.

1.8 SYSTEM MONITOR & LABEL

A System Monitor, such as a manometer (P/N 50017) or audible alarm (P/N 28001-2, 28001-4 or 28421), is required to notify the occupants of a fan system malfunction. A System Label (provided with Manometer P/N 50017) with instructions for contacting the installing contractor for service and identifying the necessity for regular radon tests to be conducted by the building occupants must be conspicuously placed in a location where the occupants frequent and can see the label.

1.9 ELECTRICAL WIRING

The RP, GP and XP Pro Series Fans operate on standard 120V, 60Hz AC. All wiring must be performed in accordance with National Fire Protection (NFPA) National Electrical Code, Standard #70, current edition, for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician. Outdoor installations require the use of a UL Listed watertight conduit. Ensure that all exterior electrical boxes are outdoor rated and properly sealed to prevent water penetration into the box. A means, such as a weep hole, is recommended to drain the box.



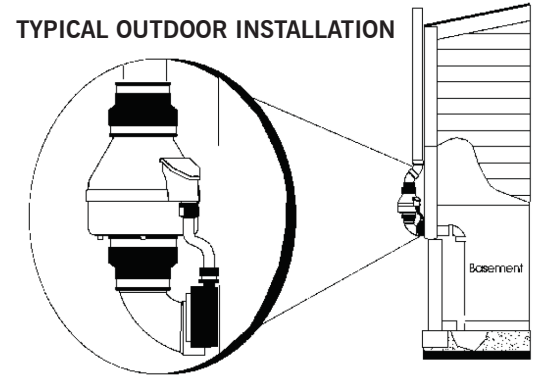
1.10 SPEED CONTROLS

The RP, GP and XP Pro Series Fans are rated for use with electronic speed controls; however, speed controls are generally not recommended. If used, the recommended speed control is Pass & Seymour Solid State Speed Control (Cat. No. 94601-1).

2.0 INSTALLATION

The RP, GP and XP Pro Series Fans can be mounted indoors or outdoors. (It is suggested that EPA and radon mitigation standards recommendations be followed in choosing the fan location.) The GP fans have an integrated mounting bracket; RP and XP Pro Series Fans may be mounted directly on the system piping or fastened to a supporting structure by means of an optional mounting bracket.

The ducting from the fan to the outside of the building has a strong effect on noise and fan energy use. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated airflow.



2.1 MOUNTING

Mount the RP, GP and XP Pro Series Fan vertically with outlet up. Insure the unit is plumb and level. When mounting directly on the system piping assure that the fan does not contact any building surface to avoid vibration noise.

2.2 MOUNTING BRACKET (optional)

The RP and XP Pro Series Fans may be optionally secured with the RadonAway P/N 25007 mounting bracket. Foam or rubber grommets may also be used between the bracket and mounting surface for vibration isolation.

2.3 SYSTEM PIPING

Complete piping run, using flexible couplings as a means of disconnect for servicing the unit and for vibration isolation. As the fan is typically outside of the building thermal boundary and is venting to the outside, installation of insulation around the fan is not required.

2.4 ELECTRICAL CONNECTION

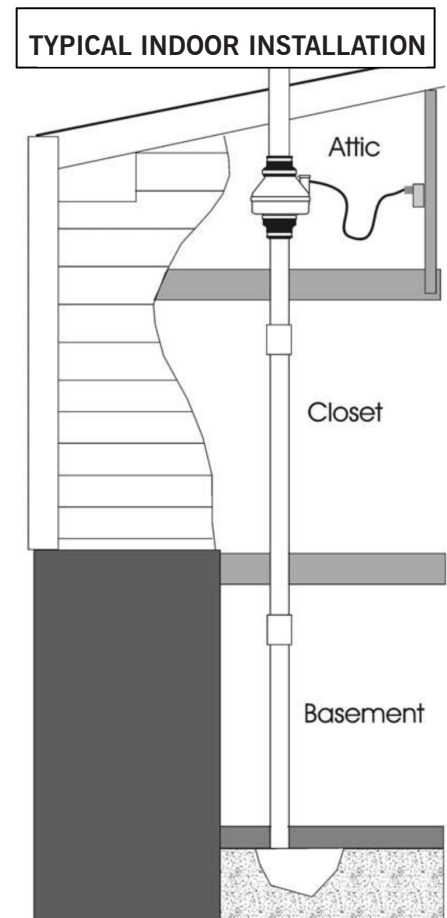
Connect wiring with wire nuts provided, observing proper connections (See Section 1.9). Note that the fan is not intended for connection to rigid metal conduit.

2.5 VENT MUFLER (optional)

Install the muffler assembly in the selected location in the outlet ducting. Solvent weld all connections. The muffler is normally installed at the end of the vent pipe.

2.6 OPERATION CHECKS & ANNUAL SYSTEM MAINTENANCE

- _____ **Verify** all connections are tight and **leak-free**.
- _____ **Ensure** the RP, GP and XP Pro Series Fan and all ducting are **secure and vibration-free**.
- _____ **Verify system vacuum pressure** with manometer. **Insure** vacuum pressure is within normal operating range and **less than** the maximum recommended operating pressure.
(Based on sea-level operation, at higher altitudes reduce by about 4% per 1000 feet)
(Further reduce Maximum Operating Pressure by 10% for High Temperature environments.)
See Product Specifications. If this is exceeded, increase the number of suction points.
- _____ **Verify Radon levels** by testing to EPA Protocol and applicable testing standards.



THE FOLLOWING CHARTS SHOW THE PERFORMANCE OF THE RP, GP and XP PRO SERIES FANS

RP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC									
Model	0"	.25"	.5"	.75"	1.0"	1.25"	1.5"	1.75"	2.0"
RP140	135	103	70	14	-	-	-	-	-
RP145	166	146	126	104	82	61	41	21	3
RP260	251	209	157	117	70	26	-	-	-
RP265	375	330	282	238	204	170	140	108	70
RP380	531	490	415	340	268	200	139	84	41

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
RP140	15 - 21 watts	0.7" WC
RP145	41 - 72 watts	1.7" WC
RP260	47-65 watts	1.3" WC
RP265	95 - 139 watts	2.3" WC
RP380	96 - 138 watts	2.0" WC

*Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.

Model	Size	Weight	Inlet/Outlet	L.2
RP140	8.5"H x 9.7" Dia.	5.5 lbs	4.5"OD (4.0" PVC Sched 40 size compatible)	25
RP145	8.5"H x 9.7" Dia.	5.5 lbs	4.5" OD	15
RP260	8.6"H x 11.75" Dia.	5.5 lbs	6.0" OD	48
RP265	8.6"H x 11.75" Dia.	6.5 lbs	6.0" OD	30
RP380	10.53"H x 13.41" Dia.	11.5 lbs	8.0" OD	57

L.2 = Estimated Equivalent Length of Rigid Metal Ducting resulting in .2" WC pressure loss for Duct Size listed. Longer Equivalent Lengths can be accommodated at Flows Lower than that at .2" WC pressure loss (see CFM Vs Static Pressure "WC Table).

XP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC						
	0"	.5"	1.0"	1.5"	1.75"	2.0"
XP151	167	127	77	-	-	-
XP201	126	98	66	26	-	-

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
XP151	53-70 watts	1.4" WC
XP201	38-74 watts	1.6" WC

*Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.

Model	Size	Weight	Inlet/Outlet
XP151	9.5"H x 8.5" Dia.	6 lbs	4.5"OD (4.0" PVC Sched 40 size compatible)
XP201	9.5"H x 8.5" Dia.	6 lbs	4.5" OD

GP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC							
	1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"
GP201	54	42	11	-	-	-	-
GP301	64	54	41	4	-	-	-
GP401	-	61	52	44	22	-	-
GP501	-	-	66	58	50	27	4

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
GP201	31-67 watts	1.8" WC
GP301	56-100 watts	2.3" WC
GP401	62-128 watts	3.0" WC
GP501	68 - 146 watts	3.8" WC

**Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.*

Model	Size	Weight	Inlet/Outlet
GP201	13"H x 12.5" Dia.	12 lbs	3.5"OD (3.0" PVC Sched 40 size compatible)
GP301	13"H x 12.5" Dia.	12 lbs	3.5" OD
GP401	13"H x 12.5" Dia.	12 lbs	3.5" OD
GP501	13"H x 12.5" Dia.	12 lbs	3.5" OD

RP, XP and GP Pro Series Additional Specifications

Model	Recommended Duct	PVC Pipe Mounting	Thermal Cutout	Insulation Class
RP140	3" or 4" Schedule 20/40 PVC	Mount on the duct pipe or with optional mounting bracket. For Ventilation: 4", 6" or 8" Rigid or Flexible Ducting.	130°C/266°F	Class B Insulation
RP145			130°C/266°F	
RP260			150°C/302°F	
RP265			150°C/302°F	
RP380			6" Schedule 20/40 PVC Pipe	
XP151	3" or 4" Schedule 20/40 PVC	Fan may be mounted on the duct pipe or with integral flanges.	120°C/248°F	Class B Insulation
XP201				
GP201	3" or 4" Schedule 20/40 PVC	Fan may be mounted on the duct pipe or with integral flanges.	120°C/248°F	Class B Insulation
GP301				
GP401				
GP501				

**Continuous Duty
3000 RPM
Thermally Protected
RP, GP Residential and Commercial
XP Residential Only
Rated for Indoor or Outdoor Use**



LISTED
Electric Fan



Conforms to
UL STD. 507
Certified to
CAN/CSA STD.
C22.2 No.113

IMPORTANT INSTRUCTIONS TO INSTALLER

Inspect the RadonAway® RP, GP and XP Pro Series Fan for shipping damage within 15 days of receipt. **Notify RadonAway of any damages immediately.** RadonAway is not responsible for damages incurred during shipping. However, for your benefit, RadonAway does insure shipments.

There are no user serviceable parts inside the fan. **Do not attempt to open the housing.** Return unit to factory. (See Warranty below).

Install the RP, GP and XP Pro Series Fan in accordance with all EPA, ANSI/AARST standard practices, and state and local building codes and regulations.

Provide a copy of this instruction or comparable radon system and testing information to the building occupants after completing system installation.

Warranty

RadonAway® warrants that the RP, GP (excluding GP500) and XP Pro Series Fan (the “Fan”) will be free from defects in materials and workmanship for a period of 12 months from the date of purchase or 18 months from the date of manufacture, whichever is sooner (the “Warranty Term”).

RadonAway® will replace any fan which fails due to defects in materials or workmanship during the Warranty Term. This Warranty is contingent on installation of the Fan in accordance with the instructions provided. This Warranty does not apply where any repairs or alterations have been made or attempted by others, or if the unit has been abused or misused. Warranty does not cover damage in shipment unless the damage is due to the negligence of RadonAway®.

The Fan must be returned (at Owner’s cost) to the RadonAway® factory. Any Fan returned to the factory will be discarded unless the Owner provides specific instructions along with the Fan when it is returned regardless of whether or not the Fan is actually replaced under this warranty. Proof of purchase must be supplied upon request for service under this Warranty.

5-YEAR EXTENDED WARRANTY WITH PROFESSIONAL INSTALLATION.

RadonAway® will extend the Warranty Term of the fan to 60 months (5 years) from date of purchase or 66 months from date of manufacture, whichever is sooner, provided that the fan is installed by a professional radon mitigation contractor. Proof of purchase and/or proof of professional installation may be required for service under this warranty. No extended warranty is offered outside the Continental United States and Canada beyond the standard 12 months from the date of purchase or 18 months from the date of manufacture, whichever is sooner.

RadonAway® is not responsible for installation, removal or delivery costs associated with this Warranty.

LIMITATION OF WARRANTY

EXCEPT AS STATED ABOVE, THE RP, GP (excluding GP500) and XP PRO SERIES FANS ARE PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL RADONAWAY BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR RELATING TO, THE FAN OR THE PERFORMANCE THEREOF. RADONAWAY’S AGGREGATE LIABILITY HEREUNDER SHALL NOT IN ANY EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE OF SAID PRODUCT. THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT, TO THE EXTENT THE SAME DOES NOT MEET WITH RADONAWAY’S WARRANTY AS PROVIDED ABOVE.

For service under this Warranty, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. No returns can be accepted without an RMA. If factory return is required, the customer assumes all shipping costs, including insurance, to and from factory.

RadonAway® 3 Saber Way
Ward Hill, MA 01835 USA TEL (978) 521-3703
FAX (978) 521-3964
Email to: Returns@RadonAway.com

Record the following information for your records:

Serial Number: _____

Purchase Date: _____

ATTACHMENT 3

Vapor Mitigation System Inspection Log

Notice: In accordance with s. NR 727.05 (1) (b) 3., Wis. Adm. Code, use of this form for documenting the inspections and maintenance of certain vapor-related continuing obligations is required. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Public Records law [ss. 19.31-19.39, Wis. Stats.].

Directions: This form was developed to provide the results of a site inspection of a vapor related continuing obligation, typically a vapor mitigation system. See the closure approval letter for this site for requirements regarding the submittal of this form to the Department of Natural Resources. A copy of this inspection log is required to be maintained either on the property, or at a location specified in the closure approval letter. The closure letter may be found in the database, [BRRTS on the Web](#), by searching for the site using the BRRTS ID number, and then looking in the "Action" section, for code 56.

Activity (Site) Name: Webers Dry Cleaners - 245 East Gage Street Vapor Mitigation System

BRRTS No. 02-53-550524

Date of Inspection: _____

When submittal of this form is required, submit an electronic version or a scanned copy of this completed form to the [RR Submittal Portal](#).

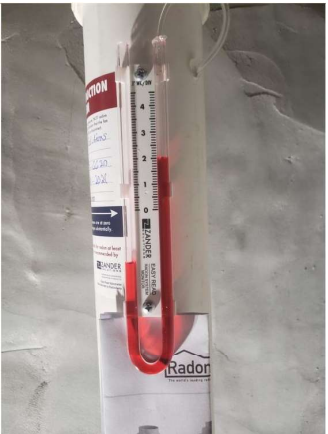
HOW TO USE THIS FORM

The Activity (Site) Name, BRRTS No. and Date of Inspection entered below will auto-populate the table. Complete only the applicable rows/components. Check "Not Applicable" for components that do not apply. For example, if there is no sump sealed and vented as part of the system, check "Not Applicable" in the "NOTES" section for that component.

Multiple components: For systems with multiple components (e.g., two manometers or two fans), add an additional row for that component by clicking the "+" (plus) symbol at the end of the row. After a system component row is added, a "-" (minus) symbol is shown so the added row may be deleted.

Photos: Click on the placeholder photo shown in each row to replace it with your own site-specific photo. Site-specific photos are optional but strongly recommended. Enter specific details and observations within the "NOTES" section to assist the DNR in understanding status of the system components.

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
Manometer or Differential Pressure Gauge	Measures differential pressure between vacuum side of vent pipe and indoor space. This measurement confirms there is a vacuum being pulled by the fan.	Liquid Level on Manometer or Gauge	Liquid level in manometer should be offset (not level with each other).	A change in liquid level indicates a change in the vacuum below foundation. This could be caused by failure of fan, blockage of vent pipe, change in water level below building, or other conditions. Hire a professional to identify cause and repair if needed.

PHOTO 	NOTES: (Record the reading on the gauge. Identify specific building and location description:) <input type="checkbox"/> Not Applicable
	(Empty space for additional notes)


SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
<p style="text-align: center;">Fan</p>	<p>Fan creates a vacuum and lowers pressure below foundation.</p> <p>The fan also removes soil gases from below foundation for discharge to atmosphere.</p>	<p>Fan Operation</p> <p>Fan Location</p> <p>Motor Noise</p>	<p>Fan is on.</p> <p>Fan mounted outside & secure.</p> <p>Fan motor is quiet (loud motor may indicate problem).</p>	<p>Replace the fan immediately once the fan stops running. Fans typically run for 10-20 years, but it may be less.</p> <p>Replacement fan to have similar specifications as original with respect to flow and vacuum.</p> <p>After a fan is replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p> <p>Original Fan Make and Model:</p>


PHOTO




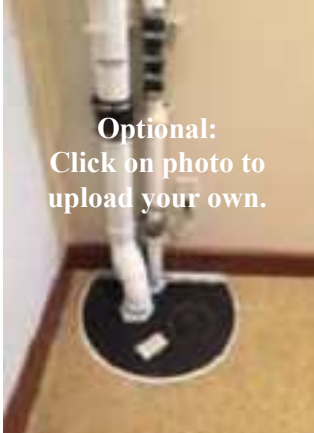
NOTES: (Identify specific building and location description:)

Not Applicable

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
<p>Suction Drop Point w/ Vent Pipe</p>	<p>Suction Point : Soil gases are collected in a void space below the foundation, and tight seal prevents soil gas from getting inside the home. Vent Pipe: Pipe conveys the vacuum from the fan, and collects soil gases for discharge to the atmosphere.</p>	<p>Suction Point Seal Vent Pipe Condition</p>	<p>Seal is air tight around pipe penetration. Vent pipe is connected to fan, has not cracked.</p>	<p>Suction point seal or vent pipe may need to be sealed or replaced if cracks or leaks appear. If any piping or sealing of the system is altered or replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p>
<p>PHOTO</p> 			<p>NOTES: (Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>	

SYSTEM COMPONENT				DATE:
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
<p>Suction Drop Point w/ Vent Pipe</p>	<p>Suction Point : Soil gases are collected in a void space below the foundation, and tight seal prevents soil gas from getting inside the home. Vent Pipe: Pipe conveys the vacuum from the fan, and collects soil gases for discharge to the atmosphere.</p>	<p>Suction Point Seal Vent Pipe Condition</p>	<p>Seal is air tight around pipe penetration. Vent pipe is connected to fan, has not cracked.</p>	<p>Suction point seal or vent pipe may need to be sealed or replaced if cracks or leaks appear. If any piping or sealing of the system is altered or replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p>
<p>PHOTO</p> 			<p>NOTES: (Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>	

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
<p>Suction Drop Point w/ Vent Pipe</p>	<p>Suction Point : Soil gases are collected in a void space below the foundation, and tight seal prevents soil gas from getting inside the home. Vent Pipe: Pipe conveys the vacuum from the fan, and collects soil gases for discharge to the atmosphere.</p>	<p>Suction Point Seal Vent Pipe Condition</p>	<p>Seal is air tight around pipe penetration. Vent pipe is connected to fan, has not cracked.</p>	<p>Suction point seal or vent pipe may need to be sealed or replaced if cracks or leaks appear. If any piping or sealing of the system is altered or replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p>
<p>PHOTO</p> 			<p>NOTES: (Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>	

SYSTEM COMPONENT				DATE:
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
<p>Sealed Sump w/Vent Pipe</p>	<p>Sump Cover: Soil gases are collected in sump and the cover prevents soil gas from getting inside home.</p> <p>Vent Pipe: Pipe transports the soil gas from the sump for discharge to the atmosphere.</p>	<p>Suction Point Seal</p> <p>Vent Pipe Seal Condition</p>	<p>Seal is airtight to floor.</p> <p>Vent pipe is connected to the sump cover and is not cracked.</p>	<p>Sump cover or vent pipe may need to be sealed or replaced if cracks or leaks appear.</p> <p>If any piping or sealing of the system is altered or replaced, the system should be evaluated by a plumber or a mitigation professional to verify effectiveness, which includes pressure readings.</p>
<p>PHOTO</p>  <p>Optional: Click on photo to upload your own.</p>			<p>NOTES: (Identify specific building and location description:)</p> <p><input checked="" type="checkbox"/> Not Applicable</p>	

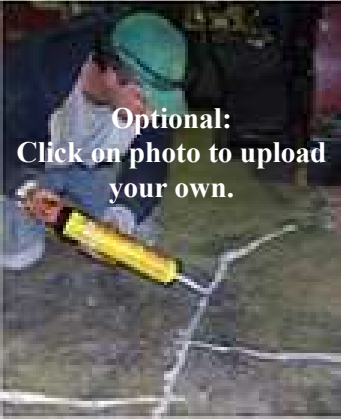
SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
Outdoor Vent Pipe	Pipe transports the soil gas from beneath the foundation for discharge to the atmosphere.	Vent Pipe Condition Vent Pipe Location	Vent pipe remains connected to fan. End of pipe free from obstructions. The exhaust is more than 15 feet from windows or air intakes.	Vent pipe may require replacement, or cleaning to remove ice or debris. If any piping or sealing of the system is altered or replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.

PHOTO



NOTES: (Identify specific building and location description:)

Not Applicable

SYSTEM COMPONENT				DATE:
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
<p>Foundation Floor</p>	<p>Foundation is a barrier that minimizes soil gas entry into building, and helps fan to work efficiently.</p>	<p>Foundation Condition Foundation Footprint</p>	<p>No penetrating cracks or holes in foundation. Check if there have been alterations or additions to building or footprint.</p>	<p>Seal cracks or other penetrations as you would to prevent water from entering. If building floor plan has changed, notify DNR and contact a mitigation professional to evaluate if modifications to the vapor mitigation system are necessary.</p>
<p>PHOTO</p>  <p>Optional: Click on photo to upload your own.</p>			<p>NOTES: (Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>	

VAPOR MITIGATION SYSTEM MAINTENANCE PLAN

725 Sextonville Road, Richland Center, Wisconsin

January 25, 2022

Property Located at: 725 Sextonville Road, Richland Center, Wisconsin

WDNR BRRTS/Activity # 02-53-550524

Legal Description: HASELTINE ADD. BLOCK 75 LOT 2 S20' EX E43.1'

Parcel ID # 276-2100-7523

INTRODUCTION

This document is the Maintenance Plan for an active vapor mitigation system (VMS) at the above-referenced property in accordance with the requirements of s. NR 724.13 (2), Wisconsin Administrative Code (Wis. Adm. Code). More site-specific information about this property may be found in:

- The case file in the Wisconsin Department of Natural Resources (WDNR) South Central Region office
- BRRTS on the Web (WDNR's internet-based database of contaminated sites) for the link to a PDF for site-specific information at the time of closure and on continuing obligations
- RR Sites Map/GIS Registry layer for a map view of the site
- The WDNR project manager for Richland County

Descriptions

System Description, Purpose, and Location

The VMS was constructed by Zander Solutions for the 725 Sextonville Road residence and was started up on September 29, 2021. The VMS was designed to reduce the potential for vapor intrusion by depressurizing the basement sub-slab where tetrachloroethylene (PCE) vapor was detected in excess of the WDNR's vapor risk screening level.

The sub-slab PCE vapor at 725 Sextonville Road appears to have originated from a release of PCE dry cleaning solvent at the neighboring property located at 711 South Church Street. The locations of various VMS components are shown on **Figure 1**.

System Design and Construction Documentation

Photographs of the VMS are included in **Attachment 1**. The VMS construction included installation of two vacuum pickup points. The pickup points were constructed with 3-inch-diameter schedule 40 PVC pipe and sealed into the basement floor. The PVC pipe was extended through the basement wall and above the roofline at the north side of the home.

A RadonAway RP 145 vacuum fan capable of producing up to approximately 3 cubic feet per minute flow at 2.0 inches of water column (WC) vacuum was mounted to the exterior pipe.

Power was supplied to the fan and tied to a labeled circuit breaker inside the basement. The fan can be turned on and off at the breaker box or with a switch located on the fan.

A manometer was fitted to each pickup point to show vacuum at the pickup points and to check fan operation. At startup the manometers read approximately 2.0 inches WC, which is at the upper end of the fan range (0 to 2.0 inches WC).

Additional fan details are provided in **Attachment 2**.

System Maintenance

Minimal operator control or maintenance is required. There are no service requirements for the fan. The fan status is checked using the manometer mounted on the pickup points.

The potential for vapor intrusion of vapors should be reevaluated if there are changes to the floor, HVAC system, or other changes that may influence the sub-slab vacuum distribution. If changes are made, pressure field extension testing of the sub-slab should be completed to make sure that adequate sub-slab vacuum is maintained.

Malfunctioning or damaged system components should be replaced as soon as possible, and any changes or repairs should be documented in the attached inspection and maintenance log (**Attachment 3**).

Inspections

The VMS manometers should be inspected monthly as follows:

- Inspect manometer:
 - If manometer vacuum reads zero:
 - Check to make sure the tube from the manometer to the pickup point is properly seated and sealed into the manometer and pickup point. Reseat/reseal with silicone caulk as necessary.
 - Check the on/off switch next to the fan and the fan circuit breaker at the southeast corner of the basement to make sure the fan has power.
 - If manometer shows low vacuum (e.g., less than 1.5 inch of WC) check for vacuum leaks in the manometer tubing as noted above or pickup point piping and repair as necessary.
 - If fan vacuum cannot be rectified contact the WDNR Project Manager.
- Record manometer readings on Form 4400-321, Vapor Mitigation System Inspection Log (**Attachment 3**).

The remaining items should be inspected at least once per year during the heating season (e.g., December) as follows:

- Inspect fan exhaust line to prevent clogging of fan exhaust, and remove any accumulated debris.
- Inspect floors and maintain as necessary to prevent vapor migration and vacuum loss.
- Document repairs to the VMS, floors, or HVAC system on Form 4400-321, Vapor Mitigation System Inspection Log (**Attachment 3**).
- Keep copies of the Vapor Mitigation System Inspection Log at the residence and available for submittal or inspection by WDNR representatives upon request.

Any system components found to be ineffective or malfunctioning need to be replaced immediately by a mitigation professional and the system recommissioned, documented, and stored on site with the inspection information. Any changes need to be communicated with WDNR (ideally in advance).

A copy of the Maintenance Plan should be put in a plastic sleeve and zip-tied to the VMS piping.

Prohibition of Activities and Notification of WDNR Prior to Actions Affecting the VMS

The following activities are prohibited unless prior written approval has been obtained from the WDNR:

1. Shutdown or removal of the VMS.
2. Replacement of the VMS, other than replacement of the vacuum fan.
3. Construction or placement of a building or other structure.

If removal, replacement, or other changes are considered, the property owner will contact WDNR at least 45 days before taking such an action, to determine whether further action may be necessary to protect human health, safety, or welfare or the environment, in accordance with s. NR 727.07, Wis. Adm. Code.

Amendment or Withdrawal of Maintenance Plan

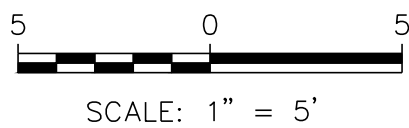
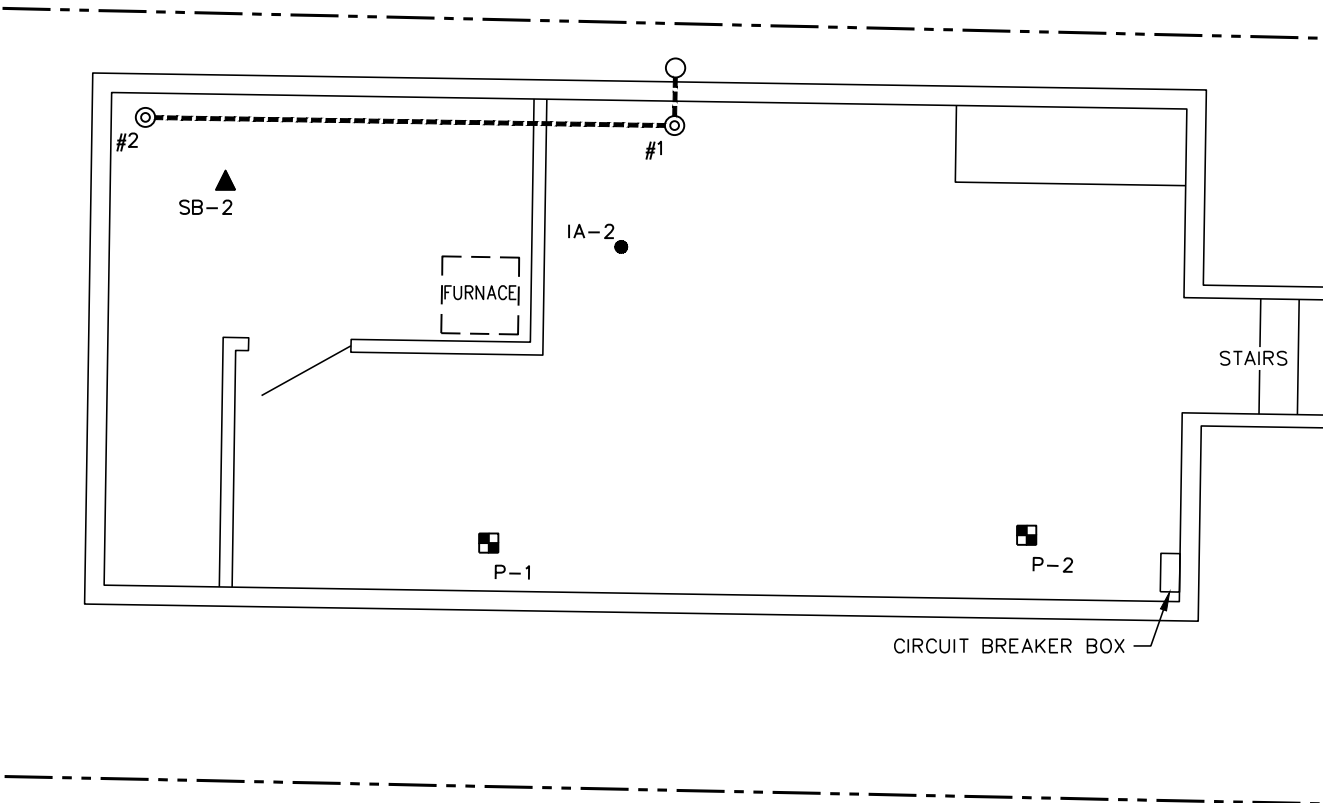
This Maintenance Plan can be amended or withdrawn by the property owner and its successors with the written approval of WDNR.

Contact Information


Property Owner: Adam Harlan, Harland Homes, LLC
578 East Second Street
Richland Center, WI 53581
(608) 475-1013
aharlan65@icloud.com

Consultant: Robert Langdon, SCS Engineers
2830 Dairy Drive
Madison, WI 53718
(608) 224-2830
rlangdon@scsengineers.com

WDNR: Jeff Ackerman, WDNR
3911 Fish Hatchery Rd
Fitchburg, WI 53711-5367
(608) 219-2302
Jeffrey.Ackerman@wisconsin.gov



- LEGEND
- PROPERTY LINE
 - ▲ SUB-SLAB VAPOR TESTING LOCATION
 - INDOOR AMBIENT AIR TESTING LOCATION
 - VACUUM OBSERVATION POINT
 - ⊙ VAPOR MITIGATION SYSTEM PICKUP POINT
 - VAPOR MITIGATION SYSTEM PIPING
 - VAPOR MITIGATION SYSTEM FAN/EXHAUST

CLIENT			SITE	WEBER'S DRY CLEANERS 711 SOUTH CHURCH STREET RICHLAND CENTER, WISCONSIN		SITE PLAN 725 SEXTONVILLE ROAD	
	PROJECT NO.	25220120.00		DRAWN BY:	KP	ENGINEER	SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830
DRAWN:	11/02/2021	CHECKED BY:	REL				
REVISED:	11/02/2021	APPROVED BY:	REL 12/27/2021	FIGURE	1		

ATTACHMENT 1

Photos

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 1: Basement access. August 31, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 2: Pickup Point 1. August 31, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 3: Pickup Point 1 (typical). August 31, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 4: Pickup Point 2. August 31, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 5: Vacuum Observation Point 1. August 31, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 6: Vacuum Observation Point 2. August 31, 2021.

**Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00**

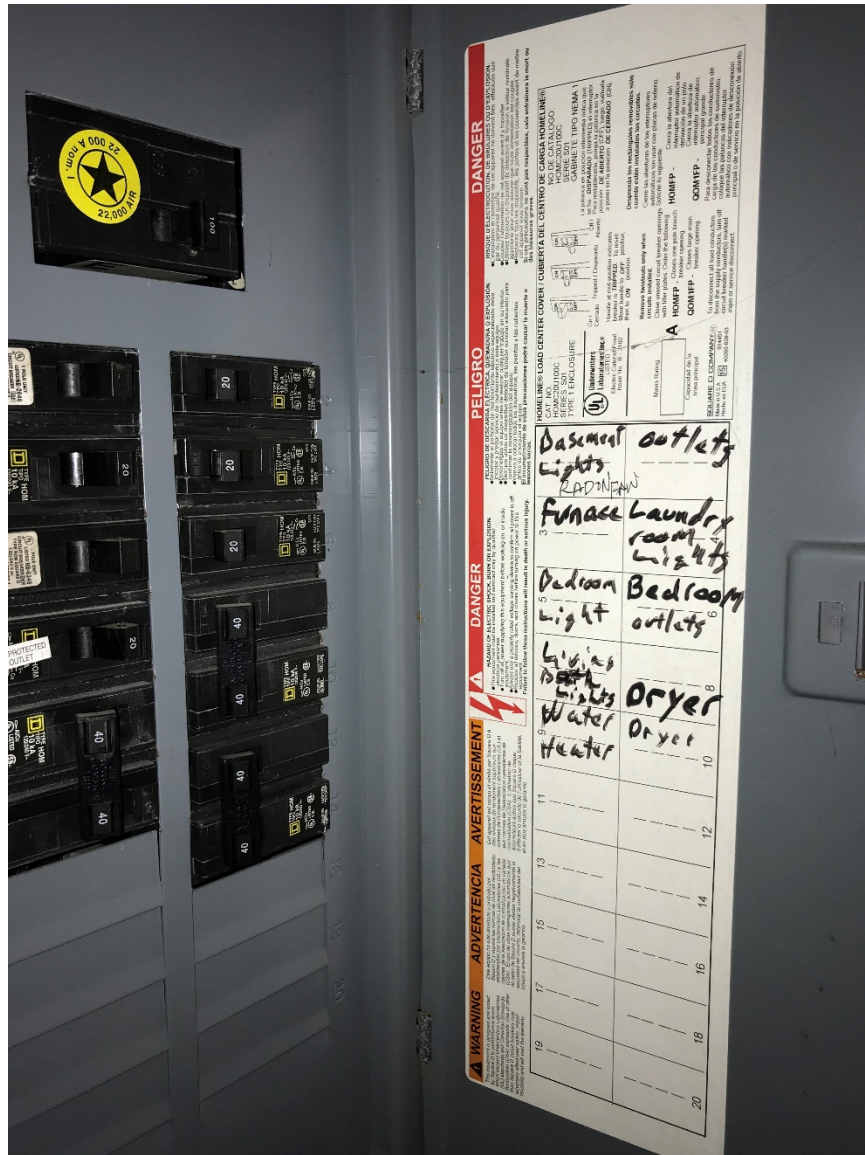


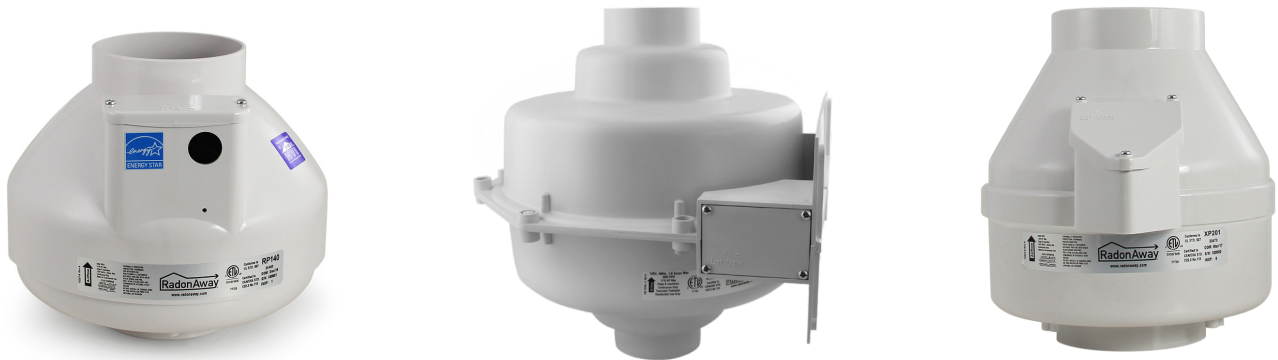
Photo 7: Circuit breaker box. November 30, 2021.

Vapor Mitigation System Installation
725 Sextonville Road, Richland Center, WI
SCS Engineers Project #25220120.00



Photo 8: Blower and exhaust line. August 31, 2021.

ATTACHMENT 2
Additional Fan Details



RP, GP, XP Pro Series Installation Instructions



Fan Installation & Operating Instructions
RP, GP, XP Pro Series Fans
Please Read and Save These Instructions.

DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED. MAKE SURE ELECTRICAL SERVICE TO FAN IS LOCKED IN “OFF” POSITION. DISCONNECT POWER BEFORE SERVICING FAN.

1. **WARNING!** For General Ventilating Use Only. Do Not Use to Exhaust Hazardous, Corrosive or Explosive Materials, Gases or Vapors. See Vapor Intrusion Application Note #AN001 for important information on VI Applications. RadonAway.com/vapor-intrusion
2. **NOTE:** Fan is suitable for use with solid state speed controls; however, use of speed controls is not generally recommended.
2. **WARNING!** Check voltage at the fan to insure it corresponds with nameplate.
3. **WARNING!** Normal operation of this device may affect the combustion airflow needed for safe operation of fuel burning equipment. Check for possible backdraft conditions on all combustion devices after installation.
4. **NOTICE!** There are no user serviceable parts located inside the fan unit.
Do NOT attempt to open. Return unit to the factory. (See Warranty, p. 8, for details.)
5. **WARNING!** Do not leave fan unit installed on system piping without electrical power for more than 48 hours. Fan failure could result from this non-operational storage.
6. **WARNING!** TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:
 - a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer. (See p. 8.)
 - b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
 - c) Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire rated construction.
 - d) Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturers' guidelines and safety standards such as those published by any National Fire Protection Association, and the American Society for Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), and the local code authorities.
 - e) When cutting or drilling into a wall or ceiling, do not damage electrical wiring and other hidden utilities.
 - f) Ducted fans must always be vented to outdoors.
 - g) If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) protected branch circuit.



Fan Installation & Operating Instructions

RP Pro Series		GP Pro Series		XP Pro Series	
RP140	P/N 28460	GP201	P/N 28465	XP151	P/N 28469
RP145	P/N 28461	GP301	P/N 28466	XP201	P/N 28470
RP260	P/N 28462	GP401	P/N 28467		
RP265	P/N 28463	GP501	P/N 28468		
RP380	P/N 28464				

1.0 SYSTEM DESIGN CONSIDERATIONS

1.1 INTRODUCTION

The RP, GP and XP Pro Series Radon Fans are intended for use by trained, professional, certified/licensed radon mitigators. The purpose of these instructions is to provide additional guidance for the most effective use of RP, GP and XP Series Fans. These instructions should be considered supplemental to EPA/radon industry standard practices, state and local building codes and regulations. In the event of a conflict, those codes, practices and regulations take precedence over these instructions.

1.2 FAN SEALING

The RP, GP and XP Pro Series Fans are factory sealed; no additional caulk or other materials are required to inhibit air leakage.

1.3 ENVIRONMENTALS

The RP, GP and XP Pro Series Fans are designed to perform year-round in all but the harshest climates without additional concern for temperature or weather. For installations in an area of severe cold weather, please contact RadonAway for assistance. When not in operation, the fan should be stored in an area where the temperature is never less than 32 degrees F or more than 100 degrees F.

1.4 ACOUSTICS

The RP, GP and XP Pro Series Fans, when installed properly, operate with little or no noticeable noise to the building occupants. The velocity of the outgoing air should be considered in the overall system design. In some cases the “rushing” sound of the outlet air may be disturbing. In these instances, the use of a RadonAway Exhaust Muffler is recommended.

(To ensure quiet operation of inline and remote fans, each fan shall be installed using sound attenuation techniques appropriate for the installation. For bathroom and general ventilation applications, at least 8 feet of insulated flexible duct shall be installed between the exhaust or supply grille(s) and the fan(s). RP, GP and XP Pro Series Fans are not suitable for kitchen range hood remote ventilation applications.)

1.5 GROUND WATER

In the event that a temporary high water table results in water at or above slab level, water may be drawn into the riser pipes, thus blocking air flow to the RP, GP and XP Pro Series Fan. The lack of cooling air may result in the fan cycling on and off as the internal temperature rises above the thermal cutoff. Should this condition arise, it is recommended that the fan be turned off until the water recedes, allowing for return to normal operation.

1.6 SLAB COVERAGE

The RP, GP and XP Pro Series Fans can provide coverage up to 2000+ sq. ft. per slab penetration. This will primarily depend on the sub-slab material in any particular installation. In general, the tighter the material, the smaller the area covered per penetration. Appropriate selection of the RP, GP and XP Pro Series Fan best suited for the sub-slab material can improve the slab coverage. The RP, GP and XP Pro Series have a wide range of models to choose from to cover a wide range of sub-slab materials. The RP140 and 145 are best suited for general purpose use. The RP 260 can be used where additional airflow is required, and the RP265 and RP 380 are best suited for large slab, high airflow applications. Additional suction points can be added as required. It is recommended that a small pit (5 to 10 gallons in size) be created below the slab at each suction hole.

1.7 CONDENSATION & DRAINAGE

Condensation is formed in the piping of a mitigation system when the air in the piping is chilled below its dew point. This can occur at points where the system piping goes through unheated space such as an attic, garage or outside. The system design must provide a means for water to drain back to a slab hole to remove the condensation. The RP, GP and XP Pro Series Fan MUST be mounted vertically plumb and level, with the outlet pointing up for proper drainage through the fan. Avoid mounting the fan in any orientation that will allow water to accumulate inside the fan housing. The RP, GP and XP Pro Series Fans are NOT suitable for underground burial.

For RP, GP and XP Pro Series Fan piping, the following table provides the minimum recommended pipe diameter and pitch under several system conditions.

Pipe Diameter	Minimum Rise per Ft of Run*		
	@25 CFM	@50 CFM	@100 CFM
4"	1/8"	1/4"	3/8"
3"	1/4"	3/8"	1 1/2"



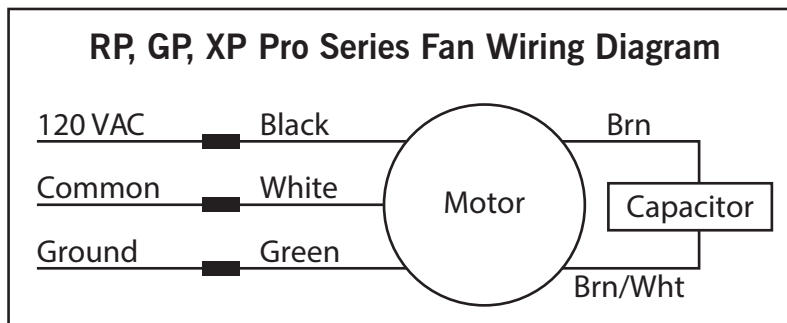
See p. 7 for detailed specifications.

1.8 SYSTEM MONITOR & LABEL

A System Monitor, such as a manometer (P/N 50017) or audible alarm (P/N 28001-2, 28001-4 or 28421), is required to notify the occupants of a fan system malfunction. A System Label (provided with Manometer P/N 50017) with instructions for contacting the installing contractor for service and identifying the necessity for regular radon tests to be conducted by the building occupants must be conspicuously placed in a location where the occupants frequent and can see the label.

1.9 ELECTRICAL WIRING

The RP, GP and XP Pro Series Fans operate on standard 120V, 60Hz AC. All wiring must be performed in accordance with National Fire Protection (NFPA) National Electrical Code, Standard #70, current edition, for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician. Outdoor installations require the use of a UL Listed watertight conduit. Ensure that all exterior electrical boxes are outdoor rated and properly sealed to prevent water penetration into the box. A means, such as a weep hole, is recommended to drain the box.



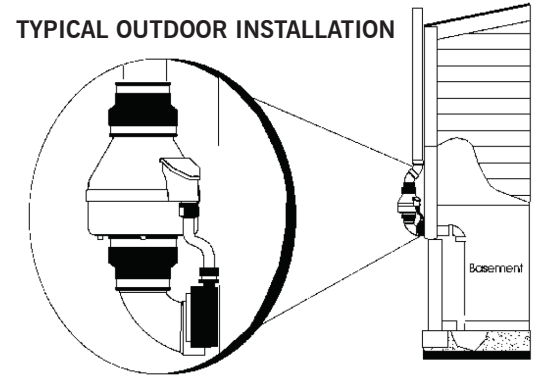
1.10 SPEED CONTROLS

The RP, GP and XP Pro Series Fans are rated for use with electronic speed controls; however, speed controls are generally not recommended. If used, the recommended speed control is Pass & Seymour Solid State Speed Control (Cat. No. 94601-1).

2.0 INSTALLATION

The RP, GP and XP Pro Series Fans can be mounted indoors or outdoors. (It is suggested that EPA and radon mitigation standards recommendations be followed in choosing the fan location.) The GP fans have an integrated mounting bracket; RP and XP Pro Series Fans may be mounted directly on the system piping or fastened to a supporting structure by means of an optional mounting bracket.

The ducting from the fan to the outside of the building has a strong effect on noise and fan energy use. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated airflow.



2.1 MOUNTING

Mount the RP, GP and XP Pro Series Fan vertically with outlet up. Insure the unit is plumb and level. When mounting directly on the system piping assure that the fan does not contact any building surface to avoid vibration noise.

2.2 MOUNTING BRACKET (optional)

The RP and XP Pro Series Fans may be optionally secured with the RadonAway P/N 25007 mounting bracket. Foam or rubber grommets may also be used between the bracket and mounting surface for vibration isolation.

2.3 SYSTEM PIPING

Complete piping run, using flexible couplings as a means of disconnect for servicing the unit and for vibration isolation. As the fan is typically outside of the building thermal boundary and is venting to the outside, installation of insulation around the fan is not required.

2.4 ELECTRICAL CONNECTION

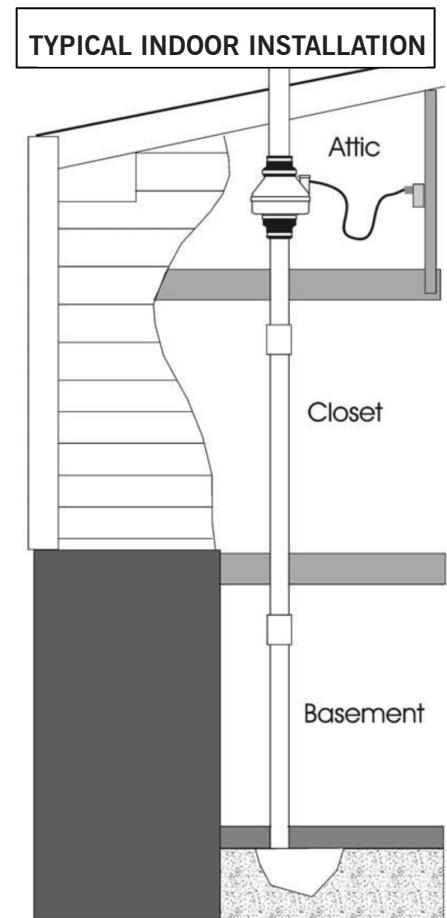
Connect wiring with wire nuts provided, observing proper connections (See Section 1.9). Note that the fan is not intended for connection to rigid metal conduit.

2.5 VENT MUFLER (optional)

Install the muffler assembly in the selected location in the outlet ducting. Solvent weld all connections. The muffler is normally installed at the end of the vent pipe.

2.6 OPERATION CHECKS & ANNUAL SYSTEM MAINTENANCE

- _____ **Verify** all connections are tight and **leak-free**.
- _____ **Ensure** the RP, GP and XP Pro Series Fan and all ducting are **secure and vibration-free**.
- _____ **Verify system vacuum pressure** with manometer. **Insure** vacuum pressure is within normal operating range and **less than** the maximum recommended operating pressure.
(Based on sea-level operation, at higher altitudes reduce by about 4% per 1000 feet)
(Further reduce Maximum Operating Pressure by 10% for High Temperature environments.)
See Product Specifications. If this is exceeded, increase the number of suction points.
- _____ **Verify Radon levels** by testing to EPA Protocol and applicable testing standards.



THE FOLLOWING CHARTS SHOW THE PERFORMANCE OF THE RP, GP and XP PRO SERIES FANS

RP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC									
Model	0"	.25"	.5"	.75"	1.0"	1.25"	1.5"	1.75"	2.0"
RP140	135	103	70	14	-	-	-	-	-
RP145	166	146	126	104	82	61	41	21	3
RP260	251	209	157	117	70	26	-	-	-
RP265	375	330	282	238	204	170	140	108	70
RP380	531	490	415	340	268	200	139	84	41

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
RP140	15 - 21 watts	0.7" WC
RP145	41 - 72 watts	1.7" WC
RP260	47-65 watts	1.3" WC
RP265	95 - 139 watts	2.3" WC
RP380	96 - 138 watts	2.0" WC

*Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.

Model	Size	Weight	Inlet/Outlet	L.2
RP140	8.5"H x 9.7" Dia.	5.5 lbs	4.5"OD (4.0" PVC Sched 40 size compatible)	25
RP145	8.5"H x 9.7" Dia.	5.5 lbs	4.5" OD	15
RP260	8.6"H x 11.75" Dia.	5.5 lbs	6.0" OD	48
RP265	8.6"H x 11.75" Dia.	6.5 lbs	6.0" OD	30
RP380	10.53"H x 13.41" Dia.	11.5 lbs	8.0" OD	57

L.2 = Estimated Equivalent Length of Rigid Metal Ducting resulting in .2" WC pressure loss for Duct Size listed. Longer Equivalent Lengths can be accommodated at Flows Lower than that at .2" WC pressure loss (see CFM Vs Static Pressure "WC Table).

XP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC						
	0"	.5"	1.0"	1.5"	1.75"	2.0"
XP151	167	127	77	-	-	-
XP201	126	98	66	26	-	-

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
XP151	53-70 watts	1.4" WC
XP201	38-74 watts	1.6" WC

*Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.

Model	Size	Weight	Inlet/Outlet
XP151	9.5"H x 8.5" Dia.	6 lbs	4.5"OD (4.0" PVC Sched 40 size compatible)
XP201	9.5"H x 8.5" Dia.	6 lbs	4.5" OD

GP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC							
	1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"
GP201	54	42	11	-	-	-	-
GP301	64	54	41	4	-	-	-
GP401	-	61	52	44	22	-	-
GP501	-	-	66	58	50	27	4

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
GP201	31-67 watts	1.8" WC
GP301	56-100 watts	2.3" WC
GP401	62-128 watts	3.0" WC
GP501	68 - 146 watts	3.8" WC

**Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.*

Model	Size	Weight	Inlet/Outlet
GP201	13"H x 12.5" Dia.	12 lbs	3.5"OD (3.0" PVC Sched 40 size compatible)
GP301	13"H x 12.5" Dia.	12 lbs	3.5" OD
GP401	13"H x 12.5" Dia.	12 lbs	3.5" OD
GP501	13"H x 12.5" Dia.	12 lbs	3.5" OD

RP, XP and GP Pro Series Additional Specifications

Model	Recommended Duct	PVC Pipe Mounting	Thermal Cutout	Insulation Class
RP140	3" or 4" Schedule 20/40 PVC	Mount on the duct pipe or with optional mounting bracket. For Ventilation: 4", 6" or 8" Rigid or Flexible Ducting.	130°C/266°F	Class B Insulation
RP145			130°C/266°F	
RP260			150°C/302°F	
RP265			150°C/302°F	
RP380			6" Schedule 20/40 PVC Pipe	
XP151	3" or 4" Schedule 20/40 PVC	Fan may be mounted on the duct pipe or with integral flanges.	120°C/248°F	Class B Insulation
XP201				
GP201	3" or 4" Schedule 20/40 PVC	Fan may be mounted on the duct pipe or with integral flanges.	120°C/248°F	Class B Insulation
GP301				
GP401				
GP501				

**Continuous Duty
3000 RPM
Thermally Protected
RP, GP Residential and Commercial
XP Residential Only
Rated for Indoor or Outdoor Use**



LISTED
Electric Fan



Conforms to
UL STD. 507
Certified to
CAN/CSA STD.
C22.2 No.113

IMPORTANT INSTRUCTIONS TO INSTALLER

Inspect the RadonAway® RP, GP and XP Pro Series Fan for shipping damage within 15 days of receipt. **Notify RadonAway of any damages immediately.** RadonAway is not responsible for damages incurred during shipping. However, for your benefit, RadonAway does insure shipments.

There are no user serviceable parts inside the fan. **Do not attempt to open the housing.** Return unit to factory. (See Warranty below).

Install the RP, GP and XP Pro Series Fan in accordance with all EPA, ANSI/AARST standard practices, and state and local building codes and regulations.

Provide a copy of this instruction or comparable radon system and testing information to the building occupants after completing system installation.

Warranty

RadonAway® warrants that the RP, GP (excluding GP500) and XP Pro Series Fan (the “Fan”) will be free from defects in materials and workmanship for a period of 12 months from the date of purchase or 18 months from the date of manufacture, whichever is sooner (the “Warranty Term”).

RadonAway® will replace any fan which fails due to defects in materials or workmanship during the Warranty Term. This Warranty is contingent on installation of the Fan in accordance with the instructions provided. This Warranty does not apply where any repairs or alterations have been made or attempted by others, or if the unit has been abused or misused. Warranty does not cover damage in shipment unless the damage is due to the negligence of RadonAway®.

The Fan must be returned (at Owner’s cost) to the RadonAway® factory. Any Fan returned to the factory will be discarded unless the Owner provides specific instructions along with the Fan when it is returned regardless of whether or not the Fan is actually replaced under this warranty. Proof of purchase must be supplied upon request for service under this Warranty.

5-YEAR EXTENDED WARRANTY WITH PROFESSIONAL INSTALLATION.

RadonAway® will extend the Warranty Term of the fan to 60 months (5 years) from date of purchase or 66 months from date of manufacture, whichever is sooner, provided that the fan is installed by a professional radon mitigation contractor. Proof of purchase and/or proof of professional installation may be required for service under this warranty. No extended warranty is offered outside the Continental United States and Canada beyond the standard 12 months from the date of purchase or 18 months from the date of manufacture, whichever is sooner.

RadonAway® is not responsible for installation, removal or delivery costs associated with this Warranty.

LIMITATION OF WARRANTY

EXCEPT AS STATED ABOVE, THE RP, GP (excluding GP500) and XP PRO SERIES FANS ARE PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL RADONAWAY BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR RELATING TO, THE FAN OR THE PERFORMANCE THEREOF. RADONAWAY’S AGGREGATE LIABILITY HEREUNDER SHALL NOT IN ANY EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE OF SAID PRODUCT. THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT, TO THE EXTENT THE SAME DOES NOT MEET WITH RADONAWAY’S WARRANTY AS PROVIDED ABOVE.

For service under this Warranty, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. No returns can be accepted without an RMA. If factory return is required, the customer assumes all shipping costs, including insurance, to and from factory.

RadonAway® 3 Saber Way
Ward Hill, MA 01835 USA TEL (978) 521-3703
FAX (978) 521-3964
Email to: Returns@RadonAway.com

Record the following information for your records:

Serial Number: _____

Purchase Date: _____

ATTACHMENT 3

Vapor Mitigation System Inspection Log

Notice: In accordance with s. NR 727.05 (1) (b) 3., Wis. Adm. Code, use of this form for documenting the inspections and maintenance of certain vapor-related continuing obligations is required. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Public Records law [ss. 19.31-19.39, Wis. Stats.].

Directions: This form was developed to provide the results of a site inspection of a vapor related continuing obligation, typically a vapor mitigation system. See the closure approval letter for this site for requirements regarding the submittal of this form to the Department of Natural Resources. A copy of this inspection log is required to be maintained either on the property, or at a location specified in the closure approval letter. The closure letter may be found in the database, [BRRTS on the Web](#), by searching for the site using the BRRTS ID number, and then looking in the "Action" section, for code 56.

Activity (Site) Name: Webers Dry Cleaners - 725 Sextonville Road Vapor Mitigation System

BRRTS No. 02-53-550524

Date of Inspection: _____

When submittal of this form is required, submit an electronic version or a scanned copy of this completed form to the [RR Submittal Portal](#).


HOW TO USE THIS FORM

The Activity (Site) Name, BRRTS No. and Date of Inspection entered below will auto-populate the table. Complete only the applicable rows/components. Check "Not Applicable" for components that do not apply. For example, if there is no sump sealed and vented as part of the system, check "Not Applicable" in the "NOTES" section for that component.

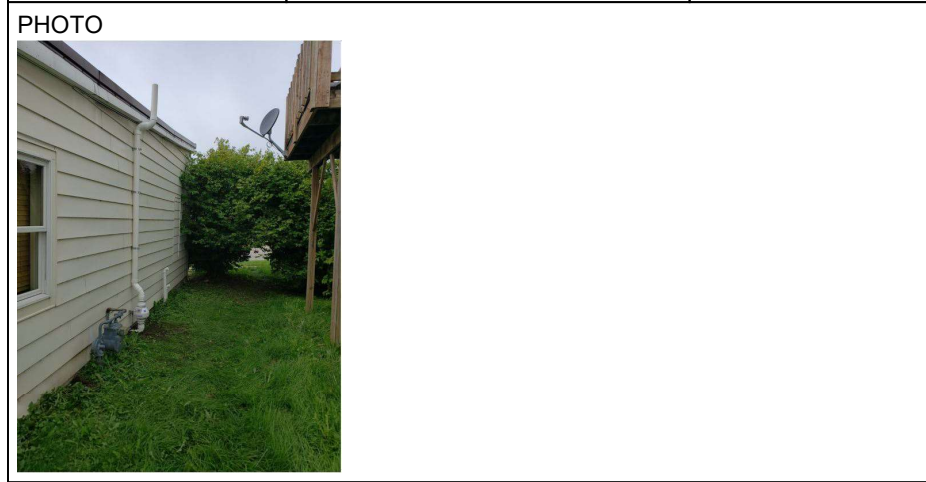
Multiple components: For systems with multiple components (e.g., two manometers or two fans), add an additional row for that component by clicking the "+" (plus) symbol at the end of the row. After a system component row is added, a "-" (minus) symbol is shown so the added row may be deleted.

Photos: Click on the placeholder photo shown in each row to replace it with your own site-specific photo. Site-specific photos are optional but strongly recommended. Enter specific details and observations within the "NOTES" section to assist the DNR in understanding status of the system components.

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
Manometer or Differential Pressure Gauge	Measures differential pressure between vacuum side of vent pipe and indoor space. This measurement confirms there is a vacuum being pulled by the fan.	Liquid Level on Manometer or Gauge	Liquid level in manometer should be offset (not level with each other).	A change in liquid level indicates a change in the vacuum below foundation. This could be caused by failure of fan, blockage of vent pipe, change in water level below building, or other conditions. Hire a professional to identify cause and repair if needed.


PHOTO 	NOTES: (Record the reading on the gauge. Identify specific building and location description:) <input type="checkbox"/> Not Applicable
	(Empty space for additional notes)


SYSTEM COMPONENT		DATE:		
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
Fan	<p>Fan creates a vacuum and lowers pressure below foundation.</p> <p>The fan also removes soil gases from below foundation for discharge to atmosphere.</p>	<p>Fan Operation</p> <p>Fan Location</p> <p>Motor Noise</p>	<p>Fan is on.</p> <p>Fan mounted outside & secure.</p> <p>Fan motor is quiet (loud motor may indicate problem).</p>	<p>Replace the fan immediately once the fan stops running. Fans typically run for 10-20 years, but it may be less.</p> <p>Replacement fan to have similar specifications as original with respect to flow and vacuum.</p> <p>After a fan is replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p> <p>Original Fan Make and Model:</p>

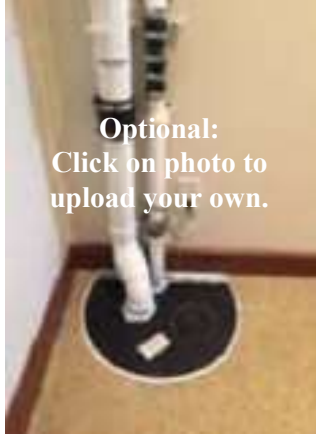



NOTES: (Identify specific building and location description:)

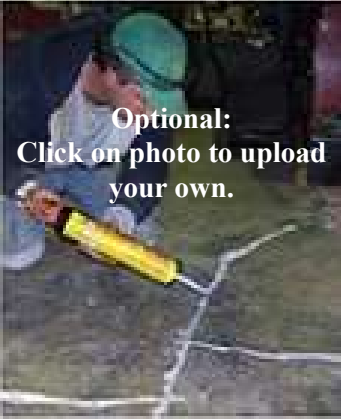
Not Applicable

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
<p>Suction Drop Point w/ Vent Pipe</p>	<p>Suction Point : Soil gases are collected in a void space below the foundation, and tight seal prevents soil gas from getting inside the home. Vent Pipe: Pipe conveys the vacuum from the fan, and collects soil gases for discharge to the atmosphere.</p>	<p>Suction Point Seal Vent Pipe Condition</p>	<p>Seal is air tight around pipe penetration. Vent pipe is connected to fan, has not cracked.</p>	<p>Suction point seal or vent pipe may need to be sealed or replaced if cracks or leaks appear. If any piping or sealing of the system is altered or replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p>
<p>PHOTO</p> 			<p>NOTES: (Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>	

SYSTEM COMPONENT				DATE:
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
<p>Suction Drop Point w/ Vent Pipe</p>	<p>Suction Point : Soil gases are collected in a void space below the foundation, and tight seal prevents soil gas from getting inside the home. Vent Pipe: Pipe conveys the vacuum from the fan, and collects soil gases for discharge to the atmosphere.</p>	<p>Suction Point Seal Vent Pipe Condition</p>	<p>Seal is air tight around pipe penetration. Vent pipe is connected to fan, has not cracked.</p>	<p>Suction point seal or vent pipe may need to be sealed or replaced if cracks or leaks appear. If any piping or sealing of the system is altered or replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p>
<p>PHOTO</p> 			<p>NOTES: (Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>	

SYSTEM COMPONENT		DATE:		
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
Sealed Sump w/Vent Pipe	Sump Cover: Soil gases are collected in sump and the cover prevents soil gas from getting inside home.	Suction Point Seal	Seal is airtight to floor.	Sump cover or vent pipe may need to be sealed or replaced if cracks or leaks appear.
	Vent Pipe: Pipe transports the soil gas from the sump for discharge to the atmosphere.	Vent Pipe Seal Condition	Vent pipe is connected to the sump cover and is not cracked.	If any piping or sealing of the system is altered or replaced, the system should be evaluated by a plumber or a mitigation professional to verify effectiveness, which includes pressure readings.
PHOTO			NOTES: (Identify specific building and location description:)	
 <p>Optional: Click on photo to upload your own.</p>			<input checked="" type="checkbox"/> Not Applicable	

SYSTEM COMPONENT				DATE:
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
<p>Outdoor Vent Pipe</p>	<p>Pipe transports the soil gas from beneath the foundation for discharge to the atmosphere.</p>	<p>Vent Pipe Condition</p> <p>Vent Pipe Location</p>	<p>Vent pipe remains connected to fan.</p> <p>End of pipe free from obstructions.</p> <p>The exhaust is more than 15 feet from windows or air intakes.</p>	<p>Vent pipe may require replacement, or cleaning to remove ice or debris.</p> <p>If any piping or sealing of the system is altered or replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p>
<p>PHOTO</p> 			<p>NOTES: (Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>	

SYSTEM COMPONENT		DATE:		
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
Foundation Floor	Foundation is a barrier that minimizes soil gas entry into building, and helps fan to work efficiently.	Foundation Condition	No penetrating cracks or holes in foundation.	Seal cracks or other penetrations as you would to prevent water from entering.
		Foundation Footprint	Check if there have been alterations or additions to building or footprint.	If building floor plan has changed, notify DNR and contact a mitigation professional to evaluate if modifications to the vapor mitigation system are necessary.
PHOTO			NOTES: (Identify specific building and location description:)	
 <p>Optional: Click on photo to upload your own.</p>			<input type="checkbox"/> Not Applicable	
			Empty space for notes	

