

January 25, 2022
File No. 25220120.00

Ms. Jeana Newberry
245 East Gage Street
Richland Center, WI 53581

Subject: Vapor Mitigation Documentation
245 East Gage Street, Richland Center, WI

Dear Ms. Newberry:

On behalf of the Wisconsin Department of Natural Resources (WDNR), SCS Engineers (SCS) is providing the attached vapor mitigation system (VMS) maintenance plan for the VMS installed at 245 East Gage Street (**Attachment A**).

SCS performed commissioning of the VMS from November 30 through December 1, 2021, including inspecting VMS components, measuring sub-slab port and VMS vacuums, and collection of an indoor air sample for laboratory analysis of chlorinated volatile organic compounds (CVOCs), including tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride. The laboratory report is provided in **Attachment B**. CVOCs were not detected in the indoor air sample.

The VMS appears to be operating as intended with sufficient vacuum based on commissioning findings. Please refer to the maintenance plan in **Attachment A** for additional details. The four sub-slab ports (P-1, P-2, P-3, and SB-4) can be used to check sub-slab vacuum, but need to remain sealed when not in use to prevent soil gas entry into the home. If you do not wish maintain the ports, these should be removed and the holes patched.

If you have any questions regarding this letter, please contact Robert Langdon at 608-212-3995 or the WDNR project manager, Jeff Ackerman, at 608-219-2302. Please contact Robert Langdon within 30 days of the date on this letter if you require assistance removing the sub-slab ports.

Sincerely,



Robert Langdon
Senior Project Manager
SCS Engineers

REL/lmh

cc: Jeff Ackerman, Wisconsin Department of Natural Resources (via email)

Attachments: A – Vapor Mitigation System Maintenance Plan
B – Laboratory Report

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Attachment A

Vapor Mitigation System Maintenance Plan

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 calk 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.

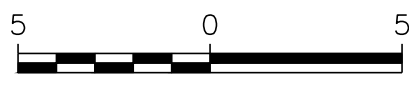
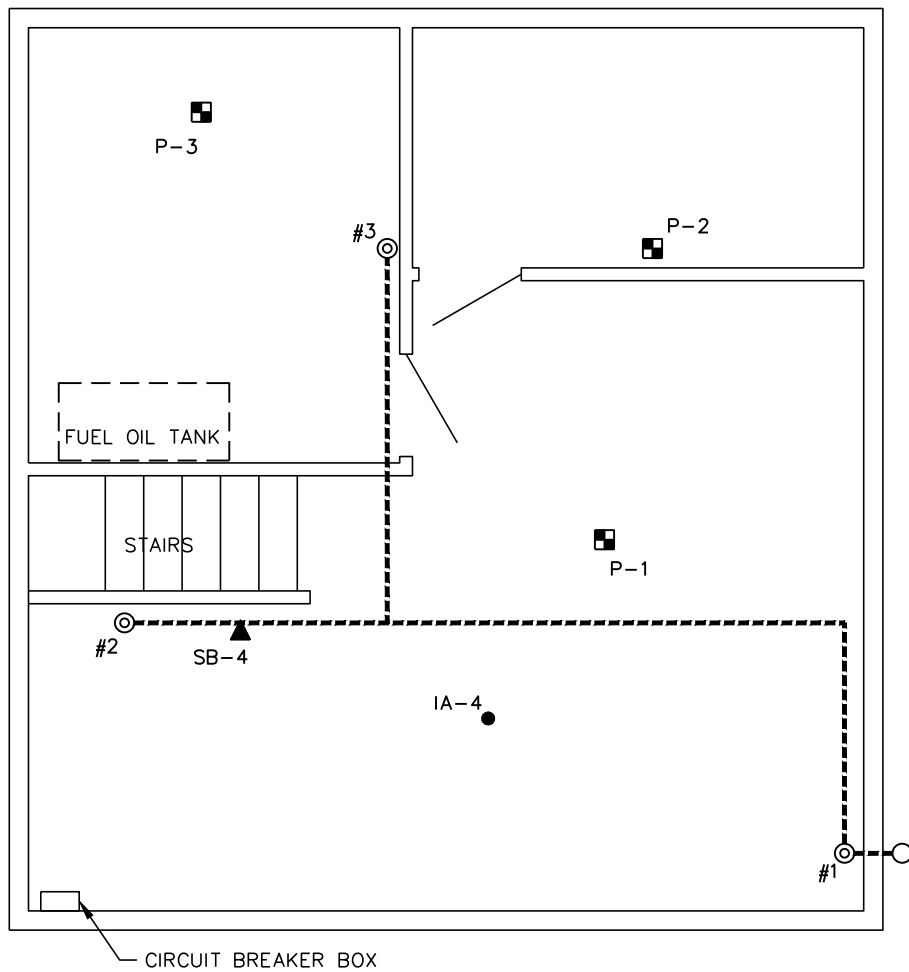
Contact Information

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


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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

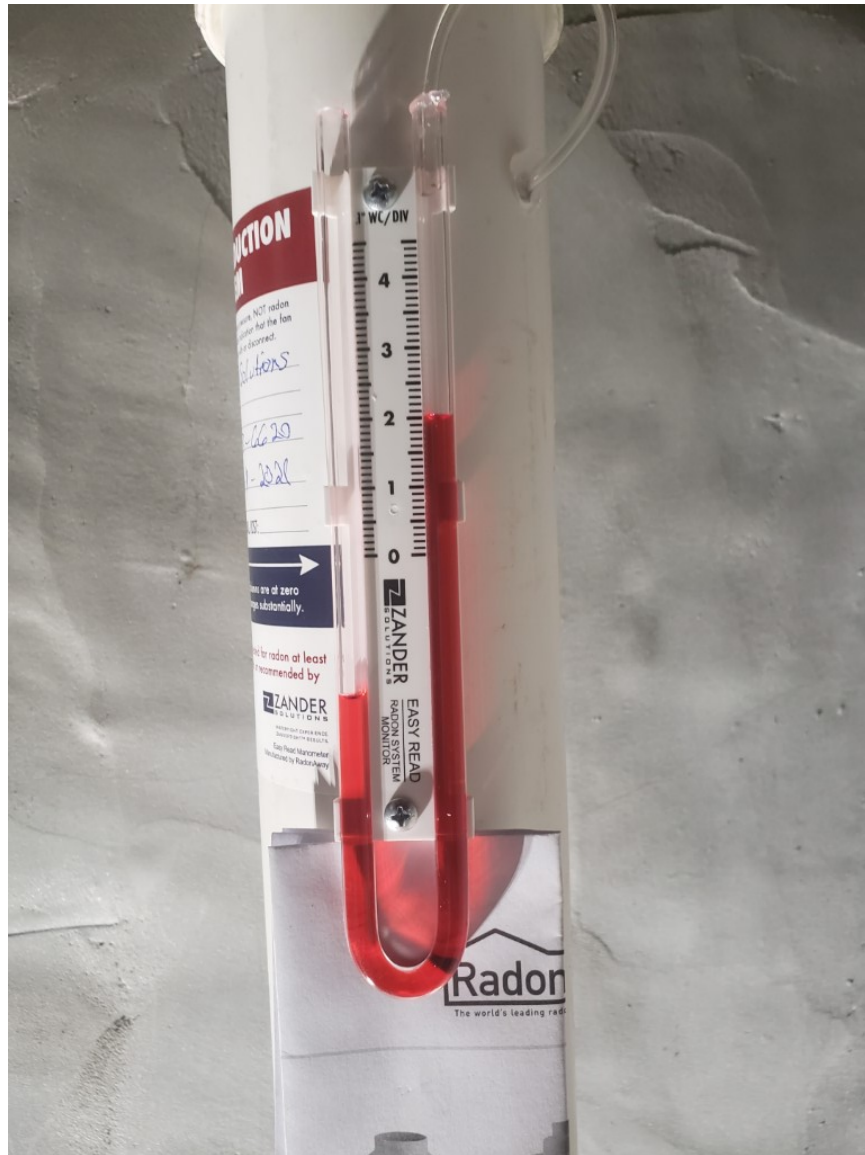


Photo 2: Pickup Point 1 manometer (typical). September 1, 2021.

**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

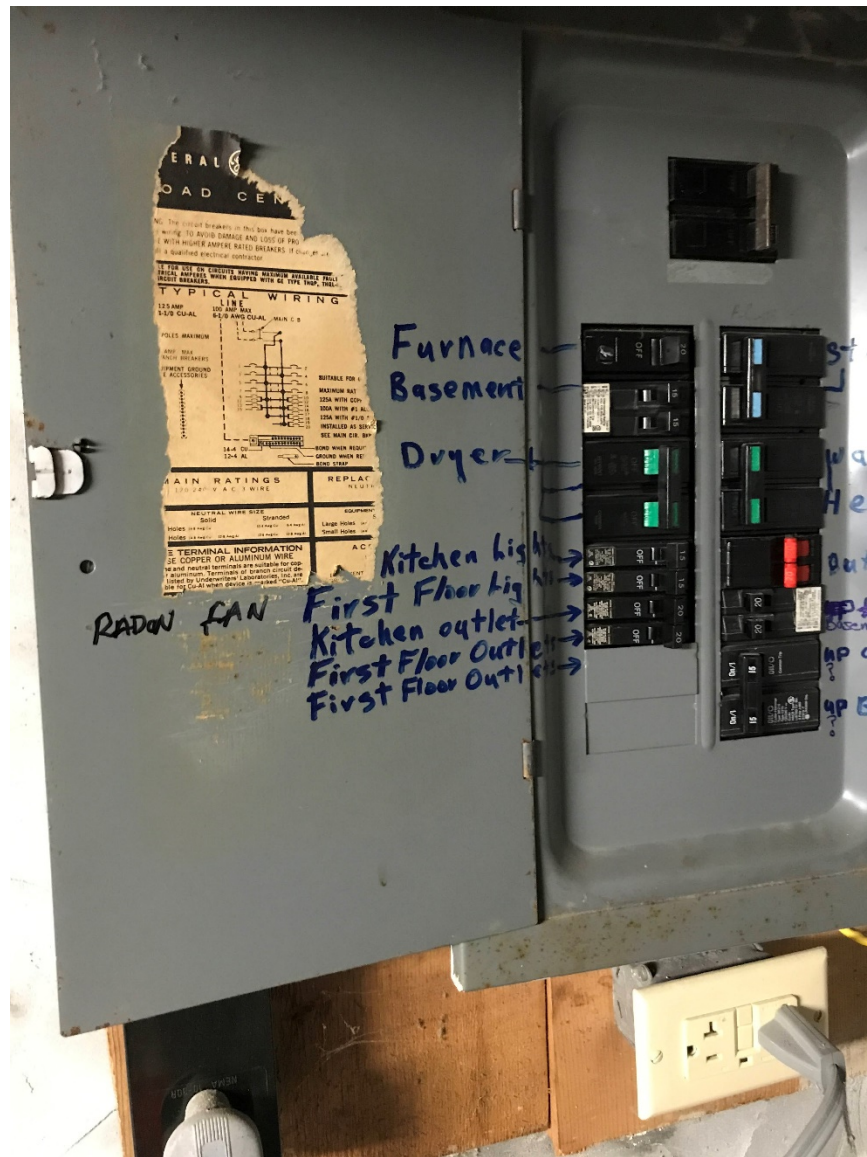


Photo 8: Circuit breaker box. December 1, 2021.

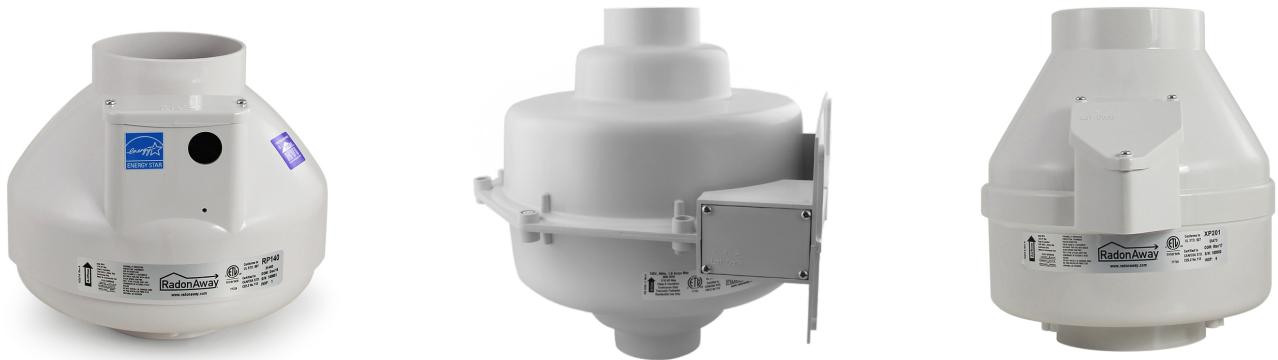
Vapor Mitigation System Installation
245 East Gage Street, Richland Center, WI
SCS Engineers Project #25220120.00



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"



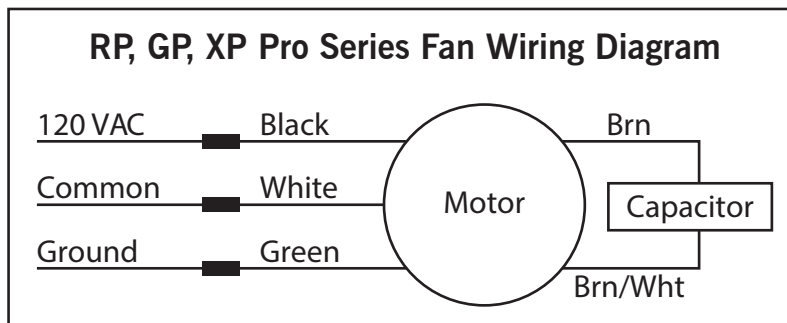
See p. 7 for detailed specifications.

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.



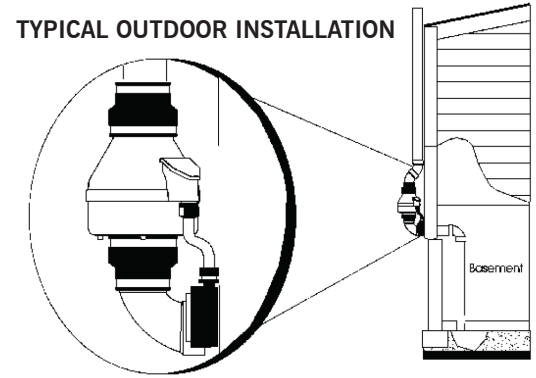
1.10 SPEED CONTROLS

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

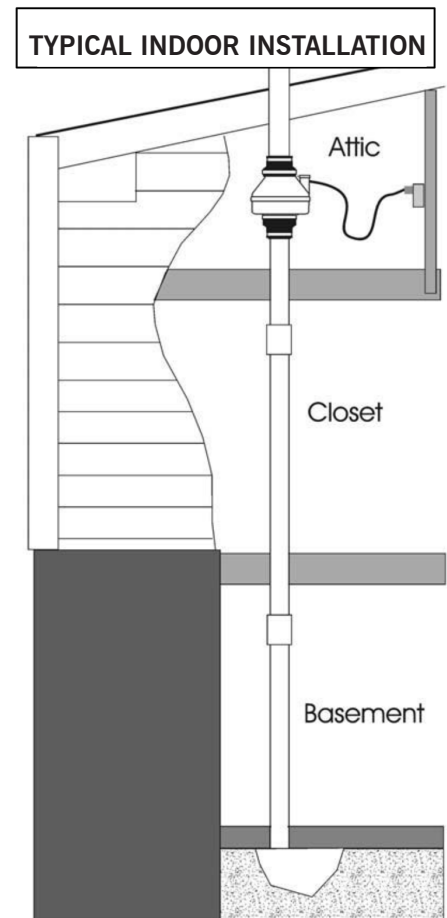
Connect wiring with wire nuts provided, observing proper connections (See Section 1.9). Note that the fan is not intended for connection to rigid metal conduit.

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](#).

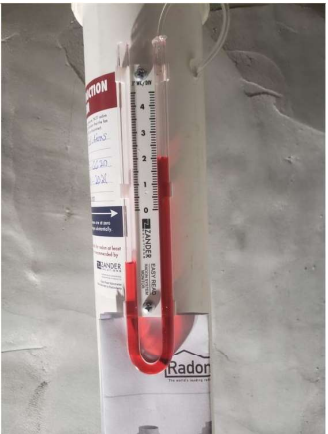
HOW TO USE THIS FORM

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				DATE:
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
<p 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 Fan Location Motor Noise</p>	<p>Fan is on. Fan mounted outside & secure. 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. Replacement fan to have similar specifications as original with respect to flow and vacuum. 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




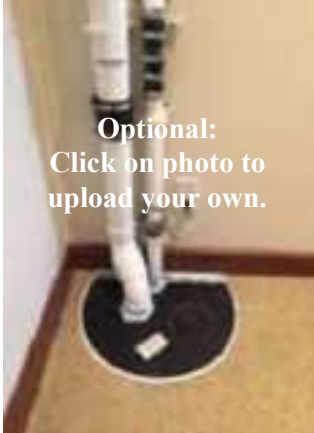
NOTES: (Identify specific building and location description:)

Not Applicable

SYSTEM COMPONENT				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?
<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?
<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>	

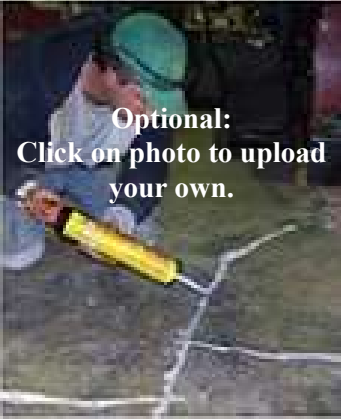
SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
Outdoor Vent Pipe	Pipe transports the soil gas from beneath the foundation for discharge to the atmosphere.	Vent Pipe Condition Vent Pipe Location	Vent pipe remains connected to fan. End of pipe free from 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> <div data-bbox="107 467 445 883">  <p>Optional: Click on photo to upload your own.</p> </div>				

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
Sub Slab Vapor Port	This is a sample port to measure vacuum or take sample of soil gas if needed. It needs to remain sealed when not in use to prevent soil gas entry into the home.	Port Seal/Cap Port Condition	If able to measure the vacuum with a micromanometer, the pressure differential should be at least 0.004 inches of H ₂ O or at least one Pascal. Port is sealed and capped when not in use.	Repair or replace the seal and cover as needed. Permanently seal hole if sample port is ever removed.
PHOTO  <p>Optional: Click on photo to upload your own.</p>			<p>NOTES: (If taken, record the pressure differential reading. Identify specific building and location description:)</p> <p><input type="checkbox"/> Not Applicable</p>	

Attachment B
Laboratory Report

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	

REPORT OF LABORATORY ANALYSIS

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