

Schultz, Josie M - DNR

From: Schultz, Josie M - DNR
Sent: Monday, October 26, 2020 4:18 PM
To: qefli neziri
Cc: Paul Killian; jesse@environmentalservicesplus.com; Matthew Bookter; Chronert, Roxanne N - DNR; Hedman, Curtis J - DHS; VanKirk, Deanne M.; Kleist, Andrew
Subject: Response to Vapor Mitigation System not meeting ANSI/AARST Stds - One Hour Martinizing 02-05-217270
Attachments: 20201026_99_Interim_Action_Not_Approved.pdf; VMS Diagram and Photographic Log.pdf

Qefli,

I really wanted to speak with you prior to sending this letter to you regarding issues that were noted with the vapor mitigation system. I would still like to schedule a phone conversation with you in the near future; please review the attached letter, diagram and photos, and feel free to contact me with any questions or concerns you may have.

I also wanted to make you aware that due to increasing COVID numbers in Wisconsin, the EPA is postponing work in the state, including the sanitary sewer and additional vapor investigation that was scheduled to be performed last week. EPA has tentatively re-scheduled this sampling for the week of November 16th, however this may be further postponed.

Sincerely,
Josie

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Josie M. Schultz

Hydrogeologist – Northeast Region Remediation and Redevelopment Team
Wisconsin Department of Natural Resources
2984 Shawano Avenue, Green Bay, WI 54313-6727
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Josie.Schultz@Wisconsin.gov



Schultz, Josie M - DNR

From: Schultz, Josie M - DNR
Sent: Monday, October 19, 2020 3:55 PM
To: qefli neziri
Subject: One Hour Martinizing - Vapor Mitigation System

Hi Qefli,

I am wondering if you would be available for a phone conference this week to discuss the vapor mitigation system at 1219-1239 S. Military Avenue. I suggest inviting Don Gallo on the call as well, as we would like to discuss a few concerns we have with the system.

Please let me know if you and/or Don would be available for a call in the near future, and provide me with some dates and times that would work best.

Thank you,
Josie

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Josie M. Schultz

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October 26, 2020

Mr. Qefli Neziri
Innovative Properties Group, LLC
628 N 8th Street
Manitowoc, WI 54220

Subject: Response to Vapor Mitigation System Documentation and Additional Actions Needed
One Hour Martinizing, 1233 South Military Avenue, City of Green Bay, Wisconsin
BRRTS # 02-05-217270

Dear Mr. Neziri,

The Wisconsin Department of Natural Resources (DNR) received the June 30, 2020 *Documentation Report – Sub-Slab Vapor Mitigation System and Groundwater Sampling* report (“June 2020 VMS Report”), submitted by Paul Killian of GEI Consultants, on your behalf for the One Hour Marinizing site located at 1233 South Military Avenue in Green Bay, Wisconsin (“the Site”). The DNR performed a review of the documentation of the vapor mitigation system installed at the Site. The review revealed several concerns with the effectiveness of the system.

Interim Action Design Concerns

DNR reviewed the June 2020 VMS Report for system effectiveness and noticed deviations from the American Nation Standards Institute & American Association of Radon Scientists and Technologists (ANSI/AARST) radon mitigation standards for large buildings (RMS-LB). Listed below are all notable ANSI/AARST standards that appear to not have been met at the Site:

1. *All components of the mitigation work shall be in compliance with the applicable mechanical, electrical, building, plumbing, energy, and fire prevention codes, or any other regulations of the jurisdiction where the work is performed (ANSI/AARST RMS-LB 4.8.2)*
 - a. You notified DNR that the mitigation system improperly hooked a 3-inch iron pipe to the sanitary vent, which is not allowed per plumbing code. This vent requires proper re-venting.
2. *Above-ground duct piping shall have a continuous downward slope towards the suction points to allow rainwater or condensation within pipes to drain downward into the ground beneath the slab (ANSI/ARST RMS-LB 7.2.2)*
 - a. Photos 7 and 13 in the June 2020 VMS Report show piping runs that will likely result in future moisture build-up as there is nowhere for rainwater or condensation to drain and will likely interfere with effectiveness of the VMS in the future.
3. *The exhaust trajectory with an exhaust spread radius of 45 degrees shall not encounter opening in structures, building materials, or the breathing space where individuals congregate or traverse within 10 feet from the point of exhaust (ANSI/AARST RMS-LB 7.4.3). Not less than 10 feet horizontally to the side of operable openings in structures (ANSI/AARST RMS-LB 7.4.6.a), or not less than 4 feet above operable openings in structures (ANSI/AARST RMS-LB 7.4.6.b).*
 - a. Photo 18 of the June 2020 VMS Report shows a vent pipe that may be less than 4 feet above door.

4. *The point of exhaust shall be directed upward without obstruction at an angle that does not deviate more than 45 degrees from a vertical exhaust trajectory. The exhaust trajectory shall not exhaust downward (ANSI/AARST RMS-LB 7.4.9)*
 - a. Photos 17 & 18 of the June 2020 VMS Report shows vent exhaust trajectories of 90 degrees.
5. *The point of exhaust shall be not less than 18 inches above a flat roof (ANSI/AARST RMS-LB 7.4.10.c)*
 - a. Photo 17 of the June 2020 VMS Report shows vent pipe is not discharging above flat roofline.
6. *Active soil depressurization (ASD) fans shall only be installed in attics, on the exteriors of buildings or in garages that are not beneath conditioned or otherwise occupiable spaces (ANSI/AARST RMS-LB 7.5.3).*
 - a. Photos 7, 9, 12, and 13 of the June 2020 VMS Report show that blowers B1, B2, B3, B4, and B5 are all within the basement (beneath/within conditioned space). These fans should be moved to the exterior or the building.
7. *Accessible gaps to soil at perimeter channel drains shall be sealed to the extent practicable without compromising water control capability (e.g., perimeter gap or drain that may include interior foundation drainage boards) (ANSI/AARST RMS-LB 8.3.1).*
 - a. Photos 5, 8, 14, 15, and 16 of the June 2020 VMS Report show what appears to be perimeter channel drains and/or a floor-wall joint crack. Some form of testing (e.g. smoke testing, tracer gas testing) should be performed to ensure venting of sumps is not short-circuiting and pulling indoor air into the system. If this is occurring, it could potentially be causing additional negative pressure differential within the basement and exacerbating the vapor intrusion issue.
8. *Sump covers shall include some form of physical access when a sump pump is installed in the pit to allow routine verification that pumps are operational. The sump cover shall include a removable port or section of lid no less than 4 inches in diameter or equivalent method to satisfy this requirement (ANSI/AARST RMS-LB 8.5.1.1).*
 - a. Sump pit covers do not appear to be designed with removable port or section of lid. This will make it difficult to perform maintenance and necessary sampling of sump water and/or vapors.
9. *An alternative drainage system shall be provided and installed when sealing a sump or other slab opening that is the only drain relief for excess water on the slab surface (ANSI/AARST RMS-LB 8.5.2).*
 - a. Photo 8 of the June 2020 VMS Report shows a moisture issue in the basement, which would likely require a trapped drain to be installed on the cover of Sump S3.
10. *Fan monitors, such as a manometer pressure gauges or electrical amperage gauge, shall be clearly marked to indicate the pressure, airflow volume or amperage readings that existed at the time mitigation goals were achieved (ANSI/AARST RMS-LB 9.4.4.1). They shall also have a label on or in close proximity to the mechanism that describes how to interpret the monitor and what to do if a monitor indicates system failure or degraded performance (ANSI/AARST RMS-LB 9.4.4.1.1)*
 - a. Photos 7, 9, 12, and 13 of the June 2020 VMS Report show that blowers B1, B2, B3, B4, and B5 have no manometers to monitor system performance. There are vacuum readings listed in Table 1 of the report, however there are no photos of manometer readings. In addition to no manometer, there is no labeling.

11. *Visual or audible fan monitors that require electricity for indication of fan failure shall be on non-switched circuits and designed to reset automatically when power is restored after power supply interruptions. Monitors shall not be powered by the same branch circuit as the mitigation system fans (ANSI/AARST RMS-LB 9.2.1.2).*
 - a. There is no mention of a fan monitor in the June 2020 VMS Report.

The list above is what was noticed by DNR during review of photos included in the June 2020 VMS report. Additional issues may be present; therefore, the system should be inspected by a certified radon mitigator to ensure it has been installed to all ANSI/AARST standards (not only what is listed above) and working properly.

Commissioning Requirements

Along with ANSI/AARST standard concerns listed above, the VMS has not been properly commissioned to verify the current effectiveness of mitigation, as required under §§ NR 708.11, 724.15, and 724.17. Proper pressure field extension (PFE) testing has not been completed to ensure good communication and vapor capture beneath the slab. Guidelines on system commissioning can be found in Section 9 and Appendix D of RR-800.

1. 1233 S Military Ave (One Hour Martinizing) has only one PFE point directly adjacent to the vapor extraction point. At a minimum, an additional PFE point should be added to the north side of One Hour Martinizing to ensure adequate vapor concentrations are being removed from the source area.
2. No PFE testing was performed at 1239 S Military Ave (Edward Jones). Although there were no sub-slab exceedances documented beneath this unit, PFE testing needs to identify the radius of influence of the system.
3. No PFE testing was performed at 1219 S Military Ave (Jim's Music). Although there were no sub-slab exceedances in this area, PFE testing needs to identify the radius of influence of the system. PFE testing needs to be performed in the basement as well.
4. A manometer u-tube, or similar device, with accuracy of 0.1 inch-water should be permanently mounted on the conveyance pipe, on the vacuum side for each fan. The fan vacuum should be measured at the same time PFE is measured.

Long-Term Operation, Monitoring, and Maintenance

A long-term operation, monitoring, and maintenance (OM&M) plan is required for each system that specifies the conditions that must be maintained and monitored for continued long-term protection from vapor intrusion, as required under Wis. Admin. Code §§ NR 708.15, 724.13, 724.15 and 724.17. Guidelines on long-term OM&M and inspection log can be found in Section 10 and Appendix E, and Appendix G of RR-800. Refer to *Maintenance Plans for Vapor Mitigation Systems/Vapor Intrusion Response Actions/Vapor Barriers*, RR-981.

Timeline

- The new blower fan should be installed, and VMS inspected, by **November 6, 2020**. Additional commissioning of the system, including PFE testing, fan vacuum readings, and smoke/tracer testing should be performed during this time, as outlined above.

October 26, 2020

Mr. Qefli Neziri, Innovative Properties Group, LLC

Response to Vapor Mitigation System Documentation and Additional Actions Needed

One Hour Martinizing, 1233 South Military Avenue, Green Bay, Wisconsin

BRRTS # 02-05-217270

- Plumbing should be corrected (i.e. removal of vent from sanitary lateral), VMS be brought up to ANSI/AARST standards, and recommended tracer testing be performed to ensure no short-circuiting is occurring, by **November 30, 2020**.
- Indoor air sampling, as part of the commissioning process and performance verification, should be completed concurrent with PFE measurements, or within two weeks, and results shall be provided to the DNR within 10 days of receipt.
- Documentation and/or addendum to vapor mitigation system construction documentation should be submitted to the DNR by **December 30, 2020**. Documentation should include all modifications to the system, commissioning, OM&M, and inspection log.

The DNR appreciates your efforts to investigate and remediate this property. If you have any questions or concerns, please feel free to contact me at 920-366-5685 or via email at Josie.Schultz@Wisconsin.gov.

Sincerely,



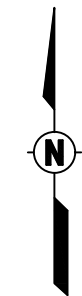
Josie Schultz

Hydrogeologist

Remediation & Redevelopment Program

Att: Photographic Log (Photos 1-17), *Documentation Report – Sub-Slab Vapor Mitigation System and Groundwater Sampling*
Fig-2, Sub-Slab Vapor Mitigation System Diagram, dated June 2020

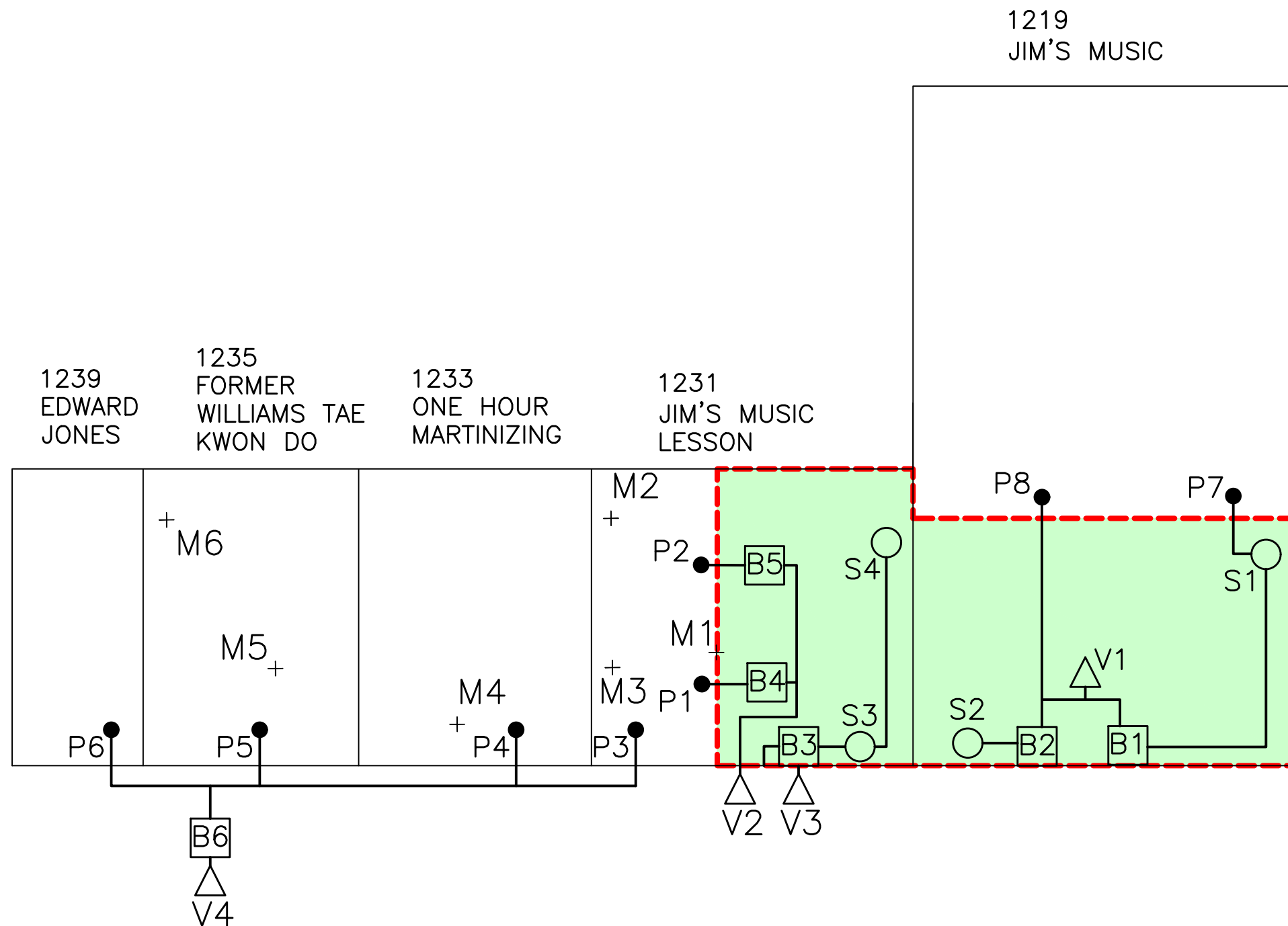
cc: Paul Killian, GEI Consultants (pkillian@geiconsultants.com)
Jesse Rose, Environmental Services Plus (jesse@environmentalservicesplus.com)
Matthew Bookter, Bank First (mbookter@bankfirstwi.bank)
Roxanne Chronert, DNR (Roxanne.Chronert@wisconsin.gov)
Curtis Hedman, DHS (Curtis.Hedman@dhs.wisconsin.gov)
Deanne Van Kirk, Brown County Health Department (Deanne.VanKirk@browncountywi.gov)
Andrew Kleist, U.S. EPA (Kleist.Andrew@epa.com)



NOT TO SCALE

LEGEND

- S1 ○ SUBGRADE SUMP
- B1 □ VACUUM BLOWER
- V1 △ DISCHARGE VENT
- P1 ● VAPOR EXTRACTION POINT
- M1+ SUB-SLAB VACUUM MONITORING PIN
- BASEMENT AREA



SUB-SLAB VAPOR MITIGATION SYSTEM

INNOVATIVE PROPERTIES
GREEN BAY, WI



Project: 2002226

SUB-SLAB VAPOR MITIGATION SYSTEM DIAGRAM

JUNE 2020

FIG-2

Photographic Log

Sub-slab Vapor Mitigation System Installation
Innovative Properties
Military Avenue, Green Bay, WI

Photo 1. Installation of East Wall Vapor Extraction Points



Photo 2. Installation of East Wall Vapor Extraction Points



Photographic Log

Sub-slab Vapor Mitigation System Installation
Innovative Properties
Military Avenue, Green Bay, WI

Photo 3. East wall vapor extraction point.



Photo 4. East wall vapor extraction points.



Photographic Log

Sub-slab Vapor Mitigation System Installation
Innovative Properties
Military Avenue, Green Bay, WI

Photo 5. Installation of south basement vacuum extraction points.



Photo 6. Sealing beam pocket in south basement.



Photographic Log

Sub-slab Vapor Mitigation System Installation
Innovative Properties
Military Avenue, Green Bay, WI

Photo 7. South basement vacuum blowers. Vacuum Blower B4 and B5.



Photo 8. Ejector pit in south basement, Sump S3, before and after sealing.



Photographic Log

Sub-slab Vapor Mitigation System Installation
Innovative Properties
Military Avenue, Green Bay, WI

Photo 9. Vacuum blower B3, south basement sumps.



Photo 10. Vacuum extraction points P7, west wall of north basement. Before and after sealing.



Photographic Log

Sub-slab Vapor Mitigation System Installation
Innovative Properties
Military Avenue, Green Bay, WI

Photo 11. Vacuum extraction points P7, west wall of north basement, after sealing.



Photo 12. Vacuum extraction blower B2, north basement.



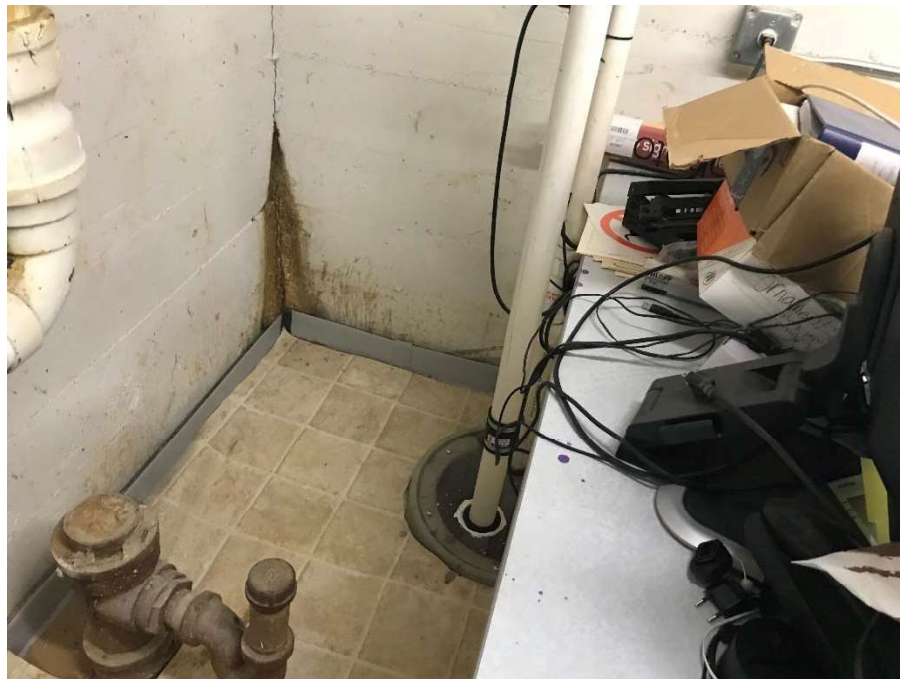
Photographic Log

Sub-slab Vapor Mitigation System Installation
Innovative Properties
Military Avenue, Green Bay, WI

Photo 13. Vacuum extraction blower B1, north basement.



Photo 14. Sump S1, north basement.



Photographic Log

Sub-slab Vapor Mitigation System Installation
Innovative Properties
Military Avenue, Green Bay, WI

Photo 15. Sump S2, north basement.



Photo 16. Sump S4, south basement.



Photographic Log

Sub-slab Vapor Mitigation System Installation
Innovative Properties
Military Avenue, Green Bay, WI

Photo 17. Discharge vents from north basement.



Photo 18. Discharge vent, east wall.

