SCS ENGINEERS

October 30, 2020 File No. 25211372.21

Ms. Cindy Koepke Wisconsin Department of Natural Resources 3911 Fish Hatchery Road Fitchburg, WI 53711

Subject: Vapor Mitigation System Documentation and Maintenance Plan

Pilgrim Cleaners, 7475 Mineral Point Road #600, Madison, Wisconsin

BRRTS #02-13-551995

Dear Ms. Koepke:

On behalf of IRC Retail Centers LLC, SCS Engineers (SCS) is providing the following report, which includes construction documentation and a maintenance plan for a vapor mitigation system (VMS) installed at Pilgrim Cleaners, Madison, Wisconsin.

BACKGROUND

The VMS was constructed by Acura Services, LLC (Acura) in June and July 2019 consistent with approved a Drycleaner Environmental Response Fund (DERF) Change Order 5 dated April 7, 2015, and Change Order 6 dated May 15, 2019. The VMS was designed to reduce the potential for vapor intrusion into the building by depressurizing the building sub-slab. The VMS was required because chlorinated volatile organic compounds (CVOCs) were detected in the sub-slab at concentrations in excess of Wisconsin Department of Natural Resources (WDNR) vapor risk screening levels.

CONSTRUCTION DOCUMENTATION

Acura's VMS construction documentation report is included in **Attachment A**. Photos of the VMS are included with the VMS maintenance plan (**Attachment B**).

The VMS was constructed with eight vacuum pick up points at locations shown on **Figure 1**. Each pick up point was constructed with 3-inch diameter schedule 40 PVC pipe set in the sub-slab material. The PVC pipes were sealed into the floor to prevent leakage. Pick up points 1 through 5 were plumbed to 3-inch diameter PVC header pipe which runs along the south side of the dry cleaner unit. Pick up points 6 through 8 were plumbed to a separate 3-inch diameter header pipe which runs along the northern side of the dry cleaner unit. The header pipes extend through the east wall of the building. The gap between the header pipes and building wall was sealed.

AMG Eagle vacuum fans capable of producing up to approximately 4.0 inches of water column (WC) vacuum were connected to each PVC header pipe on the exterior of the building. The exhaust pipe for each fan was extended a few feet above the roof line.

Each fan is equipped with an on/off switch for servicing and a manometer to monitor fan operation. Power to the fans can also be controlled by a breaker in a circuit break box located at the east side of the unit as shown on **Figure 1**.



Temporary vacuum observation points (VOP-1 through VOP-3) were installed through the building slab to evaluate the VMS pressure field extension. Initial VMS fan and sub-slab vacuum readings were measured on July 1, 2019, and measurements were made again on August 13, 2019, as summarized below. The measurements show consistent VMS fan vacuums and good pressure field extension under the slab.

Observation Point	Approximate Distance from Nearest Pickup Point (feet)	7/1/2019 Vacuum (Inches WC)	8/13/2019 Vacuum (Inches WC)
PU Point 1 Manometer	0	-3.5	-3.5
PU Point 6 Manometer	0	-3.7	-3.5
VOP-1	12	-0.148	-0.159
VOP-2	16	-0.034	-0.035
VOP-3	25	-0.013	-0.018

MAINTENANCE PLAN

A VMS maintenance plan is included in **Attachment B**. The maintenance plan summarizes the purpose, design, maintenance requirements, and limitations.

Please contact Robert Langdon at 608-216-7329 if you have any questions regarding this letter.

Sincerely,

Robert Langdon

Senior Project Manager

SCS Engineers

Mark R. Huber, PE Project Director SCS Engineers

& R Huler

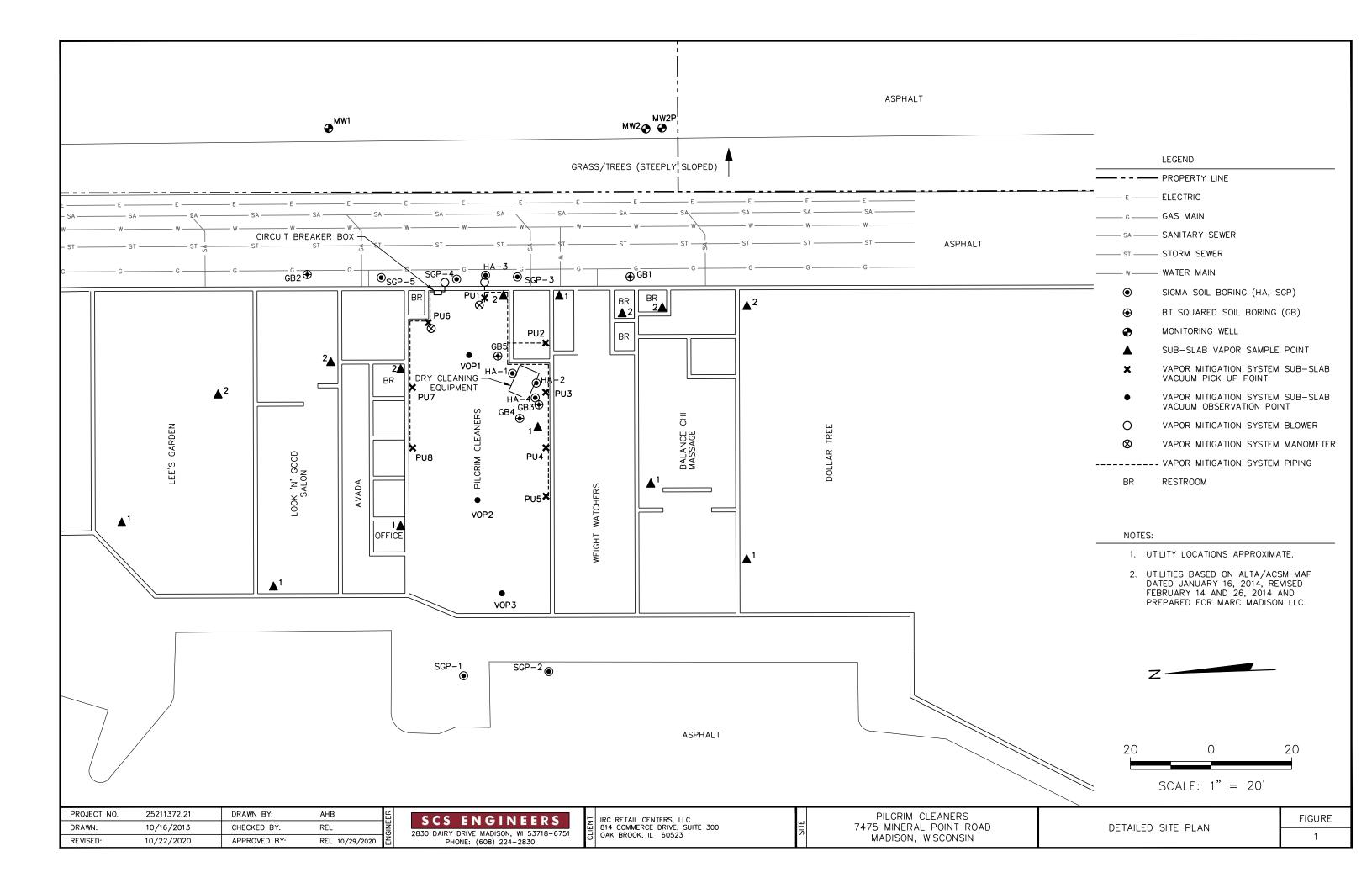
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Encl. Figure 1 – Detailed Site Plan

Attachment A – Acura Post Mitigation Report Attachment B –VMS Maintenance Plan

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Figure 1 Detailed Site Plan



Attachment A Acura Post Mitigation Report



Soil Vapor & Radon Mitigation Services Anthony G. Hendricks P.E.

July 3, 2019

Post Mitigation Report

Project: Pilgrim Cleaners, High Point Shopping Center 7475 Mineral Point Road Madison, WI 53717

Project Summary

Acura Services LLC installed two vapor mitigation systems (VMSs) in Pilgrim Cleaners, the week of June 24th thru the 28th finishing up July 1, 2019. Based on prior vacuum communication testing performed by Acura Services LLC and potential contaminate concentrations supplied by SCS's Robert Langdon, five pickup points for one system were installed on the south side of Pilgrim cleaners and three pickup points for the other system on the north side of Pilgrim Cleaners. (See drawing for approximate locations.) The piping connecting all the pickup points was run through the block wall in the back of the building where two fans were mounted. Final discharge was run above the eave line.

Vacuum observation points were installed by SCS on July 1, 2019 to evaluate VMS sub-slab vacuum distribution. The points were installed near the middle of the space running east to west. Readings were then taken with micro manometer(s). All the readings demonstrated strong negative numbers indicating that depressurization was achieved throughout Pilgrim Cleaners unit.

Soil Gas Pickup Point(s) (See drawing for approximate locations.)

Two systems were installed in Pilgrim Cleaners. The system on the south side had five pickup points installed. The system on the north side had three pickup points installed. Overall the material under the floor was very tight, clay like with frequent large rocks and rubble embedded. This made excavating to any depth very difficult. A narrow layer of fine builders sand a few inches thick was found directly below the floor. A coring machine was used to make openings in the floor of approximately 6 inches wide by 12 inches long. The concrete cores varied from approximately 4 inches to 5 inches thick. A plastic moisture barrier was observed under the floor slab.

Mitigation System on the South Side

The mitigation system on the south side of Pilgrim Cleaners consisted of Pickup 1 through Pickup 5. All the pickup points had a flat sump lid sealed over the opening after excavation. A three by four



Soil Vapor & Radon Mitigation Services Anthony G. Hendricks P.E.

hub was installed on the sump lid to connect schedule 40 PVC piping ultimately to the fan and discharge.

Pickup 1 is located against the back wall on the eastern end on the south side near the boiler room. This pickup point was excavated to 40 inches of depth. The dry cleaner operator reported that the sewer lateral in this area had been dug up and replaced twice so it's likely that the fill was primarily a fine builder's sand. The sewer lateral was not encountered during pickup point construction.

Pickup 2 is located in the boiler room. This pickup was excavated to 24 inches where two PVC pipes running east and west were discovered. The dry cleaner operator reported that the pipes received water from the boiler and discharged to storm sewers, with one pipe running out the back of the building and the other out the front of the building. The pipes were not damaged during the pickup point installation and appeared to be in good condition.

Pickup 3 is located on the south wall west of the boiler room. This pickup was excavated to approximately 18 inches.

Pickup 4 is located on the south wall west of pickup 3. This pickup was excavated to approximately 16 inches on one side. A large rock blocked half the hole at about one foot deep.

Pickup 5 is located on the south wall west of pickup 4. This pickup was excavated to approximately 12 inches before large rocks prevented further excavation.

Mitigation System on the North Side

The mitigation system on the north side consisted of Pickup 6 through Pickup 8. All the pickup points had a flat sump lid sealed over the opening after excavation. A three by four hub was installed on the sump lid to connect schedule 40 PVC piping ultimately to the fan and discharge.

Pickup 6 is located near the water cooler just outside the bathroom. This pickup was excavated to approximately 16 inches deep. Packed rock and rubble prevented further excavation.

Pickup 7 is located about 15 feet west of pickup 6 along the north wall. This pickup was excavated to about 24 inches deep. Packed rock and rubble prevented further excavation.

Pickup 8 is located about 15 feet west of pickup 7 along the north wall. This pickup was excavated to about 14 inches deep. Packed rock and rubble prevented further excavation.

Connecting Piping

All pipe used to connect the pickup points to each other and ultimately to the fan is three inch schedule 40 PVC. A slope of approximately one quarter inch per foot was maintained between



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pickup points to allow condensation to drain. The fans were installed outside the building on the east side (the alley). The fans were mounted on an upturned elbow. Final discharge was run vertically to a foot above eave height.

Fan(s) Description

The fans are specially designed & fabricated for use in mitigation systems. The fans installed are both AMG Eagle; 160 watts, 1.37 amps max., 3150 rpm, capable of pulling 4.0 inches of W.C.

System on the South side

A manometer was installed on the riser pipe of PU 1. After startup the manometer read 3.5 inches of water column. Based on the fan curve the fan is moving approximately 18 cfm based on the fan curve.

System on the North Side

A manometer was installed on the riser pipe of PU 6. After startup the manometer read 3.7 inches of water column. Based on the fan curve the fan is moving approximately 12 cfm based on the fan curve.

Sealing Description

No sealing issues were observed.

Electrical

Electrical connection was made to the fan(s) with an on/off switch for servicing the fan. The electric was run through conduit to an electric panel. The breaker the circuit is on is marked as mitigation fans.

Manometer(s)

A U-tube manometer to indicate operation was installed on the riser pipe on PU 1 for the south system and PU 6 for the north system. A label with startup information and contact information was installed beside each manometer.

Testing To Validate Performance

Three sub-slab vacuum observation points were installed by SCS (VOP-1, VOP-2, and VOP-3). These were used to take depressurization readings. (See drawing for approximate locations.)

VOP-1 Read minus - 0.148 inches WC. Is located about 16 feet from the back wall (east wall) and 12 feet north of the boiler room wall.



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VOP-2 Read minus -0.034 inches WC. Is located about 52 feet from the back wall (east wall) and 18 feet from the south wall.

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VOP-3 Read minus -0.013. Located a few feet from the front of the building (the east side) near the counter. Is located about 73 feet from the back wall (east wall) and 12 feet off the south wall.

Warranty

The fan comes with a manufacture's warranty for five years from date of startup. The startup date was written on a sticker affixed to the riser pipe along with installer, installer's phone number and initial inches of W.C.

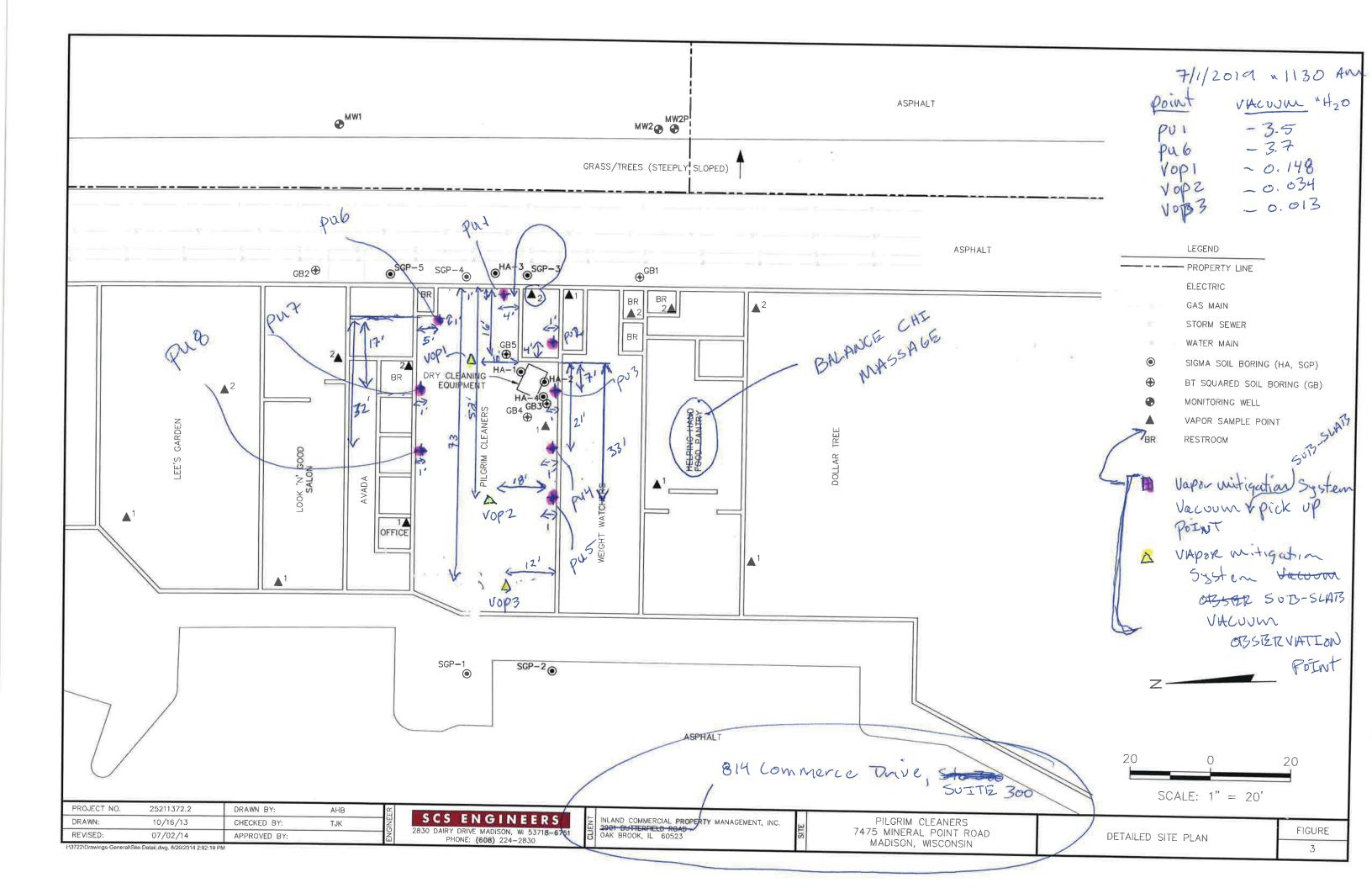
Conclusion

The final depressurization testing indicates that the sub slab mitigation system installed has successfully depressurized the sub-slab under the Pilgrim Cleaners unit.

Report Prepared by;

Anthony G. Hendricks P.E / Owner

Cc; Rob Langdon, SCS Engineers



Attachment B VMS Maintenance Plan

VAPOR MITIGATION SYSTEM MAINTENANCE PLAN Pilgrim Cleaners, 7475 Mineral Point Road #600, Madison, Wisconsin

October 30, 2020

Property Located at 7475 Mineral Point Road #600, Madison, WI

WDNR BRRTS/Activity #02-13-551995

Legal Description: Certified Survey Map No. 5013 as recorded in Dane County Register of Deeds in Volume 22 Page 217 of Certified Surveys, Lots 1 & 3

Parcel ID #251/0708-262-0501-9

INTRODUCTION

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

- The case file in the WDNR South Central 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 Dane County

D.1 DESCRIPTIONS

System Description, Purpose, and Location

The VMS was constructed by Acura Services, LLC (Acura) in June and July 2019 consistent with approved Drycleaner Environmental Response Fund (DERF) Change Order 5 dated April 7, 2015 and Change Order 6 dated May 15, 2019. The VMS was designed to reduce the potential for vapor intrusion into the building by depressurizing the building sub-slab. The VMS was required because chlorinated volatile organic compounds (CVOCs) were detected in the sub-slab at concentrations in excess of Wisconsin Department of Natural Resources (WDNR) vapor risk screening levels. The locations of various VMS components are shown on **Figure 1**.

System Design and Construction Documentation

Photographs of the VMS are included in **Attachment A**. The VMS was constructed with eight vacuum pick up points at locations shown on **Figure 1**. Each pick up point was constructed with 3-inch diameter schedule 40 PVC pipe set in the sub-slab material. The PVC pipes were sealed into the floor to prevent leakage. Pick up points 1 through 5 were plumbed to 3-inch diameter PVC header pipe which runs along the south side of the dry cleaner unit. Pick up points 6 through 8 were plumbed to separate 3-inch diameter header pipe which runs along the northern side of the dry cleaner unit. The header pipes extend through the east wall of the building. The gap between the header pipes and building wall was sealed.

AMG Eagle vacuum fans capable of producing up to approximately 4.0 inches of water column (WC) vacuum were connected to each PVC header pipes on the exterior of the building. The exhaust pipe for each fan was extended a few feet above the roof line.

VAPOR MITIGATION SYSTEM MAINTENANCE PLAN (CONTINUED)

Each fan is equipped with an on/off switch for servicing and a manometer to monitor fan operation. Power to the fans can also be controlled by a breaker in a circuit break box located at the east side of the unit as shown on **Figure 1**.

System Maintenance

Minimal operator control or maintenance of the VMS is required. There are no service requirements for the fans. The fan status is checked using the manometers. If a manometer displays greater than zero, the vacuum fan is functioning properly.

The floor in the vicinity of the VMS should be maintained as a barrier to prevent vapor intrusion. The structural integrity of the floor should be maintained, and any changes or repairs to the floor need to account for keeping the floor as impermeable as when the VMS was installed.

The potential for vapor intrusion of CVOCs should be reevaluated if there are changes to the floor, building 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 B).

Inspections

The VMS should be inspected at least once per year during the heating season as follows:

- Inspect manometers:
 - If manometer vacuum reads zero, check the fan on/off switch to make sure fan is on, and check the circuit breaker. Reset on/off switch and circuit breaker as needed. If resets do not restart the system, replace the fan.
 - If manometer shows low vacuum (e.g., less than 3.0 inches WC) check for vacuum leaks in pickup point piping and repair as necessary.
 - If fan malfunction cannot be rectified contact SCS Engineers at (608) 224-2830 or Acura Services LLC at (608) 772-2349.
- Inspect fan exhaust lines to prevent clogging of fan exhaust, and remove any accumulated debris.
- Inspect floors and maintain as necessary to prevent vapor migration and vacuum loss.
- Record manometer readings and document repairs to the VMS, floors, or HVAC system on Form 4400-305, Continuing Obligations Inspection and Maintenance Log (Attachment B).
- Keep copies of the Inspection and Maintenance Log at the facility and available for submittal or inspection by WDNR representatives upon request.

VAPOR MITIGATION SYSTEM MAINTENANCE PLAN (CONTINUED)

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
- 3) Construction or placement of a building or other structure
- 4) Changing the use or occupancy of the property to a residential exposure setting, which may include certain uses, such as single- or multiple-family residences, a school, daycare, senior center, hospital, or similar residential exposure settings
- 5) Changing the use or occupancy of the property to single-family residential use

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 Representative: Mr. Jake Lasky, Bonnie Management Corporation

8430 W. Bryn Mawr, Suite 850

Chicago, IL 60631 (708) 851-0808 Ext. 21

Consultant: Mr. Robert Langdon, SCS Engineers

2830 Dairy Drive Madison, WI 53718 (608) 224-2830

WDNR: Ms. Cindy Koepke

3911 Fish Hatchery Road Fitchburg, WI 53711 (608) 219-2181

D.2 LOCATION MAP

See Figure 1 for a map of features to maintain.

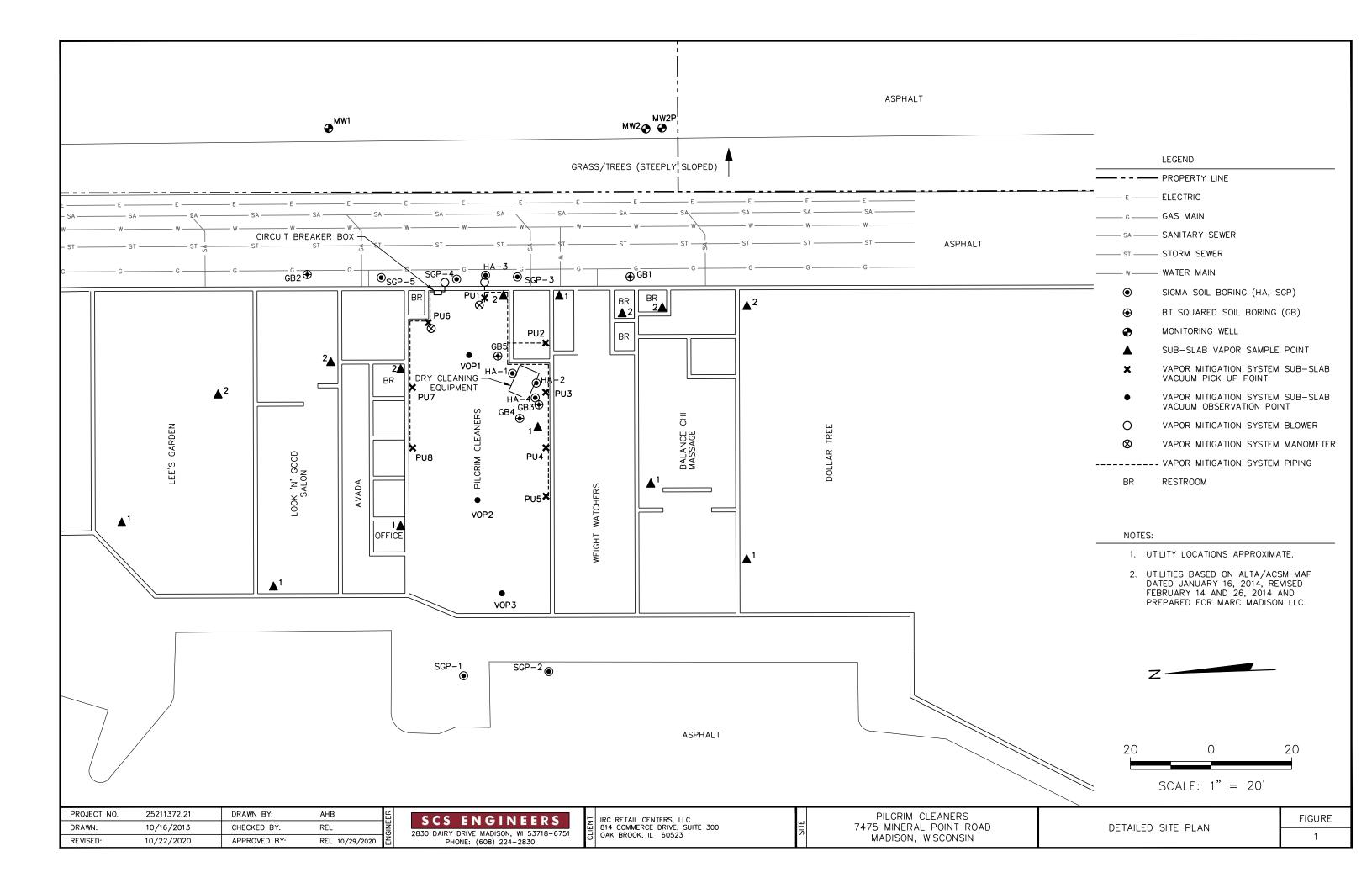
D.3 PHOTOGRAPHS

Photographs are included in **Attachment A**.

D.4 INSPECTION LOGS

Inspection logs are included in Attachment B.

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ATTACHMENT A

Photographs

Pilgrim Cleaners 7475 Mineral Point Road, Madison, WI SCS Engineers Project #25211372.51



Photo 1: Looking west from east end of Pilgrim Cleaners unit.



Photo 2: Pick Up Point 1 with manometer at southeast corner of unit.

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Pilgrim Cleaners 7475 Mineral Point Road, Madison, WI SCS Engineers Project #25211372.51

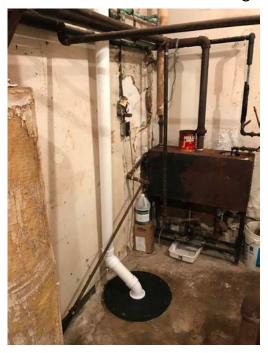


Photo 3: Pick Up Point 2 in boiler room.

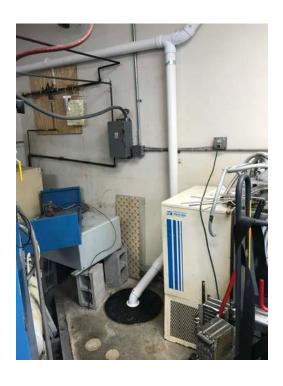


Photo 4: Pick Up Point 3 on south wall of unit.

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Pilgrim Cleaners 7475 Mineral Point Road, Madison, WI SCS Engineers Project #25211372.51



Photo 5: Pick Up Point 4 on south wall of unit.



Photo 6: Pick Up Point 5 on south wall of unit.

Pilgrim Cleaners 7475 Mineral Point Road, Madison, WI SCS Engineers Project #25211372.51



Photo 7: Pick Up Point 6 with manometer on north wall of unit.



Photo 8: Pick Up Point 7 on north wall of

unit.

Pilgrim Cleaners 7475 Mineral Point Road, Madison, WI SCS Engineers Project #25211372.51



Photo 9: Pick up Point 8 on north wall of unit.



Photo 10: Blowers on east exterior wall of unit.

ATTACHMENT B

Continuing Obligations Inspection and Maintenance Log

State of Wisconsin Department of Natural Resources dnr.wi.gov

Continuing Obligations Inspection and Maintenance Log

Form 4400-305 (2/14)

Page 1 of 2

Directions: 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 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 Open Records law [ss. 19.31-19.39, Wis. Stats.]. When using this form, identify the condition that is being inspected. 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. Do NOT delete previous inspection results. This form was developed to provide a continuous history of site inspection results. The Department of Natural Resources project manager is identified in the closure letter. The project manager may also be identified from the database, BRRTS on the Web, at http://dnr.wi.gov/botw/SetUpBasicSearchForm.do, by searching for the site using the BRRTS ID number, and then looking in the "Who" section.

Activity (Site) Name Pilgrim Cleaners Inspections are required to be conducted (see closure approval letter): annually semi-annually other – specify				When submittal of this form is required, submit the form electronically to the DNR project manager. An electronic version of this filled out form, or a scanned version may be sent to the following email address (see closure approval letter):										
								Inspection Date	Inspector Name	Item	Describe the condition of the item that is being inspected	Recommendations for repair or maintena	Previous recommendations implemented?	Photographs taken and attached?
										monitoring well cover/barrier vapor mitigation system other:			○ Y ○ N	\bigcirc Y \bigcirc N
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02-13-368525 BRRTS No.	Pilgrim Cleaners Activity (Site) Nam	е	Continuing Obl Form 4400-305 (2/14)	Continuing Obligations Inspection and Mainten Form 4400-305 (2/14)	
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