



December 7, 2023

Mr. Jeff Mawicke
Mawicke & Goisman, S.C.
1509 North Prospect Avenue
Milwaukee, WI 53202
Email only to: jmawicke@dmgr.com

Mr. Sam Morris
1101 South Prairie Avenue LLC
252 East Highland Avenue
Milwaukee, WI 53202
Email only to: smorris@jjeffers.com

Subject: Review of Supplemental Information and Proposed Activities
Schaefer Brush, 1101 South Prairie Avenue, Waukesha, Wisconsin
DNR BRRTS Activity #: 02-68-563736; FID #: 268138750

Dear Mr. Mawicke and Mr. Morris:

The Department of Natural Resources (DNR) has completed its review of the September 1, 2023, *response to June 15, 2023 Letter and Work Plan to Complete Site Investigation* (Response) and other applicable documentation submitted for the Schaefer Brush site. The Response included a plan for completing the groundwater investigation, provided answers to general questions posed by the DNR, and proposed utilizing the positive pressure system (PPS) to mitigate the vapor intrusion risk. The DNR also received the applicable technical assistance fee for providing review and a written response, in accordance with Wis. Admin. Code § NR 749.04 (1).

Groundwater Investigation

The Response included a proposal for conducting groundwater sampling to investigate the extent of PFAS and chlorinated volatile organic compounds (CVOCs) in groundwater. The DNR offers the following comments regarding this proposal:

- Additional investigation of CVOCs in groundwater should focus on determining the downgradient extent of these contaminants. Collecting additional samples from MW-7, MW-9, and the AMRON wells MW17 and MW18 should provide data useful for this purpose. Sampling either MW-3 or MW-8 as an upgradient well, and AMRON well MW19 as a downgradient well, is also recommended.
- The integrity and construction details of MW-9 (well diameter, depth, etc.) should be determined as much as possible. This well will need to be properly developed before any groundwater samples are collected from it.
- At this time the DNR is not recommending collecting groundwater samples from on-site wells MW-1, MW-2, MW-4, MW-5, and MW-6 or AMRON well MW16 for CVOC analysis. The extent of CVOC groundwater contamination on-site seems well defined and MW16 may be too side gradient to provide useful data. You may choose to collect groundwater samples from these wells if you believe it will provide useful data for interpreting site conditions.

- You may proceed with the investigation of PFAS as proposed. However, if an upgradient source of these contaminants is not confirmed, additional locations will need to be sampled to define down gradient extent (which may minimally require sampling MW-7 and/or MW-9), vertical extent, and to locate the source area.

Building Sink and Sump

Air samples collected from Sink 1 in the manufacturing area had concentrations of volatile organic compounds, including xylenes, ethylbenzene, and toluene, at concentrations relatively higher than what was measured elsewhere in the facility. Provide an explanation as to the potential cause of these compounds and whether any actions will need to be taken to investigate this contamination or to prevent similar discharges in the future.

The DNR recommends that the basement sump be sealed to prevent this from becoming a conduit for vapor migration.

Mitigation of the Vapor Intrusion Risk

The DNR's June 15, 2023, review letter outlined why the PPS is not a suitable vapor mitigation system for this site. The Response stated that as concentrations of contaminants measured in indoor air samples collected since the PPS has been operating do not exceed vapor action levels or Occupational Safety and Health Administration (OSHA) preventive exposure limits (PELs) the system will continue to be relied upon to mitigate the vapor intrusion risk. The DNR reiterates that we are not approving the PPS as a stand-alone long-term mitigation strategy at this site. This decision is based on concerns regarding the effectiveness of the system to create a pressure differential between the indoor air and sub-slab, maintain a pressure differential between the indoor air and outdoor air, and continued detections of compounds of concern in the indoor air. Additionally, OSHA PELs do not apply at the site because the contaminants of concern are not in use at the facility.

The pressure gradient between the inside of the building and underneath the building slab controls the direction of air flow across the floor slab. An effective vapor mitigation system will control this gradient and eliminate the potential of vapor intrusion by either reducing pressure under the slab or increasing pressure above it. Pressure measurements collected at this site from under the slab taken in relation to indoor air indicate no significant difference between the pressure inside the building to that sub-slab when the PPS is operating. Most pressure readings indicate that there is no pressure gradient across the floor slab and some results indicate that sub-slab pressure is greater than indoor air pressure. The PPS is not producing the gradient change required to interrupt the vapor intrusion pathway, as confirmed by continued detections of contaminants in indoor air. In addition, our previous review noted that the indoor air pressure results in relation to outdoor air vary throughout the year and throughout the facility indicating that positive pressure is not being consistently maintained for creating needed pressure gradients.

While the DNR does not agree that the PPS is an effective long-term mitigation strategy at the site we do acknowledge the operation of the PPS has had some beneficial impact on indoor air quality. We recommend it continue to operate so that indoor air conditions do not worsen at least until a DNR-approved mitigation system is installed that satisfies the requirement of Wis. Admin. Code § NR 708.05 (4) (b), or until a remedial action is taken that removes the vapor intrusion risk. The DNR is not requesting that you take immediate steps to mitigate vapor intrusion at this time, but instead recommends that you continue to operate the PPS while you evaluate remedial actions that would address this risk. A long-term mitigation plan could be implemented after the remedy is complete. However, as outlined below, indoor air monitoring would need to be conducted as long as the PPS is relied upon for mitigation.

Continued Indoor Air Monitoring

Indoor air samples must continue to be collected to monitor the vapor hazard until a satisfactory mitigation system is installed. The DNR requests that a plan for conducting indoor air monitoring (sample locations and frequency) be submitted for review and approval.

Results of future indoor samples, and results of samples collected previously, must be made available to building occupants (Wis. Admin. Code §§ NR 714.07 and NR 716.14 (2)). This notification must include:

- a. A description of the contamination;
- b. The response actions that are planned or underway;
- c. Phone numbers and addresses of persons to contact regarding the information. Contacts should include a representative for the party conducting the cleanup, myself as the DNR Project Manager, and Jeremiah Yee ((608) 266-3139, jeremiah.yee@dhs.wisconsin.gov) as the contact with the Wisconsin Department of Health Services (DHS).

It is strongly recommended that the following DNR and DHS fact sheets also be included as part of the notification. These can be obtained by visiting the DNR website at “dnr.wi.gov,” and searching for the publication title.

- a) What is Vapor Intrusion (RR-892);
- b) TCE in the Air.

Within 60 days from the date of this letter provide the DNR documentation describing how the requirements for notifying building occupants has been met.

Remedial Action Options Report

In our June 15, 2023, review letter the DNR requested an evaluation of potential remedial options, following the process outlined in Wis. Admin. Code § NR 722.07 and NR 722.09, to determine what could be a practicable means of reducing contamination impacting sub-slab vapors and groundwater. A remedial action options report, as required by Wis. Admin. Code § NR 722.13, was also requested. While the groundwater investigation is still ongoing, enough information has been obtained such that options could be developed to address the source of CVOC vapors at this site, or to develop a workplan to obtain the information or measurements needed to evaluate remedial options. Wis. Admin. Code § NR 700.11 (1) (dm) requires this report be submitted within 60 days of submittal of the site investigation report, therefore this report should be prepared and provided as soon as possible.

Documents prepared to address the above items may be submitted to the DNR with the applicable review fee to obtain a written response. We appreciate your efforts to protect the environment at this site. If you have any questions regarding this request, please contact me by calling (414) 405-0764, or by email at paul.grittner@wisconsin.gov.

Sincerely,



Paul Grittner
Hydrogeologist
Remediation & Redevelopment Program

cc: Kurt McClung, SET Engineering, LLC – kmcclung@setenv.com
Jeremiah Yee, Wisconsin Department of Health Services – jeremiah.yee@dhs.wisconsin.gov