

State of Wisconsin  
DEPARTMENT OF NATURAL RESOURCES  
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Plymouth, WI 53073

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July 20, 2022

Mr. Robert Bach  
JB Properties 8, LLC  
Cedarburg, WI 53012

also sent to:  
Robert Bach  
PJ Development Co  
524 Technology Way  
Saukville, WI 53080

Subject: Request to Evaluate Potential Vapor Intrusion Risk  
Former Mercury Marine Plant No 1 Fmr  
N49 W6337 Western Road, Cedarburg, WI  
BRRTS #: 02-46-588930, FID #: 246004770

Dear Mr. Bach:

The Department of Natural Resources (DNR) received the document, *Summary of Current Environmental Conditions, Former Mercury Marine Plant 1*, (the Report) on May 27, 2022, without a review fee. This Report was submitted on your behalf by your consultant, Kapur & Associates (Kapur). The DNR conducted a preliminary review of the Report and provides this response. Since the Report was submitted without a review fee, this letter should not be considered an exhaustive list of DNR comments on the current state of the investigation. The intent of this letter is to ensure that the potential vapor intrusion risk at the site is addressed in a timely manner and adequately during the proposed site redevelopment.

#### Regulatory Background

In 1989, the DNR commissioned Strand & Associates to investigate the potential sources for trichloroethylene (TCE) contamination found in Cedarburg Municipal Wells #3 and #5. A Strand & Associates March 3, 1990, report identified TCE contamination in groundwater samples from a monitoring well at Scot Pump, which formerly operated at the Site. As Mercury Marine had operated a TCE vapor degreaser at the Site before Scot Pump, the DNR sent Mercury Marine a letter on November 14, 1991 stating their responsibility under the Wisconsin Spills Statute to investigate and restore the environment at the Site to the extent practicable. In 1993, CH2M Hill, Mercury Marine's consultant, identified TCE contamination at the Site in soil and groundwater, including soil at both locations where Mercury Marine had operated their vapor degreaser. On January 25, 2022, since there had been no environmental investigation or remedial activity for a long period of time, the DNR sent a new letter to Mercury Marine, and Jackson Western LLC, the former owner of the property, informing them of their legal responsibilities to restore the environment at the site to the extent practicable. DNR records indicate that operators at the Site had continued to use TCE until recently.

On December 16, 2021, Kapur submitted Phase I and II reports with a review fee for a technical assistance meeting with the DNR, as the Site was slated for residential redevelopment. After the meeting occurred on January 5, 2022, it was the DNR's understanding that additional on-Site investigations would occur followed by off-Site investigations in accordance with Wis. Admin. Code ch. NR 716, and that vapor mitigation systems (VMSs) would be installed in all newly constructed buildings pre-emptively.

On February 18, 2022, the DNR emailed you and your consultant (this email was later forwarded to Mercury Marine and Scot Pump) a statement that a vapor intrusion screening assessment for off-site properties should be conducted. On May 18, 2022, Kapur informed the DNR that you had purchased the property. Under Wis. Stat. 292 (the "Spill Law"), since you "possess or control" the Site, you are a responsible party for the investigation and restoration of the environment to the extent practicable. The DNR will send you a letter with the details of your responsibilities in the near future.

### Special Vapor Intrusion Concern with Trichloroethylene

Contamination that includes TCE, a chlorinated solvent and common degreaser, is of special concern from a human health perspective due to its potential for acute (short-term) health risks at relatively low concentrations in air. TCE is also a breakdown product of tetrachloroethylene (PCE), a historically common dry-cleaning chemical. Vapors can travel from contaminated soil or groundwater and along preferential pathways, such as within sewer lines, and enter occupied buildings. This is known as vapor intrusion (VI). Screening for VI must be conducted at every contaminated site in Wisconsin, as defined in Wis. Admin. Code § NR 716.11(5)(a). **However, when TCE is present, screening for VI should be made a priority and an interim action under Wis. Admin. Code § NR 708.11 may be necessary.** For an overview on VI, refer to the DNR guidance document, *What is Vapor Intrusion?* (RR-892). For more information, go to [dnr.wi.gov](http://dnr.wi.gov) and search “vapor.” Additional technical guidance on VI is available in *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*, (RR-800).

### Report Summary

The Report provides a background of site history, current environmental conditions, and a description of the proposed site redevelopment. Site investigation activities conducted to date have identified chlorinated volatile organic compounds (CVOCs) in soil, groundwater, and soil vapor at concentrations exceeding regulatory standards. The Site is currently vacant and a residential redevelopment consisting of single-family residences, townhomes, and apartments has been proposed to be constructed across the Site.

TCE has been identified in groundwater at concentrations exceeding the enforcement standard across a large portion of the Site. Sub-slab soil vapor sampling was conducted at the site in March 2022. The sub-slab soil vapor samples were collected beneath the remaining portion of the former industrial facility and beneath the slab of the portion of the building that was previously demolished. TCE was identified at VP-9, near the former vapor degreaser, at a concentration of 1,530  $\mu\text{g}/\text{m}^3$ . The Report recommends “that the proposed redevelopment of the site incorporate some form of passive and/or active mitigation measures within structures located in the vicinity of VP-9.” Specifics regarding which structures in the proposed development will incorporate mitigation measures are not provided.

### DNR Comments

Wis. Admin. Code §§ NR 716.11(3)(a), NR 716.11(3)(b) require the field investigation to determine the nature, degree and extent, both areal and vertical, of the hazardous substances or environmental pollution in all affected media (including the vapor intrusion pathway) and provide sufficient information to permit evaluation of interim options and remedial options.

Wis. Admin. Code § NR 726.05(8) requires that, in situations where vapors are present above the vapor risk screening level, a remedial action is conducted and reduced the mass and concentration of volatile compounds to the extent practicable and that the vapor exposure pathway has been interrupted or mitigated prior to case closure.

- The site investigation is incomplete. A complete site investigation would be beneficial prior to redevelopment so that any necessary remedial actions can be completed prior to or during property redevelopment. The site investigation must include off-site investigation as necessary.
- The DNR recommends referring to the DNR guidance document *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin* (RR-800), specifically Section 7.5, Mitigation in New Construction, for guidance related to conducting vapor intrusion investigation and mitigation at newly constructed buildings.

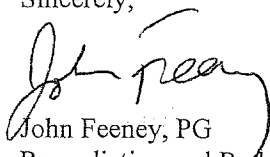
- As mentioned, conduct a vapor intrusion screening assessment for existing off-site buildings. Based on our review it appears that several off-site properties may “screen in.” Due to potential acute health risk associated with TCE, this work should be completed as soon as possible. Additional soil and groundwater sampling may be needed to complete this assessment.
- The recommendations in the report for addressing the vapor intrusion risk to the planned buildings at the site are inadequate. A vapor evaluation of future construction cannot be conducted from former building foundation slabs. Sub-slab vapor conditions cannot be verified until the new buildings are constructed. Post-construction sub-slab vapor sampling or demonstration that mitigation is effective will be required at buildings where a screening assessment indicates vapor intrusion may pose a risk. Guidelines for conducting screening assessments can be found in RR-800, specifically Section 3.4, Screening for Chlorinated VOCs.
- Because installing a vapor mitigation system (VMS) is more efficient and cost-effective during building construction, the DNR recommends you consider incorporating VMSs into all buildings where the vapor intrusion risk cannot be eliminated prior to construction.

#### Schedule

The DNR requests that you submit a site investigation workplan (SIWP) to conduct the required work by August 20, 2022. The submittal of an SIWP is required under Wis. Admin. Code § NR716.09, as this site is subject to regulation under Wis. Stat. § 292. The DNR requests the required SIWP be submitted with a fee for DNR review and response.

The DNR looks forward to working with you to address the reported contamination at this Site and ensuring that your redevelopment project is protective of human health and the environment. If you have any questions about this letter or would like to schedule a meeting with the DNR, please contact me, the DNR project manager, at 262-416-8643 or [johnm.feeney@wisconsin.gov](mailto:johnm.feeney@wisconsin.gov).

Sincerely,



John Feeney, PG  
Remediation and Redevelopment Program  
Wisconsin Department of Natural Resources

cc: Mr. Travis Peterson, Kapur & Associates, Inc.  
Mr. Mikko Halvo, City of Cedarburg  
Mr. Craig Dousharm, Mercury Marine  
Scot Pump, Wilo  
Mr. Curtis Hedman, Department of Health Services

Attachments: TCE Health Fact Sheet  
March 25, 2021 DHS Letter to the DNR