



December 4, 2020

Ms. Marilyn Fleming
Former Bayside Natural Cleaners
N40 W27880 Glacier Road
Pewaukee, WI 53072

Subject: Review of *Comprehensive Site Investigation Report* Former Bayside Natural Cleaners, 8828
North Port Washington Road, Bayside, Wisconsin
FID #: 341140250, BRRTS #: 02-41-548572

Dear Ms. Fleming

On June 10, 2020, the Wisconsin Department of Natural Resources (DNR) received *Comprehensive Site Investigation Report* (Report), prepared by KPRG and Associates, Inc. (KPRG) for the site identified above. The Report was reviewed for compliance with Wis. Admin. Code ch. NR 716. The DNR has determined that additional actions and/or information is required to complete the site investigation, demonstrate the effectiveness of the interim action, and support the conclusions presented. The DNR requests that you submit a supplemental site investigation report which details the requested activities and incorporates the documentation revisions requested below.

Background

The site is a former dry-cleaning facility located in a strip mall. The building is a one-story structure with a basement and several commercial tenants. Dry cleaning operations no longer occur onsite and the former dry-cleaning machine was removed from the property circa 2010. In 2006, the DNR was notified that chlorinated volatile organic compound (CVOC) contamination associated with the former dry-cleaning operations was identified in soil and groundwater at the site, the site was enrolled in the Dry Cleaner Environmental Response Fund Program (DERP). Additional site investigation activities have identified CVOCs in sub-slab vapors at a concentration exceeding the small-commercial vapor risk screening level (VRSL). Subsequently a sub-slab depressurization system (SSDS) was installed in the on-site building in 2012. As part of the site investigation activities, soil and groundwater samples have also been collected on the adjacent residential property to the east, identified as 8837 N. Iroquois Road (Adjacent Property).

DNR Review

The Report was reviewed for compliance with Wis. Admin. Code ch. NR 708, 716, and 724. The DNR has determined that additional actions and information are required to complete the site investigation, demonstrate the effectiveness of the interim action, and support the conclusions presented in the Report. DNR comments are presented below:

1. Degree and Extent of Contamination in All Affected Media

Wis. Admin. Code § NR 716.11(3) requires the site investigation to determine the nature, degree and extent, both areal and vertical, of the hazardous substances or environmental pollution in all affected media.

A. Vapor

1. A VRSL exceedance was identified in a sub-slab vapor sample collected from GP-7 in 2008, an SSDS was installed in the on-site building in 2012, and vapor probes SV-1, SV-2, SV-3, and SV-4 were installed in 2017. Sub-slab vapors at SV-1, SV-2, and SV-3 were sampled once, a sub-slab vapor sample was not collected at SV-4 due to the presence of water immediately beneath the slab. Due to the above, the DNR requests additional sub-slab vapor sampling to define the degree and extent of sub-slab vapor contamination. To ensure that sub-slab vapor samples are representative of conditions under the slab, the DNR recommends relocating all of the "SV" sample locations further away from the outer wall.
2. Due to the VRSL exceedance identified at GP-7, variations in previous indoor-air data, and a lack of recent indoor-air data, the DNR requests the collection of additional indoor-air samples throughout the on-site building concurrent with the sub-slab sampling requested above. Indoor-air samples should be collected in locations where vapor intrusion is more likely to occur such as areas with higher concentrations of contaminants or areas where vapors may enter the building through utilities such as bathrooms or near floor drains. Provide the rationale for indoor-air sample locations.
3. The sub-slab vapor and indoor-air samples requested above should be analyzed for CVOCs.
4. Due to the presence of TCE in sub-slab vapors, the DNR requests that the SSDS remain active during the sub-slab vapor and indoor-air sampling requested above.
5. The Report states that the SSDS was shut down prior to the collection of sub-slab vapor samples at SV-1, SV-2, and SV-3. Provide details regarding the condition of the SSDS during this sampling event including how long the SSDS was shut down prior to sampling and whether the SSDS exhaust pipe was capped.
6. Determine whether vapor sampling is necessary at the Adjacent Property and/or other neighboring properties. Screening guidelines to aid in making this determination can be found in the DNR publication "Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin," (RR-800). Propose a plan to conduct vapor sampling or provide an explanation why vapor sampling is not necessary.

B. Groundwater:

1. The highest concentrations of CVOCs in groundwater were identified in MW-2 which is screened at 15-25 feet below ground surface. Monitoring wells GP-10, GP-11, GP-12, and GP-13, located on the Adjacent Property, are screened at 5-15 feet below ground surface. Explain whether the wells located on the Adjacent Property adequately delineate the extent of CVOC groundwater contamination east of MW-2 considering the difference in screened intervals described above.
2. The CVOC groundwater isoconcentration figures including Figure 9, Figure 10, and Figure 11, illustrate a groundwater plume that is limited in extent. CVOCs have been identified at concentrations exceeding regulatory standards in soil samples collected at the the water table in locations east of MW-2 along the property boundary and in soil samples collected beneath the on-site building. Evaluate whether it is appropriate to estimate that the CVOC groundwater plume extends beneath the onsite building and east of MW-2.

C. Migration Pathway

1. Additional assessment of utilities is necessary to complete the site investigation. Specifically, evaluate the potential for the sanitary sewer(s) located at the site to be acting as a preferential pathway for the migration of CVOC vapors. Activities to evaluate the sanitary sewer as a potential migration pathway may include, but are not limited to, identifying the location of the sanitary sewer(s) underneath or within the on-site building, identifying the location of floor drains within the on-site building, and collecting vapor samples from a sewer manhole(s) or near utility p-traps.

2. Collect a water sample from all three sumps located in the on-site building. These samples should be analyzed for CVOCs.

2. Interim Action

Wis. Admin Code § NR 708.15 and Wis. Admin. Code ch. NR 724 require the submittal of an interim action report which describes each interim action taken.

- A. Based on the VRSL exceedance identified at GP-7, it appears that mitigation of the vapor intrusion pathway at the on-site building is necessary. The results of the additional vapor investigation requested above, and existing pressure field extension data should be evaluated to determine if the SSDS is effectively mitigating all areas of the building which require mitigation. Additional pressure field extension testing, and indoor-air sampling may be necessary to demonstrate the effectiveness of the SSDS. Note that the pressure field measurements collected near GP-9 indicate that the SSDS is not effectively depressurizing the area near GP-9.
- B. The revised Report should include an interim action report for the SSDS in accordance with Wis. Admin. Code § NR 708.15. The revised Report should also include details regarding the construction of the SSDS in accordance with Wis. Admin. Code § NR 724.15 and an operation and maintenance plan in accordance with Wis. Admin Code § NR 724.13.

3. Documentation

- A. Provide a figure(s) which depicts vapor specific information including sub-slab sample locations and results, indoor air sample locations and results, pressure field measurement locations and results, sumps, and utilities.
- B. Provide a table which includes the pressure field extension testing results.
- C. Indicate each well's top and bottom screen elevation on groundwater elevation tables per Wis. Admin. Code § NR 716.15(4)(e)(6).
- D. The red ES line on Figure 6 should be designated as a soil RCL line rather than an ES line.
- E. Add an isoconcentration line that depicts the extent of groundwater preventive action limit exceedances to the appropriate figures and cross-sections.

4. Remedial Action

- A. In situations where vapors are present above VRSLs, a remedial action is required to reduce the mass and concentration of volatile compounds prior to case closure per Wis. Admin. Code § NR 726.05(8). The installation of SSDSs are considered an interim action rather than a remedial action. Due to the VRSL exceedance at GP-7 a remedial action to reduce the mass and concentration of CVOCs to the extent practicable will be required prior to case closure of this site.

Next Steps

In accordance with Wis. Admin. Code ch. NR 716 within 60 days of the receipt of this letter, submit a work plan which details your plans to conduct the activities requested above. Submit a supplemental site investigation report in accordance with Wis. Admin. Code ch. NR 716 within 60 days of the completion of field activities.

Costs associated with additional site activities must be approved by the DNR prior to implementation to ensure that the costs are eligible for reimbursement under DERP.

The DNR appreciates your efforts to restore the environment at this site. If you have any questions regarding this letter please contact me, the DNR project manager, at 414-218-6042 or by email at joseph.martinez@wisconsin.gov.

Sincerely,

Joseph Martinez – Hydrogeologist
Remediation & Redevelopment Program
Southeast Region