



**VIA EMAIL ONLY**

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June 3, 2020

Bill Nicklas  
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W223 N7658 Cherry Hill Rd  
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Subject: Site Investigation/Remedial Options and Remedial Design Report – Superior Health Linens 5005  
South Packard Ave BRRTS 02-41-532649 FID 241780880

Dear Bill Nicklas and Jim Baumgartner,

Thank you for your February 24, 2020 fee-based submittal referenced above. The purpose of this letter is to provide comments to that document and request additional site investigation and interim actions. While you have made significant progress since our last letter, unfortunately, we are unable to approve your site investigation at this time. Additional work is needed to define the degree and extent of contamination, mitigate vapor intrusion, and remediate the source(s) of vapor intrusion.

### **Groundwater Investigation**

- Extent of 1,4 Dioxane Groundwater Contamination  
1,4 Dioxane has been detected above ch. NR 140 Wis. Adm. Code standards in all the monitoring wells that have been sampled. Figure 23 illustrates the potential of two separate plumes. Additional groundwater investigation should be conducted to determine the vertical and horizontal extent of contamination. MW-7, MW-9, MW-10, PZ-3 have not been previously sampled for 1, 4 Dioxane and may also provide useful information for this purpose.
- Extent of 1,1,1 Trichloroethane (TCA) Groundwater Contamination  
Cross section C-C', Figure 12 does not illustrate the downgradient extent of this contaminate plume and it is not included groundwater plume map, Figure 23. Based on the increased concentrations found in MW-6, there appears to be an additional unknown source of TCA. 1,4 Dioxane is known to be a stabilizer of chlorinated volatile organic compounds (CVOC), including TCA and maybe commingled with the TCA plume. Additional groundwater investigation activities may be necessary to define the degree and extent of contamination.
- Off-site Plumes(s)  
Your recent groundwater investigation activities did define the extent of contamination upgradient and vertically in the area of significant groundwater contamination near the southwest corner of your building and MW-2. However, Figure 23 illustrates potential groundwater contamination plume(s) migrating off-site beneath adjoining properties. Additional groundwater investigation activities are required to define the degree and extent of any off-site contamination. MW-7 and MW-10 should be resampled for the contaminants of concern to ensure the extent of the northern limit of the groundwater contamination.

### Source(s) of Groundwater Contamination and Vapor Intrusion

- Historic TCA concentrations appear to increase from the potential source area identified near the southwest corner of your building and MW-2 downgradient to MW-6. This plume is missing from cross sections, maps, and discussions in your report. Also, sub-slab vapor samples and soil gas sampling detected TCA, Tetrachloroethane (PCE), Trichloroethane (TCE) and other volatile organic compounds. Based on this information it appears that areas beneath your building may be acting as source of groundwater and vapor contamination. Your subsequent investigation activities should attempt to define the degree and extent of soil, groundwater and vapor contamination beneath your building.

### Inter-Sewer Gas Monitoring

- Additional assessment of the vapor intrusion should be conducted to ensure the sewers are not acting as a conduit for vapor migration. Gas monitoring should be conducted in the sanitary sewers and storm sewers where they can be accessed. Gas monitoring should also include 1,4 Dioxane as a contaminant of concern. Please provide a brief work plan and schedule for this work and include the utilities in all maps and cross sections.

### Commissioning and Operation and Maintenance of Sub-slab Depressurization System (SSDS)

- Please complete the commissioning phase of your mitigation of sub-slab vapor intrusion detected in 2013. The DNR provides guidance *RR-800 Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin* on our website that includes guidelines for commissioning. The commissioning of your SSDS should include indoor air performance monitoring.
- Please submit your operation and maintenance plan and apply for a continuing obligation for your SSDS after it is proven effective at mitigating vapor intrusion. This work should be completed as soon as possible as an interim action under ch. NR 708 Wis. Adm. Code. Please provide a work plan and schedule for this work.

### Remedial Options and Remedial Design

- The extent of soil, groundwater, and vapor contamination has not been defined. Upon completion of that work you should submit a remedial option analysis report in accordance with ch. NR 722 Wis. Adm. Code that includes remediation alternatives to comply with ch. 726.05(8) Wis. Adm. Code that states:  
*A site or facility is not eligible for closure until:  
the vapor exposure pathway has been investigated in accordance with par. NR 716.11(5) (g). and  
where vapors were present above the vapor risk screening level:  
a remedial action has been conducted and reduced the mass and concentration of volatile compounds to the extent practicable and the vapor exposure pathway has been interrupted or mitigated.*  
*Note: Vapor mitigation systems are not considered remedial actions, as they do not reduce the mass or concentrations of the contaminants. Vapor mitigation systems are used to interrupt the vapor migration pathway.*
- Direct Contact and Groundwater Protection Cap Proposed  
In your report you recommended a direct contact and groundwater protection cap to address the source of contamination on the west side of your facility. The DNR approves of this as an interim Action ch. NR 708 Wis. Adm. Code. Further groundwater monitoring should be conducted to evaluate the performance of this action to mitigate impacts to groundwater. Please submit your operation and maintenance plan and apply for a continuing obligation for this interim action upon completion.

### Sample Results Notification Requirements

- It is important to conduct sampling notifications in accordance with ch. NR 716.14 Wis. Adm. Code. These notifications should be made to your building occupants and any off-site property owners and occupants. The notifications are required within 10 days of receipt of the laboratory data. Please copy the DNR on your notifications under this chapter.

### Next Steps

Please submit a work plan and schedule for the action items listed above in order to complete site investigation. A priority should be placed on the commissioning of the SSDS. We appreciate the measures you have taken to address the environmental concerns at your property. Your subsequent site investigation report should include all data to date presented in tables, maps, and cross sections as appropriate in accordance with ch. NR 716 Wis. Adm. Code.

If you have any questions or concerns regarding this letter, please contact me directly at (414) 263-8564 or by email at [Douglas.Cieslak@Wisconsin.Gov](mailto:Douglas.Cieslak@Wisconsin.Gov).

Sincerely,



Doug Cieslak  
Hydrogeologist  
Remediation and Redevelopment Bureau

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