

## Beggs, Tauren R - DNR

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**From:** Beggs, Tauren R - DNR  
**Sent:** Thursday, June 29, 2023 10:43 AM  
**To:** Matt Dahlem  
**Cc:** Schultz, Josie M - DNR; Hoverman, Robert R - DNR (Rob)  
**Subject:** RE: Comment/Revisions Needed Prior to Concurrence with Vapor Mitigation Design/Sampling Plan, Bright Horizon Properties LLC (Former), BRRTS # 02-36-589295

Hi Matt,

DNR has reviewed and has a few quick changes, as outlined below. Once these have been completed and the revisions are submitted back to me, I will get the email for conditional approval drafted and sent out with a formal written approval to be issued later.

- 1) The two areas boxed in blue below should be consistent and should include the following contaminants of concern:
  - PCE, TCE, cis-1,2-dichloroethene, trans-1,2-dichloroethene, vinyl chloride, 1,2,3-trichloropropane, and naphthalene.
    - For vapor sampling for CVOCs, DNR always includes PCE and its breakdown products
    - Naphthalene is at a high concentration in soil adjacent to the building at MW-14, so include
    - 1,2,3-trichloropropane is at a high concentration in soil within the proposed building footprint at MW-15, so include
- 2) Delete the text highlighted in yellow below since it is conflicting with the revisions/additions that were made.

- VAPOR VENT PIPING
- FAN TYPE

3. AT THE COMPLETION OF INSTALLATION, THE VMS SUBCONTRACTOR SHALL SUBMIT A LETTER TO THE VMS DESIGNER AND TO THE OWNER CERTIFYING THAT VMS INSTALLATION WAS COMPLETED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS AS WELL AS MANUFACTURER SPECIFICATIONS.

4. THE FIRST ROUND OF SUB-SLAB VAPOR AND INDOOR AIR SAMPLING NEEDS TO BE COMPLETED WITH THE BUILDING FULLY ENCLOSED AND HVAC RUNNING. THE VAPOR MITIGATION SYSTEM SHOULD NOT BE ACTIVE WHILE SUB-SLAB VAPOR SAMPLING IS BEING COMPLETED.

5. ONLY TCE AND PCE FOUND AS CONTAMINANTS OF CONCERN DURING THE INVESTIGATION OF SOIL AND GROUNDWATER WILL BE ANALYZED FOR.

6. PRIOR TO OCCUPANCY OF THE BUILDING, THE FIRST ROUND OF SUB-SLAB VAPOR AND INDOOR AIR SAMPLING WILL BE COMPLETED AND DATA SUBMITTED TO THE DNR TO CONFIRM VAPOR RISK SCREENING LEVELS (VRSLs) AND VAPOR ACTION LEVELS (VALs) ARE NOT EXCEEDED TO AVOID EXPOSURE TO FUTURE RESIDENTS. FIRST ROUND OF SUBSLAB VAPOR AND INDOOR AIR SAMPLING TENTATIVELY SCHEDULED FOR JULY 2024.

F. POST-DEVELOPMENT VAPOR SAMPLING AND REPORTING

1. PASSIVE SUB-SLAB VAPOR SAMPLING WILL BE CONDUCTED AT THE 10 SAMPLING PORTS POST-CONSTRUCTION. ALL THE PASSIVE SUB-SLAB VAPOR SAMPLES WILL BE COLLECTED USING BEACON PASSIVE SORBENT SAMPLERS HUNG FROM THE TORQUER WELL PLUG FOR A DURATION OF 10-14-DAYS, WITH SAMPLING CONDUCTED PER WDNR GUIDANCE METHODS. ADDITIONALLY, WDNR GUIDANCE RECOMMENDS PASSIVE INDOOR AIR SAMPLING FOR RESIDENTIAL MULTI-FAMILY. HOWEVER, WDNR GUIDANCE DOES NOT SPECIFY THE NUMBER OF INDOOR AIR SAMPLING POINTS BASED OFF OF SQUARE FOOTAGE. INDOOR AIR SAMPLING LOCATIONS WILL BE PLACED WITHIN LIVING SPACE AREAS AND THE MOST LIKELY CONDUITS FOR VAPOR INTRUSION (IE. PLUMBING PENETRATIONS IN THE SLAB); THEREFORE, INDOOR AIR SAMPLING WILL OCCUR WITHIN ALL FIRST FLOOR APARTMENT UNITS, THE SHAFT BELOW THE ELEVATOR OR IN THE ELEVATOR, ADJACENT TO THE ELEVATOR ON THE FIRST FLOOR, AND ADJACENT TO THE ELEVATOR ON THE SECOND FLOOR. FEHR GRAHAM IS NOT RECOMMENDING INDOOR AIR SAMPLING ABOVE THE GROUND LEVEL. THIS SHOULD SATISFY INDOOR AIR REQUIREMENTS IN THAT THE PLACEMENT OF THE PASSIVE INDOOR AIR SAMPLERS WILL BE NEAR HISTORIC HIGHEST LEVELS OF RESIDUAL SOIL CONTAMINATION AND INDOOR AIR SAMPLING LOCATIONS WILL COVER THE MOST LIKELY AREAS OF VAPOR CONCERN IN A CONTINUALLY OCCUPIED SPACE (APARTMENT) AND A NON-CONTINUALLY OCCUPIED SPACE (COMMON AREA/HALLWAYS). ONE OUTSIDE BACKGROUND PASSIVE AMBIENT AIR SAMPLE WILL ALSO BE COLLECTED. THE SAMPLES WILL BE ANALYZED BY EPA METHOD TO-15 FOR CHLORINATED VOLATILE ORGANIC COMPOUNDS (CVOCs).

2. EVEN IF SUB-SLAB VAPOR CONCENTRATIONS DO NOT EXCEED VAPOR RISK SCREENING LEVELS DURING THE FIRST ROUND OF SAMPLING, ADDITIONAL PASSIVE SUB-SLAB SAMPLES WILL BE COLLECTED TO VERIFY THE INITIAL SAMPLE RESULTS. THE WDNR RECOMMENDS THREE PASSIVE SUB-SLAB SAMPLING EVENTS BE CONDUCTED TO RULE-OUT VAPOR INTRUSION, WITH AT LEAST ONE OF THE SAMPLING EVENTS DURING THE LATE FALL/WINTER/EARLY SPRING SEASONS. SAMPLE INTERVALS CAN BE AS SHORT AS 4 WEEKS OR AS LONG AS 4 - 5 MONTHS, DEPENDING ON THE SEASON OF THE YEAR WHEN THE FIRST SUB-SLAB SAMPLE IS COLLECTED. TWO ADDITIONAL PASSIVE SUB-SLAB VAPOR SAMPLING EVENTS WILL BE CONDUCTED AT THE 9 SAMPLING PORTS POST-CONSTRUCTION. NO ADDITIONAL INDOOR AIR OR AMBIENT AIR SAMPLING IS RECOMMENDED BEYOND THE INITIAL ROUND OF SAMPLING UNLESS VAPOR DATA SHOWS OTHERWISE. THESE TWO SUB-SLAB VAPOR SAMPLING EVENTS TENTATIVELY SCHEDULED FOR SEPTEMBER 2024 AND DECEMBER 2024.

3. UPON COMPLETION OF CONSTRUCTION, A REPORT WILL BE SUBMITTED TO THE OWNER AND WDNR. THE REPORT WILL SUMMARIZE THE INSTALLATION, QC MEASURES, SYSTEM EFFECTIVENESS TESTING, AND DOCUMENTATION THAT THE VMS WAS INSTALLED IN ACCORDANCE WITH THE DESIGN OBJECTIVES. THE REPORT WILL ALSO INCLUDE THE FOLLOWING: AS-BUILT DRAWINGS, INSPECTIONS LOGS, PHOTOGRAPHS, FIELD LOGS, COMPLETION LETTER FROM VMS SUBCONTRACTOR, SAFETY DATA SHEETS FOR MATERIALS USED DURING CONSTRUCTION THAT COULD IMPACT BACKGROUND INDOOR AIR CONCENTRATION, AND VAPOR SAMPLING RESULTS.

4. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COLLECT AND MAINTAIN A DATABASE OF SAFETY DATA SHEETS FROM ALL RELEVANT SUBCONTRACTORS AND THE COMPLETION LETTER FROM THE VMS SUBCONTRACTOR.

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Tauren R. Beggs

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**From:** Matt Dahlem <mdahlem@fehrgraham.com>  
**Sent:** Wednesday, June 28, 2023 3:53 PM  
**To:** Beggs, Tauren R - DNR <Tauren.Beggs@wisconsin.gov>  
**Cc:** Schultz, Josie M - DNR <josie.schultz@wisconsin.gov>; Hoverman, Robert R - DNR (Rob) <robert.hoverman@wisconsin.gov>  
**Subject:** RE: Comment/Revisions Needed Prior to Concurrence with Vapor Mitigation Design/Sampling Plan, Bright Horizon Properties LLC (Former), BRRTS # 02-36-589295  
**Importance:** High

Thank you for your time today, I beyond appreciate the time you took with me via Teams, the time you took to review the vapor design specs (sorry for the small font 😊) and in-depth comments you have below – the vapor design has been updated with what we talked about per below with revisions noted in red within the attached document.

I again ask that since we are being compliant and have updated everything per below and per our conversation, that a conditional approval be emailed to me prior to noon on June 30 if that is possible? I will then get to work on getting you a letter report of the design to be uploaded and available on BRRTS.

Thanks so much and let me know if you got this email and the attachment.

Matt

**MATT DAHLEM, PG | Branch Manager**  
**Fehr Graham | Engineering & Environmental**

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**From:** Beggs, Tauren R - DNR <[Tauren.Beggs@wisconsin.gov](mailto:Tauren.Beggs@wisconsin.gov)>  
**Sent:** Thursday, June 22, 2023 3:50 PM  
**To:** Matt Dahlem <[mdahlem@fehrgraham.com](mailto:mdahlem@fehrgraham.com)>  
**Cc:** Schultz, Josie M - DNR <[josie.schultz@wisconsin.gov](mailto:josie.schultz@wisconsin.gov)>; Hoverman, Robert R - DNR (Rob) <[robert.hoverman@wisconsin.gov](mailto:robert.hoverman@wisconsin.gov)>  
**Subject:** Comment/Revisions Needed Prior to Concurrence with Vapor Mitigation Design/Sampling Plan, Bright Horizon Properties LLC (Former), BRRTS # 02-36-589295

Hi Matt,

DNR has identified the following comments/revisions needed for the *Sub-Slab Vapor Mitigation Design* plan prior to DNR being able to concur with the plan:

- Please provide the entire system description and sampling plan in memo format for ease of access and legibility to the general public on BRRTS.
- All vapor mitigation system components should be made from the same material, typically PVC per AARST.

- Ensure the vapor barrier is properly sealed in the elevator shaft.
- The first round of sub-slab vapor and indoor air sampling needs to be completed with the building fully enclosed and HVAC running. The vapor mitigation system should not be active while sub-slab vapor sampling is being completed.
- Only VOCs found as contaminants of concern during the investigation of soil and groundwater should be analyzed for.
- **Prior to occupancy of the building**, the first round of sub-slab vapor and indoor air sampling needs to be completed and data submitted to the DNR to confirm vapor risk screening levels (VRSLs) and vapor action levels (VALs) are not exceeded to avoid exposure to future residents.
- Sub-slab sampling locations should be more evenly distributed from what is shown on Sheet 5 to ensure the entire building footprint is being properly assessed.
  - If VRSLs are exceeded, there may need to be additional locations for pressure field extension for commissioning of the vapor mitigation system to verify the radius of influence for the vacuum covers the entire building footprint
- Indoor air sampling locations need to be placed within living space areas and the most likely conduits for vapor intrusion (i.e. plumbing penetrations in the slab); therefore, indoor air sampling needs to occur within all first floor apartment units, the shaft below the elevator or in the elevator, adjacent to the elevator on the first floor, and adjacent to the elevator on the second floor.
- One round of sampling needs to occur within the winter timeframe (December 1 through March 31). Late fall/early spring is not acceptable for a winter sample.
- If the vapor data indicates a VRSL exceedance then the system will need to be turned active, conduct proper commissioning of the system, and submit an OM&M Plan.
  - Proper vapor sampling is needed to determine if the system needs to be converted to active. Refer to Section 7.5 Mitigation in New Construction in DNR Guidance Document Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin (RR-800) and Sub-Slab Vapor Sampling Procedures (RR-986). If the system needs to be activated, then the following will be needed:
    - Proper system commissioning; refer to Section 9 System Commissioning of RR-800.
    - Operation, Monitoring, and Maintenance (OM&M) Plan; refer to Section 10 Operation, Monitoring, and Maintenance of RR-800. Also refer to Maintenance Plans for Vapor Mitigation Systems/Vapor Intrusion Response Action/Vapor Barriers (RR-981) and the Vapor Mitigation System Inspection Log (Form 4400-321).
- Strongly recommend using a National Radon Proficiency Program (NRPP) certified mitigator that will follow the American National Standards Institute (ANSI)/American Association of Radon Scientists and Technologists (AARST) standards for mitigation.

DNR will be following up next week to schedule a time to go through the vapor information for this site redevelopment.

Regards,

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**Tauren R. Beggs**

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