

From: Beggs, Tauren R - DNR
Sent: Thursday, March 25, 2021 9:29 AM
To: Beggs, Tauren R - DNR
Subject: Summary of Call on 3/25/2021 for Vapor Intrusion/Mitigation Guidance for Riverpoint District, BRRTS # 02-36-585491

Follow Up Flag: Follow up
Flag Status: Flagged

Attendees: Harris Byers-Stantec, Jennifer Borski, Josie Schultz, and Tauren Beggs-DNR

Similar to PH Glatfelter case and Riverheath Redevelopment case. Consider very early design for vapor mitigation system with passive to turn into active if necessary in new building construction. Trigger DNR has is sub-slab (that is also sub-membrane) vapor data in order to require to turn VMS to active.

Do not require vapor pins, can use other methods to take discrete vapor samples in new building construction. Sample a clean out from a riser stack? Need to collect discrete samples, not currently accepting a cumulative sampling due to dilution factor. Recommendation is horizontal piping to pull discrete samples from under the building instead (Kerwin Paper, BRRTS # 02-45-221348, SIGMA Environmental). DNR can require a preventive (not preemptive) vapor mitigation system in scenarios

Elevators are an important piece to redevelopments. Elevators can be a pathway for vapors to move up through the building.

Parking on first floor (half story level) is proposed, open sidewalls to ambient air.

DNR can't require a sitewide requirement, but the City could require a sitewide or redevelopment-type ordinance for vapor mitigation.

VIPPI launched in approximately June, DNR intends to include model ordinances to adopt for the City for vapor mitigation system requirements.

Mitigators are certified through NRPP (ANSI/AARST is the standard for vapor mitigation).

In-conduit/pipe sampling (historic disposal or leaky piping as a migratory pathway for vapors). No point in new construction for this with all new utilities.

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Tauren R. Beggs

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Tauren.Beggs@wisconsin.gov (preferred contact method during work at home)

From: Byers, Harris <Harris.Byers@stantec.com>
Sent: Tuesday, March 23, 2021 10:19 AM
To: Beggs, Tauren R - DNR <Tauren.Beggs@wisconsin.gov>
Cc: Borski, Jennifer - DNR <Jennifer.Borski@wisconsin.gov>; Schultz, Josie M - DNR

<josie.schultz@wisconsin.gov>

Subject: RE: Vapor Intrusion Guidance

Thanks for setting this up. To streamline the discussion, I wanted to provide a few written questions ahead of time. My questions are both conceptual and site-specific.

Background. The Site is a vacant 21 acre peninsula primarily used for industrial/residential (19th Century) and railroad (20th Century) uses. While owned by the railroad (e.g. including tracks, depot, turntable, engine house, etc.), large portions of the Property were leased to a variety of industrial tenants (e.g. bulk petroleum, junk yard, material/grain handling, warehouse, etc.).

Site Conditions. The RR infrastructure was removed in the late 20th Century and buildings/slabs razed. A sitewide surface fill unit consisting of coarse black granular fill rich in heavy metals (As, Pb) and PAHs is present. We estimate the volume of this unit to be +- 1MM cubic yards; therefore, the presumed remedial approach is to manage this material onsite and construct a site-wide engineered barrier maintained with the appropriate institutional controls. We just received the most current soil/groundwater data and are working to summarize that today. Previous Phase II ESA sampling work (2018-2020) identified residual impacts to soil and groundwater from: petroleum (PAHs and VOCs), PFAS (gw), MGP oxide box waste fill (CN, etc.) at various portions of the Site. Chlorinated solvents were identified previously by the RR turntable during closure of that area, but do not appear to be major COCs at this point. Of additional note, subsurface soils include organic rich alluvium.

Proposed Redevelopment. The Community Development Authority of the City of Manitowoc acquired the Site in 2018 and is working through the SI and remediation planning process with the intention of redeveloping the peninsula as a destination mixed-use residential/commercial/recreation location. The City will retain ownership of the ROWs and will sell portions to private developers to facilitate reuse. The City is starting Phase I of redevelopment in 2021 (utility installation and road construction) and the first parcel is pending sale for redevelopment in 2021 as a 80 unit apartment complex.

Understanding. The Phase I construction area is currently vacant (no structures) and I understand the department is no longer accepting groundwater data as a way to quantitatively evaluate the vapor intrusion pathway for future construction. Instead, the recommendation is for all new construction to include a building-wide sub-slab Geovent (or similar) system connected to a header(s) terminating above the building roofline. I understand that the department prefers that the VI pathway then be evaluated once the building is fully constructed and adjoining impermeable surfaces poured. If the VI pathway requires active mitigation, then the BCT could be made active by adding a fan and maintaining the system with an institutional control.

Questions (general and quazi-project specific).

1. For evaluating the VI pathway post-construction, would it be appropriate to sample gas from the Geovent riser(s) vs. installing a series of sub-slab vapor pins through a newly constructed slab and finished flooring?
 - a. We are well accustomed to installing vapor pins through existing building slabs; however, if the department will only accept data from sub-slab vapor pins to evaluate VI, can you provide guidance on where (and how) to install those vapor pins through newly constructed concrete. (e.g. can they be installed in utility closets and/or in portions of the building with traffic or areas without the final flooring installed). Any suggestions/recommendations on abandoning the vapor pins so as to restore the integrity of the BCT (hydrated bentonite and hydraulic cement?).
 - b. Does the department currently have guidance on frequency of sampling to determine if the BCT installed during new construction needs to be made active?
2. From the PPT summarizing proposed revisions to the guidance, it appeared that the department will be requiring sampling of gas from sewer pipes. With new construction, should we plan to

sample gas from the sewer stack in newly constructed buildings? If so, do you prefer an air-tight sample port be installed in the PVC stack so the sample is air-tight or do you prefer a sample tube be lowered into the sewer cleanout access (like on the photo in the PPT)?

3. Project Specific (Apt. Building) – The concrete slab (first floor) will be used as a parking garage and therefore will be vented to prevent buildup of CO (I'm not sure if the venting will be active or passive). To that end, if new construction includes ventilation of the lowest floor to facilitate proposed use, is a BCT required?
4. Project Specific (Sitewide) – In addition to (and possibly more important than) residual VOC impacts, the subsurface organic horizons will undoubtedly continue to degrade over time and could off-gas methane. To that end, would the department consider a Sitewide requirement up front that all future constructed buildings on River Point be constructed to mitigate vapor intrusion and that the systems be made active and maintained through an institutional control??

Thanks again for your guidance on this project.

Sincerely,

Harris Byers, Ph.D.

Sr. Brownfields Project Manager

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From: Beggs, Tauren R - DNR <Tauren.Beggs@wisconsin.gov>

Sent: Tuesday, March 23, 2021 8:48 AM

To: Byers, Harris <Harris.Byers@stantec.com>

Cc: Borski, Jennifer - DNR <Jennifer.Borski@wisconsin.gov>; Schultz, Josie M - DNR <josie.schultz@wisconsin.gov>

Subject: RE: Vapor Intrusion Guidance

Hi Harris,

I talked to Jennifer Borski and we are looking to schedule a call with her, Josie Schultz, you, and me. Are you available either tomorrow at 1:30pm or Thursday between 8:30-9:30am for a call?

If you want to present any information, you can send out an invite for the call. Otherwise I can set up a skype invite. Please let me know which you would like to do.

Thanks,

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Tauren R. Beggs

Phone: (920) 510-3472

Tauren.Beggs@wisconsin.gov (preferred contact method during work at home)

From: Byers, Harris <Harris.Byers@stantec.com>
Sent: Friday, March 19, 2021 6:18 PM
To: Beggs, Tauren R - DNR <Tauren.Beggs@wisconsin.gov>
Subject: Fwd: Vapor Intrusion Guidance

Just a cc on an email string. I was on the call earlier this week and wrote to Jennifer for guidance on VI sampling at River Point.

Look forward to chatting next week.

Harris

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From: Borski, Jennifer - DNR <Jennifer.Borski@wisconsin.gov>
Sent: Friday, March 19, 2021 5:47:18 PM
To: Byers, Harris <Harris.Byers@stantec.com>
Subject: RE: Vapor Intrusion Guidance

Hello Harris,

Thanks for your question. I apologize I was not able to get you a response this week but wanted to confirm I received your email. I'll talk with Tauren early next week and we'll get back with you.

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Jennifer Borski

Vapor Intrusion Team Leader / Hydrogeologist

Remediation & Redevelopment Program / Environmental Management Division

Wisconsin Department of Natural Resources

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Phone: (920) 424-7887 – **RR Program land lines were permanently disconnected on October 1, 2020**

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jennifer.borski@wisconsin.gov



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From: Byers, Harris <Harris.Byers@stantec.com>
Sent: Thursday, March 18, 2021 11:08 AM

To: Borski, Jennifer - DNR <Jennifer.Borski@wisconsin.gov>

Subject: Vapor Intrusion Guidance

Jennifer:

Thank you for addressing my question this morning in the listening session re: new construction, and I look forward to the revision to RR800.

In the interim, I have a larger brownfield redevelopment project in Manitowoc where buildings do not currently exist. I am struggling on the technical side of evaluating the vapor intrusion pathway and wondered if you had time to discuss further.

The property is currently owned by the Manitowoc CDA and they will parcel/sell off portions of the property to private commercial/residential developers. Specifically, the first developer will begin construction of a multi-family residential building in 2021, and I've advised them to construct the building as though an active building control technology is needed. Conceptually, beneath the concrete slab, the developer will install Geovent (or similar) bedded in gravel below a vapor intrusion barrier. The Geovent will be connected to a header/riser to (passively) discharge vapors above the roofline. The system could be made active following building construction by adding a fan. Slab penetrations for utilities will be sealed for vapors.

In discussion with Tauren (RR PM) and other colleagues at Stantec, I understand the current recommendation of WDNR is to sample soil gas after the building and adjacent impermeable surfaces are constructed (as groundwater quality can no longer be used to quantitatively evaluate this pathway pre-construction). My understanding is that the only way to require an institutional control and/or make the building control technology active is to generate soil gas data. And the only reasonable way to do that is post-construction. To that end, do you have any guidance or recommendations on where to collect these post-construction samples (i.e. could sample ports be placed in rooms that do not interfere with building operations or perhaps just collecting a single sample from a port installed on the riser), number/frequency of samples, and/or guidance on how to properly abandon sample ports so the integrity of the building control technology is not compromised long-term. Any special consideration in this evaluation if the first floor will be parking, and thus already actively vented to facilitate planned uses?

Look forward to discussing with you soon.

Sincerely,

Harris Byers, Ph.D.

Sr. Brownfields Project Manager

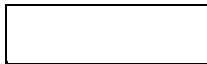
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