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Friday, July 26, 2024

Oregon Department of Environmental Quality
Attn: Rebecca Digiustino, Project Manager
Voluntary Cleanup and Portland Harbor Section
700 NE Multnomah Street, Suite 600
Portland, Oregon 97232

Subject: Response to July 15, 2024 ODEQ Comments on Passive Sub-slab Venting System Installation Work Plan
RMRE Investments PPA – Former Myers Container Site (ECSI #2062)
ENW Project Number: 1460-23001-06

Dear Ms. Digiustino:

On behalf of our client, RMRE Investments LLC (RMRE), EVREN Northwest, Inc. (ENW) presents this response to comments the Oregon Department of Environmental Quality (ODEQ) provided in its letter dated July 15th, 2024. Below are ODEQ comments (shaded), with RMRE's response below (unshaded/italicized).

ODEQ General Comments and RMRE's Responses

1) The pilot test results indicate the airflow communication below the slab is heterogenous. In general, the 20-foot radius of influence (ROI) for a passive system is not supported by the pilot test results. The most conservative of the results indicates a ROI of 16 feet is achievable under active, vacuum-induced conditions. The ROI should be more conservative for a passive system to ensure vapors are adequately released from below the slab. DEQ recommends that a ROI of no more than 15 feet should be considered for the passive system design.

   a) *Based on ENW's review of the communication test results, and knowing that if inline fans were installed, they would pull a greater negative pressure than the vacuum that was used for the communication testing, and result in a reduction of soil moisture content, which would also tent to increase sub-slab communication, ENW disagrees with ODEQ. However, ENW appreciates ODEQ's wish to be conservative regarding interpretation of this data and have readjusted the proposed system based on a 15-foot ROI.*

ODEQ Specific Comments and RMRE's Responses

1) Section 4.1 Constituents of Potential Concern in Sub-Slab Vapor – DEQ requested 1,1-dichloroethylene (DCE) and trans-1,2-DCE be added to the list of vapor contaminants of potential concern in the April 17, 2024, DEQ comment letter because these contaminants are daughter products of trichloroethylene (TCE) and tetrachloroethylene (PCE). Although these contaminants may not be present in high quantities, they are a result of constituent breakdown. DEQ believes adding these contaminants to the list may be important if

cumulative risk becomes an issue for air discharge.

a) *ODEQ's original requested these constituents be added to the list of Constituents of Potential Concern (COPCs), which ENW interpreted to be based on an assessment of risk. ENW will add these constituents as Constituents of Interest (COIs), which do not imply they were screened as COPCs through a risk-screening process.*

2) Section 4.4 Pre-Installation Communication Test (Pressure Field Extension), Procedure – Please provide the accuracy of the Fluke meter used for the tests (i.e., ±1% + 1 Pascal, etc.). Additionally, please provide the corresponding vacuum induced at 160 cubic feet per minute (CFM) and for each of the resistance steps conducted.

a) *Readings at the communication test points were recorded either a DG1000 or DG7 meter and are accurate to the tenth of a pascal. The vacuum at the manifold connecting the vacuum source was recorded with the Fluke meter and it is only accurate to a Pascal. Sorry for the confusion, this detail should have been included in the work plan and are now included.*

3) Section 4.4 Pre-Installation Communication Test (Pressure Field Extension), Results – DEQ recommends a more conservative ROI when designing a passive system to increase the margin of safety and ensure vapors can migrate to the screened sections of the piping.

a) *As requested, a 15-foot ROI was used (see response to 1 general comment).*

4) Section 5.2.2 Task 4 - Floor Sealing – Footnote 14 indicates Urethane 645 (or equivalent) will be used to seal floor penetrations; however, in Section 5.2.1 and on Figure 5 the use of Sikaflex is referenced instead. For clarity, DEQ recommends identifying one recommended product throughout the document. The final product will require DEQ review for approval prior to application at the facility.

i) *The work plan has been updated to using Sikaflex, since the other product is more difficult to get.*

5) Table 5-2 Analytical Plan for Indoor Air Assessment – As stated in Specific Comment #2, please add the daughter products for PCE and TCE (1,1-DCE and trans-1,2-DCE) as requested.

i) *ENW interpreted ODEQ's original comment to mean these constituents were to be added to the list of COPCs, which were identified through a risk-screening process, and therefore would not be applicable. However, ENW understands ODEQ means to add these as COIs. We have added these constituents as COIs to the work plan.*

6) Figure 4 Communication Test Location Diagram – Temporary Communication Test Point CT-03 is listed twice on this figure. Please correct the labels.

i) *The northernmost CT03 should have been CT13. This was updated.*

7) Figure 5 Sub-Slab Depressurization System (Detail) – The system layout does not achieve full coverage of the building footprint. Please see General Comment #1 related to the ROI, and the following requested revisions:

i) *As outlined in EPA guidance, SSD design is based on a number of factors, including*

contaminate plume morphology. As shown in Figure 3 of the work plan, the sub-slab vapor plume do not extent to the northern portion of the building. However, as previously mentioned, ENW understands ODEQ's desire to be conservative and has adjusted the proposed system so the negative pressure field induced by the system, should it need to be activated, would extend beneath the entire building.

a) Extend the E-W pipes to ensure full coverage across the entire footprint of the building.

   i) As outlined above, this has been done as requested.

b) Add the building dimensions, lengths for the perforated lines, and lengths of the solid piping to the plan.

   i) The figure was drawn to scale and the system would be installed under our oversight; however, we have added these dimensions, as requested.

c) Add arrows to show the slope directions for the solid piping shown on this figure.

   i) As requested, this has been done.

d) The spacing between the vapor collection pipes does not seem to be equidistant. Please clarify if Note 4 is referring to the space between vapor collection pipes or the offset from the edge of the building.

   e) This was meant to be more of a generalized statement but agree it should be removed since it can be confusing.

8) Appendix B, Communication Test Data and Graphs – DEQ appreciates the inclusion of the communications test data and graphs. Please clarify the following:

   a) Please confirm if the readings presented in Appendix B are differential pressure measurements, as indicated in the text. If so, what was the reference zone used for the differential pressure measurements (i.e., induced vacuum at shop-vac, ambient, etc.)?

      i) ENW has updated this graph. The differential pressure measurements are relative to ambient air.

   b) Provide the barometric pressure and ambient air temperature at the time of these readings.

      i) This additional data was added.

   c) Include the additional data for the tests conducted at 50% and 75% resistance.

      i) This additional data was added.

   d) Add the initial applied vacuum on each of the test graphs for reference.

      i) This additional data point was added.

9) Appendix B, Communication Test Data and Graphs – The test results do not appear to support a ROI of 20 feet for a passive system. The most conservative radius achieved (at 4 pascals) is 16 feet (SP-02, South). As stated in General Comment #1,

if the plan is to operate the system passively, then a more conservative ROI should be used for the piping layout to ensure the vapors are able to migrate passively into the piping below the building.

i) As requested, a 15-foot ROI was used (see response to 1 general comment).

Should you have any questions related to any of our responses, or generally about this facility, please phone me at 503-452-5561 or email me at LynnG@EVREN-NW.com.

Regards,

LYNN D. GREEN

Lynn D. Green, C.E.G.
Project Manager

CC: Ryan Madson, RMRE Investments LLC