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October 24, 2023

Roers Companies
c/o: Shane LaFave
110 Cheshire Lane, Suite 120
Minnetonka, MN 55305
Via Email Only to shane@roerscompanies.com

Subject: Column Sealing Options Report Review
Community Within the Corridor - East Block
2748 N. 32nd Street, Milwaukee, WI 53210
BRRTS #02-41-263675, FID #241025400

Dear Mr. LaFave:

On October 10, 2023, the Wisconsin Department of Natural Resources (DNR) received *Column Sealing Options Report* (Report) prepared by K. Singh & Associates, Inc. (K. Singh) on behalf of Community Within the Corridor (CWC) for the subject site. The Report was presented with a technical assistance fee of $700 for DNR review and response, and requests DNR approval for the proposed column sealing plan. On October 13, 2023, the DNR informed CWC that DNR has a goal to provide a review and response to the Report by the week of October 30, 2023. The DNR reviewed the Report for compliance with Wis. Admin. Code chs. NR 722 and 724, and generally approves the plan with the below comments and recommendations to incorporate and/or consider.

Report Overview

In summary, the Report presents the following plan:

- Trichloroethylene (TCE) air data was collected from ninety-four wooden columns (columns) located on the first floor of the site building complex. Real-time indoor air samples were collected from cracks/holes that exist in the columns using a gas chromatograph unit. Sealing activities are proposed at the sixteen columns where TCE was identified greater than its detection limit of 0.6 $\mu g/m^3$.
- Sealing activities are planned to occur in three stages scheduled from October 16 - 20, 2023 and October 23 - 27, 2023.
- A 15%(w/w) biochar-alginate mix is proposed to seal the cracks in the sixteen columns. A caulking mix will also be used. Once all cracks are sealed, a fresh coat of paint will be applied to the impacted columns.
- Performance evaluation of the sealing options is planned to include periodic inspection of the columns and air sampling near the surface of the columns for the first year and semi-annual basis from the following year.

Report Review

The DNR provides the following input on the plan presented in the Report:

- The DNR concurs that the TCE-impacted columns should be sealed, as they may be acting as preferential pathways for vapors within the site building complex. Based on the real-time indoor air data collected from the cracks of the columns, the DNR concurs that the sixteen columns identified on Figure 1 of the Report should be sealed. The DNR recommends a secondary consideration of sealing columns 1043-C4, 1042-C1, 1042-C2, 1051-C1, and 1052-C, as these columns are in close proximity to the TCE-impacted columns.
- The DNR's *Remedial Action Options Report Review* letter, dated September 9, 2023, provided feedback on K. Singh's proposed use of biochar-alginate mixture as a sealant for the columns. While the DNR recognizes biochar alginate is a promising new technology, we have not been provided adequate information or data regarding the biochar alginate's uptake, retention, or potential breakthrough concentrations to recommend the use of the biochar mix as a sealant for the columns or other structures as described. The DNR's September 9, 2023 letter provides additonal feedback on this topic. The DNR recommends that a commercially-available and proven sealant be used to seal any building features that may be acting as a preferential pathway for vapor intrusion. Notwithstanding this recommendation, CWC does not need DNR approval to use biochar as a remedial action and/or as a component of the planned sealing activities and may choose to use this method.
- The DNR concurs that a post-remediation indoor air assessment near the columns is necessary to show the effectiveness of the sealant that is selected by CWC. The DNR recommends that this assessment be performed in two stages: one stage during each of the future vapor mitigation system (VMS) commissioning events and the second stage once the VMS commissioning process is complete, as detailed below.
    - During each VMS commissioning event, the DNR recommends that passive indoor air samples be collected within 6 - 12 inches from TCE-impacted columns to evaluate the success of CWC's column sealing option. Include this column sampling plan within the future VMS commissioning plan. These indoor air results should be evaluated to determine whether additional sealing actions may be necessary.
    - Once the commissioning process is complete, use the results of the first stage of column air assessment to develop and submit a performance evaluation process for the second stage of the column sealing option, similar to the performance evaluation plan listed by K. Singh in the *Conclusions and Recommendation* section of the Report.
- If CWC chooses to use the biochar as a sealant for the columns in the site building complex, then the DNR recommends that CWC develop a method to evaluate the TCE uptake capacity of the biochar sealant mixture as part of the post remediation assessment. The purpose of this evaluation would be to determine whether a long-term monitoring plan may be needed. Consider a process similar to the following:
    - Collect a core sample from the solidified biochar sealant mixture within a TCE-impacted column and again at the same column after the first year of its use as a sealant, to measure and compare TCE levels within the sealant. For ease of access and to prevent potential TCE exposure to future occupants of the residential living spaces, the DNR recommends that any core sample(s) collected be from an area that is not in a residential living space.

Next Steps

The DNR recommends that CWC commence column sealing activities and consider and/or incorporate the above comments into these efforts, as appropriate. Please see the DNR's *Soil Sampling Plan Review* letter, dated October 6, 2023, for a detailed list of required next steps for this site in accordance with the Wis. Admin. Code NR 700 code series. The DNR appreciates the actions you are taking to restore the environment at this site. If you have any questions regarding this site or this letter, please contact me, the DNR Project Manager, at (414) 435-8021 or jane.pfeiffer@wisconsin.gov.

Sincerely,

Jane K. Pfeiffer
Project Manager – Hydrogeologist
Remediation & Redevelopment Program

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