INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

July 24, 2024

Thomas Brecheisen
U.S. EPA, Region V
77 West Jackson Boulevard
Chicago, IL 60604

Re: Semiannual Progress Report,
Conrail Railyard Superfund Site, Elkhart, IN

Dear Mr. Brecheisen:

We have completed our review of the May 30, 2024, *Semiannual Progress Report: Second Half 2023*. Geosyntec Consultants, Inc., prepared the report on behalf of the Settling Parties, American Premier Underwriters and Norfolk Southern Railway Company (Settling Parties). Please consider the following comments:

1. Section 1.2, Page 2:

   a. Paragraph 1: To our knowledge EPA has not approved the referenced October 30, 2020, *Revision 3, Groundwater Monitoring Plan* (GMP). Therefore, it is not available for public view in the IDEM virtual file cabinet (VFC) because the *Revision 3, GMP* is considered a draft document. For your convenience, January 7, 2021, IDEM comments to EPA on the Draft *Revision 3, GMP* are available in the IDEM VFC (document #83092958).

   b. Paragraph 2: Only limited discussion is provided regarding the post-Enhanced in situ Bioremediation (EISB) sampling results.

      - A detailed report that includes a summary of the injection efforts, groundwater analytical data from all Drag Strip monitoring wells (shallow, intermediate, and deep), and updated Tables and Figures depicting the extents of contamination exceeding applicable thresholds, needs to be provided to the agencies for review.

      - For this reporting period the consultant continues to only focus on detections of Carbon Tetrachloride (CT), despite exceedances of other chlorinated Volatile Organic Compounds (cVOCs) and elevated methane concentrations (highest level 19,200 µg/L). In the November 2023 groundwater samples, cVOC concentration ranges were as follows:

        - CT: from not detected (ND) to 513 µg/L – Safe Drinking Water Act Maximum Contaminant Level (MCL) 5 µg/L
        - Chloroform: from ND to 41.2 µg/L - MCL 80 µg/L
        - cis-1,2-Dichloroethene (cis-1,2 DCE): from ND to 5.27 µg/L - MCL 70 µg/L
        - Trichloroethene (TCE): from ND to 33.4 µg/L – MCL 5 µg/L
        - Vinyl chloride (VC): from ND to 2.49 µg/L – MCL 2 µg/L

- Figure 3 is misleading about the current extent of groundwater contamination exceeding applicable Remedial Action Objectives (RAOs) within the downgradient Vistula neighborhood. For example, CT is not the only groundwater constituent of concern (COC) set forth in the 1997 Consent Decree (CD) and the 2000 Record of Decision (ROD) Amendment.
    - Figure 3 presents only the CT data.
    - The CT concentration isopleths shown on Figure 3 should be verified.
    - The CT Groundwater Cleanup Goal is 5.0 µg/L, not 6.5 µg/L.
- Updated figures need to be presented to revise the conceptual site model (CSM) with its current status and plume maps need to be presented with only the applicable RAOs.

c. Paragraph 3: To our knowledge EPA has not approved the referenced October 8, 2020, *Vapor Intrusion Assessment Monitoring Plan* (*VIAMP*). Therefore, it is not available for public view in the VFC because the *VIAMP* is considered a draft document. For your convenience, December 22, 2020, IDEM comments to EPA on the *VIAMP* are available in the IDEM VFC (document #83086762). Please consider the following general comments related to that document:

- We recommend that Geosyntec resume paired indoor air/sub-slab soil gas (IA/SGss) sampling of the buildings. We recommend that Geosyntec develop elevated safety measures to facilitate Vapor Intrusion (VI) sampling in lieu of the alternative sampling strategies discussed in the October 2020 Draft *VIAMP*.
- Soil gas and groundwater sampling should not replace IA/SGss sampling in buildings without vapor mitigation systems.
- An IA building survey should be conducted prior to each IA sampling event to identify potential IA sources and help understand the sampling results.
- The VI mitigation and monitoring in the Vistula Area should continue until groundwater Remedial Action Objectives (RAOs) defined within the 1997 Consent Decree are achieved and there are no longer any potential VI or groundwater risks within the Vistula Area.

2. Section 2.2, Pages 4 to 5; and associated Figure 3 and Figure 4:

a. Regarding the enhanced in-situ bioremediation (EISB) performance monitoring, the consultant continues to only focus on detections of CT.

- Only CT results are presented on Figure 3 and Figure 4. CT is not the only constituent of concern (COC) for the Site. As directed by the 1997 CD, all contaminants above defined RAOs need to be addressed. The complete set of cVOCs and methane (due to the enhanced bioremediation remedy) need to be monitored and compared to applicable RAOs defined within the 1994 ROD.
- A link to IDEM's R2 Published Level Tables 1 and 2 as well as a short table is available on the IDEM Cleanups Screening and Closure Level Tables webpage at:

IDEM: Environmental Cleanups: IDEM Screening and Closure Level Tables.
Future reports should be appropriately revised with the current IDEM R2 published levels, utilizing, for example, the IDEM R2 groundwater published levels. Since the sampling documented in this report was conducted in November, it would be appropriate to refer to the IDEM 2023 R2 Screening Level Table that became effective March 1, 2023:

- The IDEM 2023 R2 CT groundwater published level (GWPL) is 5 µg/L, not 6.5 µg/L. The water table groundwater CT concentration isopleth depression results on Figure 3 and Figure 4 should be revised from <6.5 µg/L to <5 µg/L.

- This report compares soil gas CT concentrations to a residential subslab screening level of 235 µg/m^3. However, the IDEM 2023 R2 CT residential subslab soil gas published level (RSGPL) is: a) 200 micrograms per cubic meter (µg/m^3) for subslab/deep exterior/conduit, and b) 50 µg/m^3 for shallow exterior/utility corridor. IDEM generally considers shallow soil gas to include samples collected no more than five feet below ground surface, and deep soil gas samples to include samples collected at more than five feet below ground surface.

- According to Table 3, for this reporting period (November 2023) some groundwater analytical results exceed the following Safe Drinking Water Act Maximum Contaminant Levels (MCLs): CT (5 µg/L), TCE (5 µg/L), and VC (2 µg/L). Failure to address all cVOCs contamination presents a significant data gap within the CSM and diminishes the ability to evaluate the EISB remedy results. This information must be presented in future reports.

- Contaminant concentrations should be compared with the RAOs defined in the ROD and CD, not IRGs. Usage of IRGs in the Vistula neighborhood is incorrect and does not correlate with the initial intended purposes for the IRGs to evaluate remedy effectiveness in the Drag Strip area. For off-site properties, IDEM uses R2 soil gas published levels to evaluate potential VI. We recommend that future reports do not include references to IRGs unless it is specifically to evaluate groundwater quality in the Drag Strip area.

b. As IDEM has commented to EPA previously, IDEM does not agree that the presence of a "precipitation and 'lens' of clean water at the water table" has been demonstrated.

c. Eleven soil gas probes in the Vistula Area were sampled in November 2023.

- Again, only the CT data is discussed within the text or presented on Figure 4. The soil gas and vapor mitigation system (VMS) sampling results should also include data for the other cVOCs that are observed in groundwater. Accordingly, the potential vapor intrusion (VI) exposure risk cannot be adequately evaluated. Lacking a complete CSM, the ability to evaluate the potential exposure risk is not feasible. This information must be presented in future reports.

- Figure 3 and Figure 4 identify two locations where Vapor Mitigation System Exhaust may be collected. It is still unclear why the VMS exhaust has been sampled in the past. Sampling the exhaust vent is not an acceptable method to verify the effectiveness of the vapor mitigation system. One cannot utilize exhaust gas sample results to evaluate potential indoor-air exposure pathway(s). If a vapor mitigation system is in operation at a property, the system should be monitored by sampling indoor air (IA) under winter worst-case conditions. To evaluate VI risk, sampling of

the VMS's exhaust cannot replace IA sampling in a building with an operating sub-slab depressurization system (SSDS), and soil gas and groundwater sampling cannot replace indoor air/sub-slab soil gas (IA/SGss) sampling in buildings without vapor mitigation systems. An IA building survey should be conducted prior to each IA sampling event to identify potential IA sources and help understand the sampling results.

- Soil gas CT concentrations were compared to the residential sub-slab screening level (SSSL) of 235 micrograms per cubic meter (µg/m^3). Future reports should be appropriately revised to the current IDEM R2 published levels. The IDEM 2023 R2 published subslab levels are: a) residential (RSGPL) 200 µg/m^3, and b) commercial (CSGPL) 700 µg/m^3. Therefore, IA/SGss sampling should be conducted at the residences within 100 feet of the exterior soil gas (SGe) exceedances.

    - IDEM uses an attenuation factor of 0.03 to calculate a soil gas screening level (SGSL) of 5 feet below ground surface (ft bgs) or deeper. Therefore, based on a residential indoor air published level (RIAPL) of 5 µg/m^3, a RSSPL of 200 µg/m^3 should be used, not 235 µg/m^3. Properties near these locations with exceedances of CT in SGe over 200 µg/m^3 should be sampled for IA/SGss.

    - As discussed with EPA previously, the method of predicting IA levels from SGe results is not acceptable. VI risk should be evaluated using paired IA/SGss sampling or IA/SGe sampling if sampling SGss is not allowed by the property owner. IDEM does not recommend using the Johnson & Ettinger model instead of direct measurement. Exterior soil gas sampling will help understand the VI pathway but cannot replace direct measurement of COCs in IA when there is an exceedance in SGe.

3. Section 3, Page 6: The consultant notes that VMS sampling was not conducted due to inability to obtain access from site owners. Again, it is unclear why the VMS exhaust has been sampled in the past.

4. Tables 1, 2, 3, and 4: The laboratory analytical results for these samples were not provided and therefore, cannot be confirmed. Furthermore, when EPA is the lead agency for Superfund sites, we rely on EPA validation of the report data packages.

5. Table 1: It would be beneficial to also include the Action Level for each constituent.

6. Table 2: It would be beneficial to also include the Action Level for each constituent.

7. Table 3:

    a. Groundwater samples from 34 monitoring wells collected in November 2023 were analyzed for volatile organic compounds (VOCs), Ethane, Ethene, and Methane; and select wells for microbial assays and total organic carbon. Concentrations of CT, TCE, and VC remain above the IDEM 2023 R2 GWPLs (CT 5 µg/L, TCE 5 µg/L, and VC 2 µg/L); and Methane is above the IDEM's Screening Level of 10,000 µg/L in several samples (see IDEM Nonrule Policy Document *Addressing Methane at Anaerobic Bioremediation Sites*, Appendix A https://www.in.gov/idem/files/nrpd_waste-0073.zip). Elevated levels of methane are probably due to the on-going dichlorination process.

    b. The report does not explain why in November 2023 groundwater samples were not collected from monitoring wells DSMW-25WT, DSMW-28WT, MW-56WT, MW-08S, and MW-62WT.

c. It would be beneficial to also include the Action Level for each constituent.

8. Table 4:

a. According to Table 4, November 2023 samples collected from eleven soil gas locations were analyzed for VOCs, but only CT results are provided. The soil gas sample results indicated concentrations of CT in samples SG-2 (106 µg/m^3) and SG-65 (53.4 µg/m^3) remain above the IDEM 2023 R2 residential shallow soil gas published level (RSSGPL) of 50 µg/m^3. As previously stated, to evaluate VI risk, soil gas and groundwater sampling cannot replace IA/SGss sampling in buildings without vapor mitigation systems.

b. In future submittals, it would be beneficial to include on the table:

- Depth of the soil gas samples.
- Action Level for each constituent.

c. In future submittals, the column widths on the table should be wide enough to list every sampling date. In this report for locations SG-58, SG-64, and SG-65 not all sampling dates are listed (i.e., ### instead of an actual date).

If you have any questions concerning these comments, please contact me at (317) 234-0353.

Sincerely,

Resa L Ramsey

Resa L. Ramsey
Federal Programs Section
Office of Land Quality

cc: Jessica Huxhold Fliss, IDEM