State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee WI 53212-3128

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

August 24, 2020

Mr. Frank Dombrowski
Wisconsin Electric Power Company (dba We Energies)
333 W. Everett St. A231
Milwaukee, WI 53203

SUBJECT: Review of Site Investigation and Remedial Action Options Report and Remedial Action Design Report
We Energies Metro North Service Center
3100 West North Avenue, Milwaukee, Wisconsin
WDNR BRRTS # 02-41-583015
DNR FID # 241311510

Dear Mr. Dombrowski:

The Wisconsin Department of Natural Resources (DNR) received a Site Investigation and Remedial Action Options Report (SI Report) on May 5, 2020 and a Remedial Action Design Report (RAD Report) on July 9, 2020, prepared by Geosyntec Consultants (Geosyntec) for the site identified above. Geosyntec's focus was on a historic dry cleaner, located in the southwest corner of the on-site building area, as the primary source of chlorinated volatile organic compounds (CVOCs), specifically tetrachloroethylene (PCE), in soil, groundwater, and vapor at the site. This letter does not include other areas of contamination identified on the site that appear to be unrelated to the historical dry cleaner as discussed in the email, dated July 13, 2020. A fee was submitted in accordance with Wis. Admin. Code § NR 749 for review of the SI Report and the RAD Report.

Report Summary

The SI Report indicates that the horizontal and vertical extent of soil and groundwater contamination has been delineated and does not appear to extend off-site. The SI Report also indicates that vapor contamination, associated with the former dry cleaner, is present at this site. Indoor air sample concentrations are less than the Vapor Action Levels (VALs) and soil vapor impacts detected above Vapor Risk Screening Levels (VRSLs) in soil gas probes appear to be limited to the source area. The SI Report concludes that further investigation is warranted, including additional groundwater sampling, indoor air and soil vapor sampling, in-situ hydraulic conductivity testing and a review and evaluation of the Department of Defense Environmental Security Technology Certification Program study, if applicable. Additional sampling and testing results will be included in an addendum, subsequent design or remedial action construction report, or post-remedial action monitoring plan.

Remedial action options proposed in the SI Report and further addressed in the RAD Report, include pre-treatment of PCE contaminated soil greater than 60,000 ug/kg with in-situ chemical oxidation (ISCO), to allow for landfill disposal, and soil excavation and disposal of the remaining accessible impacted soils above the site specific soil performance standard for PCE of 1,000 ug/kg, determined by interactive 3-D modeling, as part of the site redevelopment. To address shallow groundwater impacts,

the SI Report and the RAD Report include a plan for direct mixing of ISCO material and the installation of piping for multiple ISCO events. To address vapor, the SI Report and the RAD Report include plans for installation of a sub-slab depressurization system (SSDS) in the reconstructed/new addition to the building. According to the SI Report and RAD Report, clean soil barriers, including current and planned building slab and pavement will be maintained over the remaining contaminated soil, continued groundwater monitoring will be conducted, and WDNR Wisconsin Remediation and Redevelopment Database registry and continuing maintenance/obligations will be completed.

The DNR recommends changing the term “Remedial Actions” to “Interim Actions” in the reports. An Interim Action is required per Wis. Admin. Code § NR 708.11 when specific actions are necessary during a site investigation. Because the soil and groundwater treatment and removal, i.e. source removal, and the use of a vapor mitigation system will be conducted during ongoing site investigation activities, the interim actions may change site conditions and therefore investigation conclusions and recommendations.

Site Investigation Review

The site investigation portion of the SI Report was reviewed for compliance with Wis. Admin. Code § NR 716. The DNR has determined that additional actions and/or information is required to complete the site investigation as summarized below:

Wis. Admin. Code § NR 716.11 (3) (a) requires the field investigation to determine the nature, degree and extent, both areal and vertical, of the hazardous substances or environmental pollution in all affected media.

a. Shallow Groundwater

    1) Define the horizontal and vertical extent of the shallow groundwater plume to the south of MW-09, including potential impacts to the North Avenue utilities/right-of-way.

b. Deep Groundwater

    1) Define the vertical extent of the deep groundwater plume. Although decreasing with depth, the vertical extent of the deep groundwater has not been defined. Contamination is still detected in P-09A-2019 at 60-65’ bgs, above Wis. Admin. Code § NR 140 Groundwater Quality Standards. Consider extending the depth of the proposed piezometer in the source area, as depicted in the RAD Report (Figure 5).

c. Vapor - The DNR publication RR-800, *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*, indicates that a vapor investigation is recommended when a building overlies groundwater with CVOC concentrations above Wis. Admin. Code § NR 140 Enforcement Standards (ES) at the water table.

    1) Based on soil and groundwater data collected to date, it appears a vapor investigation of the entire on-site building will be necessary. Conduct a Vapor Intrusion (VI) Investigation of the entire on-site building (office area, storage, and garage area) after building reconstruction and interim action activities are complete to evaluate the VI risk.

2) Conduct a vapor assessment in accordance with RR-800 to determine if vapor investigation is warranted at nearby off-site properties. In particular, determine if a vapor investigation is warranted at the buildings across North Avenue to the south of the site.
3) Determine the appropriate VRSL for all sections of the building. The industrial VRSL may not be appropriate for certain areas such as office spaces.
4) Additional assessment of the vapor intrusion pathway should be conducted to determine whether the current and/or historic laterals and the utilities along North Avenue are acting as conduits for vapor migration. For more information on vapor intrusion pathways you may review DNR's *VI: New Preferential Pathways* webinar from July 15, 2020 on the Issues and Trends website. Additional information is also available on the DNR's Vapor Intrusion for Environmental Professionals website under the "Other Resources" tab.

Documentation

a. Geologic Cross-Sections must be provided per Wis. Admin. Code § NR 716.15(4)d which requires the site investigation report to include cross sections that depict the hazardous substance concentrations in each environmental medium. Prepare cross-sections that show the horizontal and vertical extent of all contaminated media. Indicate the area and depth of the planned excavation on the cross-sections to identify impacted soil to be removed and soil to be left in place.

b. Please rename your "site specific soil performance standards" to "site specific remediation goal" for soil concentrations targeted for removal by your interactive 3-D modeling. This level was calculated to help manage contaminated soil and allow for landfill disposal, not determine DNR soil cleanup standards per Wis. Admin. Code § NR 720.

Remedial Action/Interim Action

The DNR also received a Remedial Action Design Report (RAD Report) prepared by Geosyntec and the DNR concurs with the proposed remedial/interim actions evaluated for the soil, groundwater (including additional groundwater monitoring), and WDNR Wisconsin Remediation and Redevelopment Database registry listing with continuing obligations. These actions may be implemented in conjunction with additional requested site investigation activities. The DNR has determined that additional actions and/or information is required to complete the Remedial Action Design Report as summarized below:

1) To complete the barrier design, include a plan for green space design in the areas where there are residual Direct Contact RCL exceedances.

2) The DNR agrees with the proposal to install a vapor mitigation system in the office area during site redevelopment. However, the results of the post-construction vapor investigation, requested above, may identify the need for vapor mitigation in areas which will not be addressed by the current proposed vapor mitigation system. Consider expanding the footprint of the vapor mitigation system, potentially across the entire extent of the on-site building, during redevelopment. Actual vapor mitigation requirements will be dependent upon the post-remedial conditions, the VI Site Investigation, and building reconstruction.

Schedule

- Provide a Site Investigation Work Plan with the above requested information within 60 days of this letter as required under Wis. Admin. Code § NR 716.09 (1).
- Resubmit the Remedial Action Design Report with the above requested information.
- After the additional site investigation activities and interim actions are completed, submit a supplemental Site Investigation report within 60 days of completion as required by Wis. Admin. Code § NR 716.15(1)(a).

The DNR appreciate your efforts to restore the environment at this site. If you have any questions concerning the site or this letter, please contact me at (262) 297-2177, or by email at linda.stanek@wisconsin.gov.

Sincerely,

Linda Stanek
Hydrogeologist
Remediation and Redevelopment Program

cc: Geosyntec, Consultants, 10600 N. Port Washington Road, Suite 100, Mequon, Wisconsin 53092
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