State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
1027 West St. Paul Avenue
Milwaukee WI 53233-2641

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

March 31, 2025

Mr. Mark Lake
Tosa Reef, LLC
1200 N. Mayfair Road, Suite 410
Milwaukee, WI 53226
Via Electronic Mail Only to: mlake@wangard.com

SUBJECT: Review of *Groundwater Monitoring Update*
Former Western Metal Specialty Division (The Reef)
1215 N. 62nd Street, Wauwatosa, WI
BRRTS # 02-41-532149, 02-41-539928, 06-41-559856; FID # 241033540

Dear Mr. Lake:

The Wisconsin Department of Natural Resources (DNR) received the *Groundwater Monitoring Update* (Report), prepared by The Sigma Group, Inc. (Sigma), dated September 27, 2024 for the site identified above. The Report contained information and plans for additional groundwater investigation of volatile organic compounds (VOCs). The DNR also received utility assessment information in the *Additional Groundwater Monitoring Discussion and Work Plan* dated July 3, 2024 and additional groundwater sampling data submitted on December 6, 2024. The DNR is providing comments on the planned groundwater investigation and assessment as they relate to applicable Wis. Admin. Code chs. NR 700 - NR 799.

Definition and Monitoring of Groundwater VOC Plume

The Report stated that no additional monitoring well or piezometer installation was planned for further delineation of contaminants in groundwater. Although additional groundwater sampling was proposed it was unclear if this included any beyond the sampling reported on December 6, 2024 to the DNR. The Report included a brief summary of natural attenuation data collected for the site and a general conclusion regarding attenuation of contaminants in groundwater. After a review of the submittals, the DNR does not concur with the Report conclusions and has the following comments:

1) **Shallow groundwater VOC plume monitoring:** Groundwater sampling and monitoring to establish contaminant trends should continue for the shallow groundwater contaminant plume, including chlorinated VOCs and 1,4 dioxane. Consider the appropriate number of wells and frequency of sampling needed to accomplish this when developing a sampling work plan.

2) **Mid-depth and deep-level groundwater VOC plume definition:** Most recent groundwater quality results indicate the chlorinated VOCs and 1,4, dioxane plume extent is not defined to the south or southeast off-site. A work plan should be developed for the installation and sampling of mid-depth and bedrock piezometers with the goal of plume definition in these areas.

3) **Monitored natural attenuation evaluation:** The current discussion of how the collected natural attenuation data support the conclusion that breakdown is occurring at a reasonable rate lacks detail and clarity, considering the complexity of the contaminant plume and subsurface conditions. Although sampling data and measurements of some indicator parameters were collected, it was not made clear which processes and to what degree degradation is occurring at

different depths within the groundwater plume. Refer to DNR guidance *Understanding Chlorinated Hydrocarbon Behavior in Groundwater* RR- 699, specifically Table 1, for appropriate geochemical parameters to include in a sampling plan. Consider comparing specific indicator parameters between impacted/non-impacted groundwater for the presence or relative rates of dechlorination, evaluation of which parameters are or are not useful for this site, and rationale for selected indicator parameters. A comparison table of natural attenuation data for groups of impacted wells versus background wells would be helpful for this type of evaluation.

West State Street Utility Assessment

The DNR letter of April 24, 2024 requested an assessment of whether the utilities in the West State Street right-of-way could act as preferential pathways for contaminant migration in groundwater. The DNR concurs with the utility discussion and evaluation contained in the July 3, 2024 submittal which concludes that the utilities are not likely preferential pathways of contaminant migration in groundwater.

Next Steps

Due to the complexity of the site, the DNR requests that a workplan for the additional groundwater investigation and monitoring requirements discussed above be submitted for DNR review.

We 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 (414) 207-2179, or by email at adam.mcilheran@wisconsin.gov.

Sincerely,

Adam S. McIlheran
Hydrogeologist
Remediation and Redevelopment Program

cc: Steve Meer, The Sigma Group, Inc. (smeer@thesigmagroup.com)
SER file