



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
GRAND RAPIDS DISTRICT OFFICE



LIESL EICHLER CLARK
DIRECTOR

August 3, 2020

VIA E-MAIL AND U.S. MAIL

Mr. Dave Latchana
Associate General Counsel
Wolverine World Wide, Inc.
9341 Courtland Drive, NE
Rockford, Michigan 49351

Dear Mr. Latchana:

SUBJECT: Notice of Approval with Conditions of the Groundwater-Surface Water Interface Response Activity Plan as Required by the Wolverine World Wide, Inc. Consent Decree Court Case No. 1:18-cv-00039

The Michigan Department of Environment, Great Lakes, and Energy (EGLE), Remediation and Redevelopment Division, has reviewed the Response Activity Plan for Groundwater-Surface Water Interface (GSI) Investigation for the North Kent Study Area submitted on April 20, 2020, by Rose & Westra, a Division of GZA GeoEnvironmental, Inc. (GZA) on the behalf of Wolverine World Wide, Inc. (Wolverine). This GSI Response Activity Plan is a requirement of the Consent Decree (effective February 19, 2020) as described in Sections 7.4, 7.10, and Appendix S of the Consent Decree.

Section 20114b(3) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), and as outlined in Section 15.7 of the Consent Decree, states that when a response activity plan is submitted for approval, EGLE may notify the submitter that the plan is approved with conditions, if applicable. The GSI Investigation Response Activity Plan is approved with the following conditions:

- **Section 1.0 Introduction:** *Include statement regarding how the information collected from this investigation will be used for the next phase of investigation.*
- **Section 2.04 Hydrology:** *Include a discussion about how this information is related to this specific study or why this information matters.*
- **Section 2.09 Site Geology:** *Figures 4 through 12: Groundwater level is shown as surface water in many areas along cross-sections. Identify the surface water features on the cross-sections to help with referencing.*
- **Section 2.11 PFAS Distribution in Groundwater:**

Last paragraph: Cite research or other sources which support the claim of perfluorobutane sulfonic acid (PFBS) behavior in relation to perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), specifically in similar geologic settings as

are found in North Kent Study Area. EGLE does not agree that the spatial distribution of PFBS is spatially greater than PFOS and PFOA in all circumstances.

- EGLE does not agree with the iso-concentration interpretations shown on Figures 15, 16, and 17. For example, the figure depicts MW-10 in the Wolven-Jewell investigation area as an unconnected area of contamination. Additionally, the plume emanating from House Street towards the Rogue River is not identified as a continuous plume. Professional geologic interpretation and judgement should be used to estimate the full extent of per- and polyfluoroalkyl substances (PFAS) contamination, even if data is lacking at points between. Update these figures accordingly.
- **Section 2.12 GSI and Applicable Rule 57 Water Quality Standards:**
 - Refer to Footnote X of the Part 201 Criteria Table. The reason why the human health drinking water value is not applicable is stated incorrectly. Please update appropriately.
 - Since PFOA & PFOS are bio-accumulative, a GSI mixing zone evaluation cannot be performed – remove mention of mixing zone evaluation.
- **Section 3.0 Proposed Statement of Work:**
 - Figure 18: Create maps that zoom in closer to the specific investigation areas. The current map scale is too large, and icons overlap each other.
 - EGLE understands that the locations of the proposed piezometers may change based on site conditions and access; however, final placement of the piezometers should be at locations that have the highest probability to identify infiltration into the river in order to support placement of pore water samples. EGLE and/or our subcontractor will be onsite whenever possible to oversee these field activities.
- **Section 3.01 HSHD Study Area:**
 - Third bullet: HS-PW-10, HS-PW-11, and HS-GSI-9 appear to be FL-PW-1, FL-PW-2, and FL-GSI-1 on Figure 18. Please clarify.
 - Clearly state that monitoring wells MW-19s/d and MW-29a will be sampled as part of this investigation and identify when, during the investigation, they will be sampled.
 - EGLE expects that all piezometer locations will be sampled and analyzed for PFAS compounds, which should be stated in this section. Currently, the report states that piezometers will be used to measure PFOS and PFOA venting to the surface water, which can only be done through actual sampling.
- **Section 3.02 Wolven/Jewell Study Area:**
 - Second bullet: Identify staff gauge locations in Area 19 on Figure 18.
 - Third bullet: Identify staff gauge locations in the Wolven Northwest plume area on Figure 18.
 - EGLE expects that all piezometer locations will be sampled and analyzed for PFAS compounds, which should be stated in this section. Currently, the report states that piezometers will be used to measure PFOS and PFOA venting to the surface water, which can only be done through actual sampling.
- **Section 4.0 Investigation Methodology:** The two-week monitoring period shall not be a limiting factor in completing the work. If more than one two-week

monitoring period is needed, Wolverine shall discuss that with EGLE and obtain approval before extending to any additional 2-week monitoring period(s).

- **Section 4.01 Piezometers:**

- *The piezometer installation standard operating procedures (SOP) are included, but a sampling SOP discussion for piezometers also needs to be included in this section, and included in Appendix B.*
- *Specify how long after the piezometers are installed that they are sampled.*
- *There is no mention of measurement of pH, temperature, conductivity, dissolved oxygen and oxidation-redox potential (ORP) from the GSI groundwater piezometer locations as discussed in Appendix S of the Consent Decree. Update this section to include this language.*

- **Section 4.02 Pore Water Sampling:**

- *First paragraph: This states that samples are going to be “attempted.” Provide clarification of what will happen if a sample cannot be collected. If one of the two pore water samples cannot be collected, GZA will need to step out to obtain a sample from a nearby location. Additionally, a reason why a sample could not be collected needs to be documented in field notes, along with discussion of the new pore water sample location.*
- *First bullet: The shallowest depth acceptable to EGLE is 12 inches below the surface of the sediment in the river bottom. Do not take any samples above that interval.*
- *Sixth bullet: Update SOP A27 to include dissolved oxygen (DO) and oxidation-reduction potential (ORP) on the sampling sheet and indicate that 12 inches will be the shallowest depth that a pore water sample will be collected.*

- **Section 5.01 Sampling Locations**

- *In area Northwest of the House Street Disposal Site (HSDS), downgradient of Freska Lake area, add piezometer location HS-GSI-9 to the table.*
- *For the “One EGLE Well” on the table, identify it by name (DEQ-MW-9 Well Series).*
- *Paired staff gauges mentioned in the Wolven NE (Area 19) plume area and the Wolven/Jewell NW plume area are not shown on Figure 18, please add to the figure.*
- *Please make existing staff gauges easier to see in the SE downgradient of the HSDS primary plume investigation area. Another staff gauge could likely be located on the West River Drive bridge over the Rogue River, and if so, should be utilized during this investigation.*
- *Will any staff gauges be used in the Grand River for the piezometers HS-GSI-6 through HS-GSI-8 or in the Rogue River for the investigation downgradient of Freska Lake? If not, EGLE suggests that staff gauges be installed in those investigation areas for reference.*

- **Section 7.0 Investigation Derived Waste:**

- *Pore water or surface water collected as part of this investigation should be discharged back to the surface water body after the PFAS aliquot is collected.*

- *Purge water collected from monitoring wells and piezometers as part of this investigation should be containerized and disposed of appropriately.*
- **Section 8.0 Schedule:**
 - *EGLE expects this work to be completed in fall 2020.*
 - *The protocol laid out in Section 9 of the Consent Decree shall be implemented if access issues do arise.*

EGLE's approval is conditional on Wolverine making the above changes to the Response Activity Plan. If the above changes are not made, EGLE's approval of the Response Activity Plan is withdrawn.

This approval with conditions of the Response Activity Plan is based upon the representations and information contained in the submittal. EGLE expresses no opinion as to whether other conditions that may exist will be adequately addressed by the response activities that are proposed.

If you should have further questions or concerns, please contact Karen Vorce, at the Grand Rapids District Office, Remediation and Redevelopment Division, at 616-439-8008, or at VorceK@michigan.gov.

Sincerely,



Abigail Hendershott
District Supervisor
Grand Rapids District Office
Remediation and Redevelopment Division
616-888-0528
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cc: Ms. Polly Synk, Department of Attorney General
Ms. Danielle Allison-Yokom, Department of Attorney General
Mr. John Byl, Warner Norcross & Judd LLP
Ms. Karen Vorce, EGLE