



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

May 11, 2018

Wolverine Worldwide, Inc.  
c/o Mr. David A. Latchana (david.latchana@wwwinc.com)  
Associate General Counsel for Wolverine World Wide, Inc.  
9341 Courtland Dr. NE  
Rockford, MI 49351

Rose & Westra, a Division of GZA  
c/o Mr. Mark A. Westra (Mark.Westra@gza.com)  
Project Coordinator  
601 Fifth St., NW  
Suite 102  
Grand Rapids, MI 49504

Via Email delivery

**Re: Draft Removal Work Plan, House Street Disposal Area, Plainfield Township, Kent County, Michigan: Approval with Significant Modifications.**

Dear Mr. Latchana and Mr. Westra,

The U.S. Environmental Protection Agency (EPA) completed its review of the *Draft Removal Work Plan, House Street Disposal Area, Plainfield Township, Kent County, Michigan* dated April 19, 2018. This document was submitted in accordance with the January 10, 2018, Unilateral Administrative Order from EPA to Wolverine World Wide, Inc. (WWW).

This letter is being sent to both the Project Coordinator (Mr. Westra) and to the WWW company contact (Mr. Latchana) to highlight several significant additions and modifications to the plan which must be addressed to maintain EPA approval of the plan and approach. These modifications and additions will be detailed later in this letter, but to summarize key points: all soil cores must be x-ray fluorescence (XRF) surveyed for metals in 1 foot increments and samples must not be from pre-selected depths – they instead must be guided by both visual and XRF results; visual inspection of soils for waste must only apply to the five known waste areas, and for that only to define the outer boundary for sampling (Tier 1 and 2); the outer ring of geoprobe core locations must likewise be processed with XRF and samples selected for off-site laboratory analysis; the proposed timeframe for sampling activities of 4-6 months must be completed within an appropriate time-critical removal schedule of 6 weeks from on-site mobilization to completion of sample collection; WWW must authorize and set in place sufficient geoprobe/drill rig contractors, environmental consultants (as determined by the Project Coordinator), and other contractors or subcontractors to meet this 6 week schedule; the final report summarizing the data and activities (including maps of data points, photographs, and data tables) must be due 1 calendar month from the receipt of initial data from the lab (2-3 days should be sufficient once final data is received to verify accuracy of the initial data); all data gathered during this process that is ready before the final report is completed shall be submitted in summarized form in the monthly report (please copy MDEQ A. Hendershott on monthly

progress reports to EPA for continued project coordination); and lab reports and data tables shall be separately submitted when finalized and include date of sample, sample location, media type, and X/Y coordinates of sample location for geographical information system (GIS) mapping purposes.

U.S. EPA hereby approves the above-referenced document with the required modifications described herein included. WWW shall incorporate the comments below and submit a revised, renamed and final *Extent of Contamination Study Removal Work Plan, House Street Disposal Area, Plainfield Township, Kent County, Michigan* to U.S. EPA no later than 1700 EDT on May 18, 2018.

- 1) Section 2.1, second sentence refers to a Site Locus Plan. This should be renamed Site Locus, or Site Location Map. In essence that it is a figure, not a “plan”. Make change to Figure 2.1-1 as well.
- 2) Second paragraph, last sentence, for Figure 2.1-2, change the name on the figure and in the text to Site Diagram. Again, this is not a “plan”.
- 3) Section 2.2, spell out RIWP. Include the following additional historical information in this section:
  - second sentence: add the date or time frame the 16 soil borings were conducted;
  - in the sentences following the second sentence add supportive documentation (description, photos, etc.) to support your visual findings;
  - add a summary table to the key laboratory analysis of the five locations sampled to show what contamination or waste is in the soils; and
  - reference sample ID in the table (that matches the map).
- 4) Second paragraph of Section 2.2, add the date the borings and wells were installed and supporting information in a table (depth to screen, sampled on date, key sample results if sampled).
- 5) Section 2.3, change the sentence to read “In 2017, Wolverine initiated a limited investigation of suspected waste disposal areas, underlying soil, and on-site groundwater in the suspected former trench disposal locations. Samples for laboratory analysis were only submitted from 5 of 16 core locations, and were based on visual observation of suspected waste in discolored soils.” Please explain which groundwater wells were sampled and why.
- 6) Section 2.3.1, change the second sentence to read “The waste material in the trenches we observed to be finer-grained fill material and are unlike natural geologic conditions typically observed across the Site.”
- 7) Section 2.3.2, delete the current sentence. Add the following sentence, “Limited samples were collected below the visible waste in the 5 cores sampled.” Add a table of the depth

below visual waste, sample ID, location, and results. Present other evidence collected (a picture of the discolored waste, etc.).

- 8) Section 2.3.3, last sentence, delete, "...in fact, neither total nor hexavalent chromium were detected on site." And replace with, "...in the wells and depths sampled. Shallow water, if encountered, has not been sampled to date."
- 9) Section 2.3.4, change first sentence to read, "To date, samples have only been collected from 5 of the 16 on-site soil borings." Delete the migration conclusion as this has yet to be completely defined or proven. Delete the last sentence of this paragraph completely. Second paragraph (first sentence), add to the end of the sentence, "...to date and at those wells and depths sampled." Shallow, trapped and perched water has not been investigated nor has lateral migration in near surface soils or soils at lateral depth comparative to identified waste layers. A complete groundwater investigation at the Site has not yet been completed, and work with MDEQ under a Conceptual Site Model approach is ongoing. Additionally, historic surface water pathways (pre-dated construction of the highway), which may have been present at the time of waste deposition, have not been investigated immediately
- 10) Section 3.0, second sentence, change the word "may" to "will" (based on MDEQ comments to EPA in regard to this plan).
- 11) Section 3.0, first bullet, add "vertical and horizontal" after "The"; under the second bullet, remove "dissolved-phase"; for the third bullet, add "and surface water if identified" after groundwater.
- 12) Section 3.0, delete entire paragraph after the bullets. Surface water and/or sediment will be sampled if identified on site after direction from the OSC.
- 13) Section 3.0, add that any cores collected will be first XRF analyzed in 1 foot increments, and then laboratory samples will be collected from the cores based on both XRF and visual inspection.
- 14) Section 3.1, add "Environmental Contamination" before "Investigation" on the signs. Also, as a contingency, during investigation activities WWW must inspect Site conditions during and directly after rain events to determine if surface rainwater or soils are migrating off site. If WWW observes surface rainwater or soils migrating off site, WWW must implement appropriate mitigation efforts immediately.
- 15) Section 3.2, first paragraph, the concept of only delineating 5 of the 16 suspect areas is rejected. WWW must fully define all 16 suspect areas at the Site that are based on historic knowledge, not on random cores. I approve the tiered approach for the 5 locations described in the Draft Removal Work Plan. For the other 11 suspect areas, WWW must drill or geo-probe 5 cores (not 2), and must XRF-screen each core to determine metals content. If no elevated levels are found, EPA or its representative (if the OSC is not on site that day) will direct between 1 and 3 samples per core to submit

for analysis. All cores collected on site will be screened by both the PID and an XRF at at least 1 foot intervals for the entire core. This data, along with visual inspection of the cores, will be used to determine if WWW needs to conduct step out sampling, or if samples should be pulled as the outer bound of the waste area sample (Tier 2 in your plan).

- 16) Section 3.2, third paragraph page 8, collection must continue, not stop, if saturated soils are encountered. EPA does not accept your argument that waste doesn't migrate, while you also assert that continued sampling will cause significant cross contamination. WWW must continue to completely push cores, inspect the saturated soils, and follow the XRF and sample submission procedure. If a temporary well can be installed to collect this shallow water, WWW shall install such well. Subsequent to temporary well installation, WWW will collect a sample of the saturated zone water. If WWW attempts well development, WWW will retain the first pull water in case the perched water does not recharge. WWW must then submit an aliquot of this first pull water for analysis. EPA recognizes that this migration pathway is potentially temporary and related to precipitation.
- 17) Section 3.2, general comment, remove the distinction of saturated and unsaturated soils. WWW must investigate all soils. Additionally, at least 2 samples per boring for Tier 2 must be collected, at waste level and within 1 to 2 feet below the waste level from the most adjacent core. Analytical parameters must include all parameters proposed in the SAP/QAPP and be consistent with parameters for the sampling to occur at the Tannery location.
- 18) Section 3.2, change "may" to "will" in the first sentence, per comment from MDEQ.
- 19) Section 3.3, change from 2 to 5 borings in each of the 11 remaining historical suspect areas. Change the key concept from visual and pre-prescribed depth to visual plus information from XRF and PID screening. At least 3 samples must be collected from each core to define the vertical extent of the waste in each core where screening indicates contamination (top level of waste, bottom level of waste and 1 to 2 feet below suspected waste). If the "5 feet below observed waste" is an attempt to look at leachability, WWW must couple that testing with bench scale leachability testing of the waste. Several samples must be collected of the suspected highly contaminated layers, most likely near the original 5 core locations, and WWW must provide splits to EPA to also conduct a leachability study of the material.
- 20) Section 3.3, change the saturated soil language to be consistent with Section 3.2 or just remove it. All cores must be fully developed. Temporary monitoring wells must be installed, if needed. Adjust the sample strategy summary table to include the additional samples.
- 21) For all soil analysis, if total metals are 20 times or higher than the metals' TCLP value for hazardous waste, a TCLP metals analysis must be run on that sample as well. WWW must collect enough soil so the lab can pull the aliquot at the lab after the initial total metals data exceeds this level so that re-sampling is not required for each location.

- 22) Section 3.5, as with previous comments, if the shallow screened wells have difficulty recharging, WWW must preserve a first pull of standing water in the well for analysis. EPA realizes this may not show what is ubiquitous "in" the aquifer/aquitard, but it has value in potentially evaluating shallow migration pathways.
- 23) Section 3.6, the 8 to 10 foot below ground surface (BGS) is appropriate if sampling is adjacent to a structure but not if sampling is quite some distance away, as there are likely elevation differences. WWW must push cores pushed at least 5 feet past the BGS elevation of encountered waste and the cores screened consistent with previously laid out protocol. WWW should consider following EPA's 2015 Vapor Intrusion guidance and integrated soil gas sampling references. EPA's guidance recommends sampling as close to a building of concern as possible and preferably beneath it. If that is not possible, EPA recommends that deeper soil gas sample be collected in the vadose zone immediately above the source of vapor contamination, as these will tend to be more suitable than shallow soil gas samples for assessing vapor concentrations that may be in contact with the building's sub-slab.
- 24) Section 3.6, page 12, second full paragraph, clarify that detection limits meet trace requirements (i.e. TCE down to 0.4 ppbv).
- 25) Section 3.6, utilize an appropriate direct push technology (geoprobe or similar) rig equipped with real time monitoring capability to screen soil gas in each grid cell, with a focus around waste areas and the northeast and southwest boundaries of the property that are closest to off-site residences. This technology must be incorporated as a screening tool to help select appropriate depth and placement of soil gas sampling locations.
- 26) Section 3.7, include soil gas in the evaluation as it is not currently referenced.
- 27) Section 4.0, second paragraph, EE/CA is not required for a Time-Critical Removal Action, which is the focus of the current Order. EPA will determine potential immediate actions at the Site based on the EOC study and at the decision and direction of the EPA On-Scene Coordinator consistent with EPA statutory authority. However, EPA is not opposed to WWW conducting additional sampling to support an EE/CA after the EOC study is completed for the purpose of continuing potential long term Site remediation and planning for completion.
- 28) Section 6.0, discuss the type of container WWW will utilize to store the treated water pending analysis. Discuss disposal of spent carbon. Ensure treated water does not exceed EPA health guidance or State of Michigan criteria for drinking water before releasing, as there are residences near the site.
- 29) Figure A, label the grid cells from top to bottom and left to right, including the partial grid cells (there are 28 that should be labeled A through BB). For grid cells that do not have a random space 11, WWW must drill and process one core following the protocols laid out in this letter. Placement can be anywhere within the grid using best judgement.

30) Figure E, change 2 point cores in additional proposed borings to 5 (X pattern or as appropriate) in each of the 7 previously un-sampled suspected historical trench locations.

31) Figure F, same comment as Figure A.

32) Figure G, add additional sampling locations along northeast and southwest locations of property for a more complete look at potential soil gas migration to residences nearby. In each grid cell, around identified waste, and at the property boundary, add locations to show points to be assessed via direct push probe equipped to real-time monitor for soil gas. This will be used as information, if soil gas is indicated, as to where and at what depth to collect soil gas for analysis.

Finally, include your proposed work timeline (Gantt chart or similar timeline) for completing Site work. You should prepare to mobilize the week of May 28, 2018, with assessment activities beginning in earnest by June 4, 2018.

If you have any questions regarding this letter, please contact me immediately at (734) 692-7688.

Sincerely,



5/11/2018

Jeffrey Kimble  
Federal On-Scene Coordinator  
U.S. EPA, Region 5

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