



Electronic Copy

STATE OF WASHINGTON  
**DEPARTMENT OF ECOLOGY**

Northwest Region Office

PO Box 330316, Shoreline, WA 98133-9716 • 206-594-0000

August 12, 2024

Merle Jefferson, LNR Director  
Lummi Indian Business Counsel  
2665 Kwina Road  
Bellingham WA 98226  
([merlej@lummi-nsn.gov](mailto:merlej@lummi-nsn.gov))

**RE: Ecology Response to LNR Comments on Treoil Industries Biorefinery RI Report**

Dear Merle Jefferson:

Thank you for providing comments dated April 29<sup>th</sup>, 2024, on the draft Remedial Investigation (RI) report for the Treoil Industries Biorefinery site (Treoil), located in Ferndale, Washington. The purpose of the RI report is to define the nature and extent of contamination under Model Toxics Control Act (MTCA) regulations.

The current RI report showed that the contaminants found at Treoil are limited to the heavy end of petroleum products (diesel- and heavy oil-range total petroleum hydrocarbons (TPH-D and TPH-O), metals (chromium, copper, and lead), and SVOCs (pentachlorophenol) in the soil. The contaminants are located in the area where past industrial activities occurred at the site. The RI report has determined that the nearby wetland and dense vegetation area are not likely impacted by these contaminants. Further, the regional groundwater, about 150 feet below ground surface (bgs), is not impacted by the heavy petroleum and metals found in the surface soil at depths less than 2-3 feet bgs.

Ecology is providing the following detailed responses to your comments:

**Surface Water and Wetland Contamination:**

1) Deviations from the Work Plan

In some areas, proposed sample locations were inaccessible due to a number of reasons including the presence of dense vegetation and fence lines, or the proposed sample location was removed during the EPA Emergency Removal activities. In the event these sample locations deviated from the proposed sample locations, the location where the sample was collected was logged using a GPSGeo7x Trimble unit.

Though the RI Work Plan (Haley & Aldrich, 2023) originally included installation of seven monitoring wells, groundwater was not encountered in any of the borings advanced during the 2023 RIs and, therefore, no monitoring wells were installed. Additionally, no grab groundwater samples from the borings could be collected. Select borings, B-01, B-04, and B-09, were advanced up to a depth of 55 feet bgs in an attempt to determine the depth of regional groundwater; however, these attempts

were unsuccessful and equipment constraints prevented further investigation at greater depths during this RI mobilization. Additionally, and as mentioned above, no surface water was present on site at the time of the RI; therefore, no surface water samples were collected. Some accumulated water at two locations (a trench and sump associated with Warehouse B) were sampled for characterization for future disposal purposes.

**Background Samples:** one background location was eliminated due to consistent field conditions/observations, including consistent subsurface conditions across the site. BG-01 was shifted to the approximate location of proposed location BG-02 and BG-02 was eliminated.

**Soil Samples:** A few surface soil samples were adjusted based on changed field conditions. S-03 location was moved approximately 20' north of the proposed location to avoid an improved gravel access road that EPA installed during their 2022 Emergency Removal activities. S-04 location was moved roughly 150 feet to the northeast to better support the TEE work, and difficult access due to dense vegetation (including blackberry bushes). Proposed location for S-05 was on top of a concrete pad, so it was shifted 20 feet southwest of the pad to a location with exposed soil.

**Groundwater Samples:** no groundwater was encountered. No groundwater monitoring wells could be installed as a result.

**Drainage/Wetland Samples:** multiple samples in the drainage/wetland areas were adjusted in the field due to access issues caused by dense vegetation (including blackberry bushes). There was also no water observed in these drainage/wetland areas during the time of sampling. The RIWP proposed collecting surface water samples in these areas which could not be completed as described above due to lack of water. Soil sample S-21 was shifted approximately 40 feet to the north due to the presence of dense vegetation. Soil sample S-22 was shifted approximately 60 feet to the northwest to avoid dense vegetation. Soil sample S-13 was shifted approximately 30 feet to the west due to obstructions (equipment debris/materials left on site), fencing, and dense vegetation.

**Sumps/Surface Water Samples:** as described above, no surface water was present on site during the RI implementation and therefore samples could not be collected. Two samples from water accumulated in sumps were collected (SW-11 and SW-12). No soil/sediment was present in the sumps so only water was collected/sampled from these locations. Sump sample S-09 was eliminated since this sump was removed during the 2022 EPA Emergency Removal activities.

**Pipe Product Sample:** during the RI reconnaissance event, product material was observed dripping from a cut pipe in the distillation tower. However, during the RI implementation, the pipe was no longer actively dripping. Therefore, a grab sample (PP-01) was collected from an accumulated puddle of apparent product material (located roughly 60 feet to the north of where the dripping pipe was initially observed).

The above detailed description regarding deviations from the RI work plan will be included in the next revised RI report.

2) Dry Season:

Haley & Aldrich, Ecology's contractor, collected soil samples and attempted to collect groundwater samples at the Treoil site in August 2023 (the dry season).

The RI report identified heavy petroleum TPH-D and TPH-O, chromium, copper, lead, and pentachlorophenol in the soil exceeding MTCA cleanup levels. The cleanup levels, shown in the Table 4 of the RI report, were selected to be protective of wildlife and workers from direct contact with the contaminated soil. The Treoil site is zoned for heavy industrial use.

The contaminants, heavy petroleum, and metals, identified in the RI report are not mobile and do not volatilize. Figure 5 of the RI report shows the extent of the soil contamination. Soil samples S19, S13, S21, B04 S14 B03, B02, S04, S02, and B01 did not contain any chemicals exceeding MTCA cleanup levels. These samples, which are located between the contaminated industrial area and the wetland, indicate that Treoil site industrial discharges did not likely impact the wetland area.

3) Wet Season:

Please note that the soil samples collected during the dry season indicated that the extent of soil contamination was delineated and did not appear to have migrated to the nearby wetland. However, Ecology Toxics Cleanup Program (TCP) plans to visit the Treoil site later this year during the wet season. Our contractor will attempt to collect water samples from discharge locations identified at that time.

We will revise the RI report to include any water samples collected during the wet season. If the water samples show contamination exceed MTCA surface water cleanup levels, cleanup alternatives in the Feasibility Study will be evaluated and proposed to remove or reduce any contamination found in the surface/storm water runoff.

**Groundwater Contamination:**

Section 3.1 of the RI report (Haley and Aldrich, 2024) noted that:

*“Though the RI Work Plan (Haley & Aldrich, 2023) originally included installation of seven monitoring wells, groundwater was not encountered in any of the borings advanced during the 2023 RI and, therefore, no monitoring wells were installed. Additionally, no grab groundwater samples from the borings could be collected. Select borings, B-01, B-04, and B-09, were advanced up to a depth of 55 feet bgs in an attempt to determine the depth of regional groundwater; however, these attempts were unsuccessful and equipment constraints prevented further investigation at greater depths during this RI mobilization.”*

Section 4.2 of the RI report (Haley and Aldrich, 2024) noted that regional groundwater was not encountered in any of the borings advanced (down to 50+ feet bgs) during the August 2023 sampling event.

The boring logs are presented in Appendix A of the RI report.

The heavy petroleum and metals are limited to the soil at the top three feet. It is highly unlikely for the heavy petroleum and metals in the soil at the surface to migrate down to 150-200 feet below the ground to impact the regional groundwater in the area.

**Culture Resources:**

Ecology's Cultural Resource Specialist Jon Klem has coordinated with Lena Tso, Lummi

Tribal Historic Preservation Office prior to conducting fieldwork. We will continue to notify and coordinate with the Lummi Cultural Resources Department regarding any possible future field investigation/remediation activities at the Site.

**Site Visit:**

As we have indicated earlier, Ecology's access agreement only allows Ecology employees and its contactors to access Treoil site. We request that the Lummi Nation coordinate their access through the property owner Mr. Gill for a site visit.

**Public Review of the RI and Anticipated Feasibility Study for the Site:**

Ecology expects to have a 30-day public comment period at the beginning of 2025. During the comment period, the Lummi Nation can provide comments/feedback to Ecology regarding to the revised RI report and the Feasibility Study report.

**Questions:**

If you have any questions, please contact me at [sunny.becker@ecy.wa.gov](mailto:sunny.becker@ecy.wa.gov) or (425) 457-3842.

Sincerely,



Sunny Becker  
Site Manager  
Toxics Cleanup Program, NWRO

cc: Kristin Lowell, Lummi Natural Resources ([KristinL@Lummi-nsn.gov](mailto:KristinL@Lummi-nsn.gov))