



Oregon

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via electronic delivery

Attn: Chris Chiola
Tillamook County
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RE: **DEQ Comments for Updated Phase II Environmental Site Assessment Report**
Highway 101 Former Mill Site (former Wheeler Lumber Mill)
Highway 101 at Marine Drive, Wheeler, OR
ECSI #6581

Chris:

The Oregon Department of Environmental Quality (DEQ) reviewed the *Updated Phase II Environmental Site Assessment Report, Highway 101 Former Mill Site*, dated January 29, 2025, prepared by Terraphase Engineering, Inc., on behalf of Tillamook County. The former mill site is located west of Highway 101 near Marine Drive in Wheeler, Oregon (Site) and consists of Tillamook County tax lots 2N1002BC04700, 2N1002BC04800, 2N1002BB00400, 2N1002BB00300, and 2N1002BB00301.

Significant effort was taken to revise the Phase II report in response to DEQ's comments documented in our letter dated October 2, 2024. DEQ also reviewed the Response to Comment matrix submitted with the Updated Phase II ESA report. DEQ understands the assessment work was conducted to facilitate a request for a No Further Action (NFA) Determination from DEQ in anticipation of site redevelopment. However, further delineation of contaminants is necessary for DEQ to make an informed decision regarding Site risk and closure.

DEQ appreciates the opportunity to review the *Updated Phase II Environmental Site Assessment Report* and is providing this letter to document our observations and recommendations for achieving an NFA determination from DEQ.

Section Specific Comments:

1. *Section 1.1 Background.*
 - a. Based on historic images included in the Phase I ESA report (CHA/Terraphase, 2023) and the estimated outlines of former mill structures on report Figures 2 to 7, DEQ clarifies that former mill operations extended into the Nehalem River.
 - b. This section summarizes findings from the 2017 Parametrix investigation but omits mention of dioxin/furan results. In addition to polycyclic aromatic hydrocarbons (PAHs) and total petroleum hydrocarbons (TPH), please add dioxins/furans and metals to the bulleted list of environmental concerns warranting further investigation for the former saw/shingle mill operations.

- c. The areas surveyed during the geophysical survey are outlined on the report Figures but not all historic structures are depicted. Please add the approximate location of the former residences to the report Figures to aid in the discussion and findings related to the potential presence of heating oil tanks.
2. *Section 2.3.2 Riverbank Sediment Sampling.* “Sediment sample locations were selected to represent *likely discharge points* for dissolved contaminants identified in the 2017 Phase II ESA.” Please discuss the general topography, nature of discharges or site features observed during field sampling that guided selection of the sediment sample locations.
3. *Section 3.1 Geophysical Survey.* An object not representing a UST is presumed to represent “buried construction debris.” If available, please include the approximate size of anomaly B. Buried construction debris has the potential to contain hazardous building materials (HBM) such as lead-based painted building components, asbestos-containing materials, and mercury-containing lamps or devices. DEQ recommends conducting test pits to determine the composition of the anomaly or preparing a Contaminated Media Management Plan to document proper handling and disposal of HBM if discovered during redevelopment.
4. *Section 3.2 Lithology and Field Observations.*
 - a. Please clarify how the sheen observed within a ponded surface water near sediment sample WS-RS-1 was determined to be natural.
5. *Section 3.3.1. (Soil Boring Samples)*
 - a. TPH detections in soil borings were flagged by the laboratory as not representing a fuel pattern; however, Section 2.3.1 documents TPH samples analyzed by analytical method NWTPH-Dx using acid/silica gel cleanup, which should have reduced interference from non-hydrocarbon organic materials. The presumption that the flagged laboratory data is due to interference from biogenic materials is contradicted by later statements in Section 5.1 Nature and Extent of Contamination that “TPH data indicate significant degradation based on laboratory flags, which is consistent with the historic nature of the release.” Please clarify the line of reasoning for indicating TPH detections might be of biogenic origin.
 - b. DEQ disagrees with the statement that there were no reported uses or sources of polychlorinated biphenyls (PCBs) associated with the Site. Based on historic Sanborn fire insurance maps and typical lumber mill operations, PCB-containing equipment may have been used for the “log lift”, “refuse conveyor” and other shingle or sawmill equipment or in electrical transformers. DEQ notes that analytical data for limited soil and sediment sampling for PCBs did not detect PCBs above the laboratory reporting limit.
6. *Section 4.1.3 Water Rights.* A water right held by a previous owner of the Site (Vern Scovell) includes industrial use. Proposed redevelopment does not include industrial uses; however, only the southern portion of the Site is planned for redevelopment. The Site is reportedly connected to the municipal water supply. DEQ acknowledges the ingestion and inhalation from tapwater exposure pathway is incomplete but uses allowed by zoning should still be documented. Please clarify the type of land uses zoning allows.
7. *Section 4.1.5 Surface Water Recharge.* Risk to ecological receptors is not considered as part of the discussion; however, *Section 4.1.7 Summary* indicates shallow groundwater discharging to the Nehalem River has beneficial ecological use. Please consider risk to ecological receptors as part of the discussion in Section 4.1.5.

8. *Section 5.1 Nature and Extent of Contamination.* Soil. Aerial deposition of wildfire soot as a potential source of dioxins/furans is suggested but not supported with evidence. An onsite source of dioxins/furans is documented by historic Sanborn fire insurance maps depicting the “refuse fire.” Burning of wastes generated by mill operations is likely the primary source of dioxin/furan contamination onsite. Dioxin/furan results indicate exceedances of DEQ’s ecological screening levels that has not been sufficiently delineated. DEQ recommends additional sampling in the area of the former refuse burn pit to characterize dioxin/furan contamination. Further, due to the potential for surface runoff to have carried contaminants towards the riverbank west of the burn pit, DEQ also recommends sampling for dioxins/furans in riverbank sediment.
9. *Section 5.2 Locality of Facility.* The locality of facility (LOF) is not correctly interpreted. The LOF is the Site (as noted on the Figures) and may extend into a portion of river where site-related contaminant releases potentially impact sediment and surface water.

Later statements in *Section 5.5.2 Ecological* regarding individual contaminated areas being of insufficient size to support habitat and dismiss potential site-wide risk is incorrect. The current LOF (7.79 acres) is much larger than the minimum area required to support an interbreeding population of small mammals (0.5 acres). As the report points out, the 0.1-acre former burn pit area is not sufficiently large by itself to support a wildlife population; this does not, however, preclude wildlife from using the burn pit area as part of a larger home range.

Cumulative risk to ecological receptors should be assessed in Tier I assessments per Section 3.4.1.2 of DEQ’s “Conducting Ecological Risk Assessments” guidance (DEQ 2020). This may apply at soil and sediment locations where multiple chemicals are below their respective risk-based concentrations (RBCs) but where the sum of hazard quotients (i.e., concentration divided by RBC) is greater than 1. See also DEQ Comment 11.d. below.

10. *Section 5.5.1 Human Health.*
 - a. The area of sediment near sample WS-RS-2 in which a residential receptor could be exposed to PAHs has not been fully delineated. Spatial coverage of sediment samples is too widely distributed to rule out potential risk. Investigation samples were collected in May, when precipitation is typically higher than during dry, summer months and tidal influence on the river would potentially expose this area during periods of low tide. Please see DEQ Comment 11.b.
 - b. DEQ’s Cleanup Program has additional requirements for the evaluation of risk at cleanup sites in Oregon; these are outlined in Appendix H of DEQ’s Risk-Based Decision Making guide (DEQ 2017). Please include, for example, an evaluation and discussion of cumulative human health risks for carcinogenic and non-carcinogenic chemicals, and estimates of risk based on central tendency (average) and reasonable maximum exposure (90% upper confidence limit) levels.
11. *Section 5.5.2.2 Sediment.*
 - a. Based on investigation data from 2017 and 2024, ecological RBCs for HPAHs (samples BM-B-11, BM-B-12, WS-SB-9) and TPH (as motor oil; samples BM-B-11, BM-B-12, and BM-B-13) are exceeded in surface soils in the central portion of the site. This area of the Site is proposed for redevelopment, according to the design drawings provided. Buildings and paved driveways/parking areas may serve as a partial protective cap; however, risk has not been assessed in areas that would remain accessible. Please clarify how residual risk will be addressed.

- b. Benzo(a)pyrene (BaP) (0.405 milligram per kilogram [mg/kg]) in the duplicate sediment sample WS-RS-02 exceeds the residential direct contact RBC (0.11 mg/kg). Total LPAHs (0.155 mg/kg) exceed the ecological RBC for freshwater receptors (0.076 mg/kg) and total HPAHs (2.43 mg/kg) exceed ecological RBCs for freshwater (0.193 mg/kg) and marine receptors (0.655 mg/kg), respectively. The laboratory flagged the sample results for WS-RS-02 due to dilution. Due to poor data quality as supported by laboratory results which were reported with relative percent differences between the primary and duplicate samples ranging from 159 to 171% and outside of the target range, and report statements indicating sample heterogeneity and the presence of fill material observed in soil borings, DEQ recommends additional sediment sampling in the area of WS-RS-02 to further characterize PAHs in the riverbank to assess both human health and ecological risk.
 - c. Oregon does not have background screening levels for dioxins and furans. There is a documented onsite source of dioxins/furans. The TEQ results from the burn pit area exceed multiple ecological screening values. The LOF is not limited to only the burn pit area which appears to be located north of the proposed redevelopment area. Based on sampling results, additional data is needed to further delineate dioxin/furan contamination. DEQ recommends further sampling for dioxins/furans.
 - d. Based on assessment data and as depicted on the Phase II ESA Report figures, the LOF is the Site and includes an area of the Nehalem River that borders the property to the west. The historic 1953 aerial photo depicts portions of the former mill extending over the river. Further, wetland areas are noted in Sections 3.2 near sample locations SB-1 and SB-6 to SB-10. An ecological risk assessment was not completed in accordance with DEQ's Conducting Ecological Risk Assessments guidance (DEQ 2020). Please complete the Basic Site Information Checklist and Ecological Scoping Checklist to inform whether habitat supportive of ecological receptors may be present at the Site.
12. *Section 6 Conclusions. Ecological Screening.* Site soil and sediment data exceed default RBCs for ecological receptors, suggesting a potentially unacceptable risk. A more robust ecological risk assessment (including site-specific investigation) is required to justify the conclusions made in Section 6. For example, the report does not provide evidence to support the assumption of insignificant groundwater discharge. See also Comments 9 and 11c.
 13. *Table 1 Soil Analytical Results.* TPH oil range organics were detected by HCID analysis. However, DEQ's generic RBC for TPH (diesel and heavier hydrocarbons) is inclusive of diesel, kerosene, light fuel oil and heating oil. Therefore, TPH results for oil range hydrocarbons should be compared with DEQ's RBCs for generic diesel/heating oil and not the generic mineral / insulating oil RBC which is intended for hydrocarbons associated with transformers. Further, DEQ's generic RBC for TPH-d does not differentiate between diesel or motor oil, as presented. These petroleum products are evaluated as a sum of the detections. Please revise Table 1 to compare TPH data to the correct DEQ RBC and present the results as a combined value.
 14. *Table 2 Riverbank Sediment Analytical Results.* Laboratory reporting limits for metals (mercury, selenium), select PAHs and PCP are above DEQ RBCs. Laboratory reporting limits should not exceed 10% of their DEQ RBC or screening level value without justification to support the detection limits for the project. For exceeded reporting limits, please provide justification for why lowered reporting limits do not represent potential risk.

15. *Table 4 Groundwater Analytical Results*. DEQ does not have ecological RBCs for total metals. DEQ's ecological RBC for metals are based on dissolved metals. Please revise Table 4 to remove shading and/or underlines that infer an exceedance in the columns with total metals results.

The following summarize the recommendations above for next steps:

- Test pitting should be performed to determine the composition of the anomaly identified during the geophysical survey or a Contaminated Media Management Plan should be prepared to document proper handling and disposal of HBM if discovered during redevelopment.
- Additional sampling should be conducted in the area of the former refuse burn pit to characterize dioxin/furan contamination. Further, due to the potential for surface runoff to have carried contaminants towards the riverbank west of the burn pit, DEQ also recommends sampling for dioxins/furans in riverbank sediment.
- Additional sediment sampling should be conducted in the area of WS-RS-02 to further characterize PAHs in the riverbank to assess both human health and ecological risk.

DEQ appreciates your consideration of our comments and looks forward to your responses to the items noted above and inclusion of the items in a revised report. Please contact me at (503) 686-3903 or kara.e.master@deq.oregon.gov, if you wish to meet to discuss any of the comments above prior to providing response.

Respectfully,



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