



EXTERNAL MEMORANDUM

TO: Department of Ecology (Ecology)
FROM: Scott Shock, P.E., Exponent
DATE: July 24, 2019
PROJECT: 1504026.001
SUBJECT: Response to Ecology Review Comments on the Draft Remedial Investigation Work Plan for Former WSDOT Potlatch Maintenance Facility, Skokomish, Washington, Ecology Cleanup Site #12397

The “Draft Remedial Investigation Work Plan for Former WSDOT Potlatch Maintenance Facility, Skokomish, Washington, Ecology Cleanup Site #12397” (RI Work Plan) has been revised in response to review comments provided by Nicholas Acklam at the Washington State Department of Ecology (Ecology) in a letter dated December 5, 2018. This memorandum provides responses to those comments.

General Comment: *“Ecology concurs with your proposed remedial investigation. However, depending on the results, additional characterization may be warranted to complete the remedial investigation for the Site...”*

Ecology has the following comments on Exponent's draft work plan:”

Area 1 Comments

Ecology Comment: *Additional soil and groundwater characterization should be completed in the vicinity of the former dry well. Please clarify on the figures the location of the septic tank and drain field.*

Response: At the location of the former drywell to the southwest of the former building, boring B-8 will be advanced and a groundwater sample will be collected. The only historical feature the RI Work Plan describes that is related to the septic tank and drain field is a former drain line to the northeast of the former building. Boring B-8 and the former drain line for the septic tank are both labeled on Figure 9.

Ecology Comment: *Additional soil and groundwater characterization should be completed in the vicinity of the northwest catch basin.*

Response: A new soil boring location (B-46) and grab groundwater sample has been added in the vicinity of the former northwest catch basin.

Ecology Comment: *Please verify the sample collection depths for samples to be collected in the vicinity of the former diesel underground storage tank (UST) excavation. Text in Section 9.1 indicated samples to be collected at depths greater than 15 feet below grade (fbg); however, per Table 7, samples are not proposed at depths greater than 10 fbg.*

Response: Soil sampling will be conducted in the former UST areas within Area 1 at proposed sampling locations B-3 and B-4. The estimated total depth has been changed to 20 ft for both locations, and the sampling depth intervals have been adjusted to 5–10, 10–15, and 15–20 ft.

Ecology Comment: *If additional USTs or associated piping are identified as a result of the geophysical survey, additional characterization may be warranted. For sampling requirements, see Ecology publication number 90-52, Guidance for Site Checks and Site Assessments for Underground Storage Tanks, dated February 1991.*

Response: Section 10.1 of the RI Work Plan has been updated to state that modifications may be made to the sampling and analysis plan based on evaluation of the geophysical survey results. A reference to Ecology's UST guidance document has also been added to Section 10.1.

Ecology Comment: *Groundwater should be collected and analyzed for VOCs at proposed borings in the vicinity of the former maintenance facility based on historical operations.*

Response: Groundwater samples will be collected and analyzed for VOCs at eight borings in the immediate vicinity of the former maintenance facility based on historical operations. Section 10.4 and Table 7 have been updated in the revised RI Work Plan.

Ecology Comment: *A drinking water well is located approximately 50 feet west of the maintenance building (Draft RI Work Plan page 6). Depth to groundwater is approximately 22 fbg. Ecology recommends sampling groundwater from this well for gasoline, diesel and heavy oil, VOCs, SVOCs, and total and dissolved metals.*

Response: Boring B-7 has been moved to the approximate location of the former drinking water well. A groundwater sample will be collected from this location and analyzed for dissolved metals, VOCs, TPH (gas, diesel, and oil range via NWTPH-Gx and NWTPH-Dx), and herbicides as described in the revised RI Work Plan.

Ecology Comment: *Groundwater should be collected and analyzed at proposed boring B-12 in the vicinity of TP-13, where heavy sheens were observed during previous field screening.*

Response: A groundwater sample has been added to planned boring B-12, and water samples will be collected at two nearby borings (B-10 and B-11).

Ecology Comment: *Please ensure that adequate sampling is performed north of the former maintenance building where the roll up doors were located.*

Response: A new soil boring/grab groundwater sampling location (B-47) has been added in the vicinity of the former roll-up doors.

Area 2 Comments

Ecology Comment: *Based on previous field screening results, groundwater should be collected and analyzed at proposed borings B-24 and B-25.*

Response: Groundwater sampling has been added to planned borings B-24 and B-25.

Ecology Comment: *Collect confirmation soil sample(s) from the TP-9 area. No soil samples have been analyzed from this area.*

Response: Planned boring B-17 has been moved to the TP-9 area to address this comment.

Area 3 Comments

Ecology Comment: *If ash material is observed during field activities, a corresponding sample should be collected and analyzed for dioxin/furans.*

- *If ash material is identified in any other area of the Site, a corresponding sample should be collected and analyzed for dioxin/furans.*

Response: In addition to samples previously designated for dioxin/furan analysis, the RI Work Plan has been revised to include additional dioxin/furans analyses for a representative subset of those soil core samples where ash material is observed.

Ecology Comment: *Groundwater should be collected and analyzed for VOCs at proposed boring B-42, based on previous field screening results (organic smell).*

Response: A groundwater sample has been added to B-42, and analysis includes VOCs.

Area 4 Comments

Ecology Comment: *Summary of current conditions or proposed sampling activities were included in Section 7 of the Draft Work Plan. Please add a discussion of the proposed sampling for Area 4.*

Response: A sentence has been added to Section 7.4 indicating that sampling is planned in Area 4 and referring the reader to Section 9.4 for details. In Section 9.4, the RI Work Plan was revised to indicate that 10 surface soil samples will be collected from locations throughout Area 4 to assess soil quality in this area.

Ecology Comment: *Section 9.4 Area 4 Wooded Area of the Work Plan states that sampling is not planned for Area 4. However, Table 7 and Figure 9 list proposed sampling locations and soil analysis. Revise the Draft Work Plan.*

Response: Section 9.4 was revised to acknowledge that 10 surface soil samples will be collected from locations throughout Area 4 to assess soil quality in this area.

Additional Comments

Ecology Comment: *Low flow sampling: The draft RI work plan proposes a maximum sampling flow rate of 1,500 milliliters per minute (mL/min). Ecology recommends reducing the flow rate to less than 1,000 mL/min.*

Response: The RI Work Plan text in Section 10.4 was revised to state that samples will be collected at a flow rate of approximately 1,000 mL/min or less.

Ecology Comment: *Investigation Derived Waste (IDW): The draft RI work plan proposes to dispose of purge water and rinse water at selected boring locations pending field observations. Ecology recommends containing all IDW in labeled drums for proper disposal.*

Response: Section 10.10 was revised to indicate that all purge water and decontamination rinse water will be contained in drums pending receipt and evaluation of analytical results.

Ecology Comment: *Sampling Depths: At sampling locations where groundwater is proposed to be collected, borings will likely need to be advanced at least 5 feet below the water table to collect samples.*

Response: Table 7 presenting planned sampling locations, depths, and analyses was modified to indicate that the estimated total depth for each sampling location is either (a) 5 ft greater than the estimated depth to water if a groundwater sample is to be collected or (b) equal to the depth of the greatest soil sampling depth interval (which is based on estimated fill depth) if no groundwater sample will be collected. The soil and groundwater sampling sections (Sections 10.2 and 10.4) have been modified to reflect this clarification.

Ecology Comment: *Total phosphorus in groundwater: Ecology suggests collecting dissolved oxygen (DO) parameters in permanent monitoring well locations to determine if total phosphorus is causing a reduction of DO.*

Response: Based on review of existing data for this site, DO measurements are not planned for groundwater sampling. As discussed with you, if sampling results suggest that DO data would be useful, this data collection will be considered.

Ecology Comment: *Thallium in groundwater: Concentrations of thallium exceed the MTCA Method B cleanup level at monitoring wells Skok-2 and Skok-5. The source of thallium in groundwater is currently unknown. Ecology recommends continued sampling at these wells for both total and dissolved thallium.*

Response: Table 10 has been revised to include thallium along with other metals analytes for all groundwater samples. Given historical groundwater sample exceedances for certain total metals constituents but not for the associated dissolved metals, and to minimize the potential for turbidity to impact total metals results such that they would not be representative of true groundwater conditions, only dissolved (field-filtered) groundwater samples will be collected for thallium and other metals analyses.

Comments Regarding the Proposed TEE (Attachment A)

Ecology Comment: *Ecology disagrees with the proposal from the consultant that the site should be excluded from requirements of the TEE (WAC 173-340-7490 through 7494). This conclusion is based on the caveat to the exclusion, in which MTCA states "To qualify for this exclusion, an institutional control shall be required by the department under WAC 173-340-440. An exclusion based on planned future land use shall include a completion date for such future development that is acceptable to the department (Ecology, 2013)."*

Response: A revised TEE will be prepared following the completion of the Remedial Investigation. Remedial Investigation data will be screened against generic TEE values in accordance with the options provided in Ecology's opinion letter and the requirements in WAC 173-340-7490 through 7494.