

MEMORANDUM | April 1, 2022

TO Erin McDonnell and David Lacey, Oregon Department of Environmental Quality (DEQ)

FROM Peter Shanahan, HydroAnalysis LLC (HALLC); Jennifer Hart and Gail Fricano, Industrial Economics, Inc. (IEc)

SUBJECT Five Tribe review of “Draft Remedial Design Investigation Work Plan, Willamette Cove Upland Facility, Portland, Oregon,” dated February 23, 2022

This memorandum, submitted on behalf of the Five Tribes,¹ reviews the *Draft Remedial Design Investigation Work Plan, Willamette Cove Upland Facility, Portland, Oregon* (RDI Work Plan) prepared by Apex on behalf of the Port of Portland (Apex 2022).

GENERAL COMMENTS

1. Overall, the RDI Work Plan provides generally good spatial coverage and sampling for all contaminants historically found on the site. The use of the Incremental Sampling Methodology (ISM) (ITRC 2020) is appropriate. With the exception of the hot spot characterization (see Comment #6 below), we expect the work plan will provide an adequate characterization of the site’s uplands.
2. On page 12, the second paragraph of Section 6.3.1 describes the ISM sampling design but is difficult to interpret without also referring to HDOH (2021). We recommend including a more complete description of the ISM in the work plan.
3. The work plan indicates the ISM (ITRC 2020) will be used; however, specific elements deviate from the ITRC’s specifications. In particular, the work plan fails to define Decision Units (DUs), which are key to proper site characterization with ISM. The work plan would benefit from additional discussion of DUs and how they relate to Sampling Units (SUs). If they are intended to be entirely coincidental, we recommend the report state so explicitly.
4. The work plan provides only limited explanation as to how the SUs were defined. On page 12, the work plan indicates that the SU boundaries are skewed towards the Ecological Risk Overlay. We recommend that the work plan indicate why that particular risk overlay was given primacy. Further, we recommend including a table that outlines how each SU aligns with known areas of contamination, historical site uses, and projected future use.
5. We understand that designs for future site use are in development and yet to be finalized. That said, we recommend the work plan describe how the proposed

¹ The five tribes are the Confederated Tribes of the Grand Ronde Community of Oregon, the Nez Perce Tribe, the Confederated Tribes of Siletz Indians, the Confederated Tribes of the Umatilla Indian Reservation, and the Confederated Tribes of the Warm Springs Reservation of Oregon.

sampling approach will appropriately characterize areas where more intensive site use and human exposure are anticipated.

SPECIFIC COMMENTS

6. On page 1, the work plan indicates that one of the objectives is to “Define the lateral and vertical extent of soil hot spots designated for excavation and off-site disposal.” However, the work plan does not make clear how it will address hot spots within the context of the SUs. Collecting a single ISM sample over a 0.5-acre area has the potential to leave hot spots unidentified. Page 8 of the work plan includes a footnote indicating that “In some cases, discrete samples will be collected/analyzed to better define hot spots.” We recommend the RDI Work Plan and Sampling and Analysis Plan (SAP) provide a more complete and specific explanation as to how hot spots will be identified and sampled.
7. Page 12 indicates that additional field replicates will be collected at SU-1, SU-3, SU-14, SU-18, SU-20, SU-28, and SU-31. We recommend the work plan provide the rationale for collecting extra replicates in these particular SUs.
8. Page C-16 states “For SUs that do not have approximately square corners, the grid spacing will be adjusted so the 30 increments are evenly spaced within the SU.” This seems to imply that the grid spacing will be modified such that 30 increments will be sampled no matter the shape of the SU. This is at odds with the presentation by HDOH (2021, Section 4), which preserves the increment spacing in irregularly shaped SUs (i.e., the increment spacing calculation remains the same) and not the number of increments. We recommend the work plan include sketches of how a regularly-shaped SU and an irregularly-shaped SU would be sampled, illustrating how incremental samples are to be located in example SUs.
9. Regarding the number of samples to be collected, the description provided in Section 6.3.1 (page 12) is ambiguous. Specifically, it is unclear whether the sampling grid includes both the horizontal and vertical directions. We recommend that the reference to “all axes of the grid” be rephrased as “all horizontal axes of the grid.” We also recommend clarifying that ISM samples will be collected at depth intervals of 0-1, 1-2, and 2-3 feet below ground surface (bgs) from each point on the sampling grid. As written (“ISM samples will be collected from depth intervals of 0-1, 1-2, and 2-3 feet bgs”), it is unclear that all three depth intervals will be collected from each location.
10. On page 11, the work plan states that the targeted ISM SU areas range in size from 0.49 to 0.54 acres while the SAP, page C-10, states that each SU ranges from 0.43 to 0.70 acres. Please explain this apparent discrepancy.

EDITORIAL COMMENTS

11. The acronym ISM is used but not defined or included in the list of abbreviations and acronyms.

12. The acronym TEQ is used but not defined or included in the list of abbreviations and acronyms.

REFERENCES

- Apex. 2022. Draft Remedial Design Investigation Work Plan, Willamette Cove Upland Facility, Portland, Oregon. Prepared for the Port of Portland. February 23, 2022.
- Hawai'i Department of Health (HDOH). 2021. Technical Guidance Manual for the Implementation of the Hawai'i State Contingency Plan. Interim Final. April 2021. Available at: <http://www.hawaiidoh.org/tgm-pdfs/TGM.pdf>
- Interstate Technology & Regulatory Council (ITRC). 2020. Incremental Sampling Methodology Update. October 2020. Available at: https://ism-2.itrcweb.org/wp-content/uploads/2020/11/itrc_ism_compiled_508_011921.pdf