

MEMORANDUM | August 2, 2019

TO Erin McDonnell, Oregon Department of Environmental Quality

FROM Peter Shanahan, HydroAnalysis, Inc.; Jennifer Hart, Gail Fricano, and Rachel DelVecchio, Industrial Economics, Inc.

SUBJECT Comments on the Premier Edible Oils Site *Riverbank Sampling and Analysis Plan, Riverbank Chemical Characterization and Evaluation*

This review of the *Riverbank Sampling and Analysis Plan, Riverbank Chemical Characterization and Evaluation* (SAP) for the Premier Edible Oils (PEO) Site (dated July 2019) has been prepared on behalf of the Five Tribes.¹

In general, PEO's SAP is well-written, organized, and generally follows EPA's guidance for chemical characterization of record of decision (ROD) river banks (i.e., contaminated river banks with an adjacent sediment management area (SMA) that will be addressed using Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) authority) (EPA 2019). We provide the following comments for consideration.

OVERALL EVALUATION

1. While the proposed sample density has good spatial coverage overall, the spatial density for the lower river bank is considerably less than that for the upper river bank. Section 2.5.2 indicates that the concentrations of PAHs and metals decrease from the top of the river bank to the shoreline. It is unclear if this is the rationale for the decreased spatial density in the lower river bank. Regardless, we recommend that the SAP explicitly state the justification for the difference in sample density.
2. In general, the SAP and QAPP fail to provide sufficient detail regarding the types of qualitative field observations that should be made and recorded. The Field Notes Form included in the Quality Assurance Project Plan (QAPP) is blank. Either the SAP or the QAPP, or both, should specify what information should be recorded in the field notes. For instance, in Section 2.5.3, sampling for LNAPL is ruled out based on its "unlikely presence." The presence of LNAPL should not be ruled out completely, and several qualitative field observations could help indicate its presence. At a minimum, the field protocols should require that NAPL, odors, sheens, colors, and any other indications of the presence of contamination and LNAPL should be detailed in the field notes.

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.

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3. Neither the main body of the SAP nor the attached QAPP adequately describe protocols for sample handling during and following compositing of the samples and prior to re-analysis. Compositing implies stirring and mixing samples, which could lead to a loss of volatile organic compounds and mercury to the air. Also, considering some of the short hold times for these analytes, the initial analyses will require a very quick turnaround in order to meet hold times for any potential re-analysis. We recommend the SAP discuss how samples will be composited and held after compositing to ensure the samples remain representative and that sample hold times are not exceeded.
4. EPA's River Bank Guide (EPA 2019) identifies the PEO river bank as a ROD river bank with known contamination. According to the guidance, ROD river banks should be remediated in conjunction with the sediment action. While the SAP clearly defines the lower vertical extent of the river bank for the present soil and sediment sampling, the SAP does not provide detail for how the river bank sampling will be complemented by any past or future sediment sampling for the adjacent SMA. If possible, we recommend that the SAP describe any current or proposed coordination of the river bank remedial design with remedial design for the adjacent SMA.
5. Regarding PEO's tiered sampling rationale, the last bullet on page 11 states that if the deep composite samples exceed remedial action levels (RALs) or principal threat waste (PTW) values, the area represented by these composite samples will be evaluated for remediation. We recommend including specific detail regarding the need for additional samples to vertically bound the contamination to the depth appropriate to support the remedial action design, whether this additional sampling is to be conducted pursuant to this SAP or as a separate study.

SPECIFIC COMMENTS

1. Given the length of the QAPP and the number of appendices included with the QAPP itself, we recommend including the QAPP as the final appendix to the SAP. Also, the table of contents and the SAP text refer to the QAPP as Appendix C and the International Slip Photo Log as Appendix D, whereas they are reversed as actual appendices; this discrepancy should be corrected.
2. Text on page 8 states "Soil sampling with hand tools is impractical due to the thick layer of riprap and the cement-like material covering the surface." It is not clear if this is intended to describe the entire river bank or just the portion of the southern river bank adjacent to the International Slip which is discussed in the immediately preceding paragraph. We recommend clarifying to which portions of the PEO river bank this statement applies.
3. Text on page 9 states the proposed maximum sampling depth is 3.5 feet below ground surface (bgs); however, a 3-foot auger will be used to collect these samples. We recommend revising the maximum depth to 3 feet bgs or providing clarification on how the 3.5 foot bgs sample will be achieved.

4. The Table of Contents lists Table 1 as the Distribution List and Table 2 as the Required Analytes and Screening Criteria; however, both tables are labelled as Table 1. All subsequent table numbers are incorrectly labelled.
5. The first paragraph of Section 4.2 references Table 1. Instead, this paragraph should reference Table 2, Required Analytes and Screening Criteria. The reference to this table notes that reporting limits are included; however, no reporting limits are included in the table. We recommend including the reporting limits.

REFERENCES

U.S. Environmental Protection Agency (EPA). 2019. Guidance for River Bank Characterizations and Evaluations at the Portland Harbor Superfund Site. 5 April 2019.