UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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SUPERFUND &
EMERGENCY
MANAGEMENT DIVISION

MEMORANDUM

DATE: October 06, 2020

SUBJECT: Additional Riverbank Soil Sampling and Analysis Plan
Crawford Street Site, Portland, OR
ECSI #2363
September 01, 2020

FROM: Benjamin Leake, PMP
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TO: Jim Orr
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Following are the United States Environmental Protection Agency's (EPA's) comments on the September 2020 *Additional Riverbank Soil Sampling and Analysis Plan* (ARSSAP) prepared by Cascadia Associates, LLC (Cascadia) for the Crawford Street Site. The site is located at 8424 N Crawford Street in Portland, Oregon, and adjacent to the Portland Harbor Superfund Site (PHSS) at approximately river mile 6.2 E. The facility is listed as Oregon Department of Environmental Quality (DEQ) Environmental Cleanup Site Information (ECSI) #2363.

The ARSSAP is an addendum to the Phase I and Phase II Leave Surface Sampling and Analysis Plans (LSSAPs) and presents the scope and sampling procedures for additional soil sampling based on the findings of the investigation to date and the design configuration of the launchable toe. Specifically, the proposed investigation serves to define the extent of dioxins/furans and polychlorinated biphenyls (PCBs) near locations XS2-LMID and XS7-LMID and to sample the launchable toe area in conformance to the Riverbank Source Control Measure (RBSCM) design. EPA previously commented on the Phase I and Phase II LSSAPs and took part in a meeting with DEQ and Cascadia to discuss the results of the investigation. EPA's review of the ARSSAP focuses on evaluating whether the proposed sampling is sufficient for characterizing the extent of PCBs and dioxins/furans.

EPA's comments are presented in the following sections. Comments are separated as "Primary," which identify concerns that must be resolved to achieve the document's objective; "To Be Considered," which, if addressed or resolved, would reduce uncertainty, improve confidence, or best support the document's objectives; and "Matters of Style," which substantially or adversely affect the presentation of the technical information provided.

Primary Comments

1. Sampling density near locations XS2-LMID and XS7-LMID may not adequately delineate lateral extent of contamination. For better definition of directionality, it is recommended to increase the conditional stepout borings to three in both areas. At XS2-LMID, an additional stepout sample should be collected north of the current southeasterly stepout. At XS7-LMID, an additional stepout sample should be collected east of the current northwesterly stepout. Per the ARSSAP, these samples would only be analyzed if the primary sample results indicate a need for further delineation and would preclude the need for additional mobilization to define these impacts. However, some consideration should be given to analyzing all samples at once and it is recommended to analyze samples for all dioxin/furans listed in ROD Table 21, rather than only PeCDD. These additional stepouts should be discussed in the text and included in Figures 4 and 5, respectively.

2. The proposed additional sampling around borings XS2-LMID and XS7-LMID is insufficient to provide the data needed to conform to the ROD design requirements for a source control measure that addresses soil exceeding the remedial action levels (RALs) and principal threat waste (PTW) thresholds at the PHSS. EPA's expectation is that additional riverbank sampling be performed beyond what has been proposed. The Phase 1 and Phase 2 riverbank sampling results may indicate a continuous area of contamination from transect XS1 to XS6 with concentrations of PCBs, dioxin/furans, copper, and arsenic exceeding cleanup levels (CULs). PCBs and dioxin/furans exceed the RALs at many of the sample locations, and PCBs exceed the PTW thresholds at transects XS1 through XS3. This portion of the riverbank with soil concentrations exceeding the CUL, RAL, and PTW thresholds is adjacent to the 2001 removal area where riverbank soil and black sand with high concentrations of PCBs, polycyclic aromatic hydrocarbons (PAHs), and metals were known to be present and associated with the riverbank fill beneath the former sawmill. One specific area needing further delineation is:
   XS1 – PCB sampling to delineate horizontally and vertically the RAL and PTW exceedances at the toe to inform design of the riverbank toe. Also consider analysis for PCB congeners, as this may be a more appropriate method for meeting data quality objectives at this site.

3. Additional sampling regarding refinement of the extent of PCBs and dioxin/furans concentrations above PTW levels that were located above ordinary high water (OHW) should be completed now, regardless of whether these locations are accessible from the top of the bank, rather than expecting further refinement in a future RBSCM design activity. These sample locations, both primary and stepout, should be included in the text and added to Figures 4 and 5.

To Be Considered Comments

1. Report maps and cross sections should use standard elevations referenced to a datum and not refer to OHW and ordinary low water (OLW). The OHW has a specific elevation determined by the U.S. Army Corps of Engineers (USACE) for the Willamette River. USACE has abandoned use of OLW and no longer defines its elevation. Historical records may have an elevation, but it is not currently used by USACE.

2. It would be beneficial if Figure 3 and Figure 4, or an additional figure, showed the location of the potential source areas represented by the black sand fill area, former sawmill, former underground storage tank, former septic tank, and any stormwater conveyance or discharge components associated with the Columbia Forge Yard. These features have not been previously shown in riverbank sampling work plans and reports and are needed to identify whether the previous (Phase I and II) and the planned additional sample locations address these potential source areas.

Matters of Style Comments

1. The range of concentrations for detections described in the bullet list at the top of page 2 should be presented.

2. Additional stepout locations should be added to Figures 4 and 5.

3. Background: The text should be corrected as follows (emphasis added): "Samples collected from adjacent transects and locations around **XS7-LMID** were analyzed during the phase II LSSAP and defined the lateral extent of dioxin/furans around location XS7-LMID; therefore, additional sampling around XS7-LMID was not proposed."

4. Scope of Additional Beach Soil Sampling and Analysis Activities: The subsection title text should be corrected as follows (emphasis added): "Further Definition of PCBs Around Location **XS2-LMID** and PECDD Around XS7-LMID."

References

DEQ and EPA. 2005. *Portland Harbor Joint Source Control Strategy.*

EPA. 2017. *Record of Decision Portland Harbor Superfund Site Portland, Oregon*.