



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3123

SUPERFUND &
EMERGENCY
MANAGEMENT DIVISION

MEMORANDUM

DATE: August 21, 2023

SUBJECT: Stormwater and Groundwater Source Control Evaluation Work Plan
Albina Railyard, 4350 NW Front Avenue Portland, Oregon
ECSI #178
April 2023

FROM: Laura Hanna, RG 
Remedial Project Manager

TO: Michael Romero
Project Manager
Oregon Department of Environmental Quality

The following are the U.S. Environmental Protection Agency's (EPA's) comments on the document titled *Stormwater and Groundwater Source Control Evaluation Work Plan*, dated April 2023, prepared by Jacobs on behalf of Union Pacific Railroad (UPRR), Albina Railyard, Portland, Oregon. The UPRR Albina Railyard (site) is listed in the Oregon Department of Environmental Quality (DEQ) Environmental Cleanup Site Information (ECSI) as ECSI # 178.

The purpose of the work plan is to (1) supplement previously completed stormwater and groundwater evaluations with additional data to understand current site conditions, and (2) assess recontamination potential from upland sources to the adjacent Portland Harbor Superfund Site (PHSS). This work plan is intended to guide the collection of stormwater and groundwater data to update the SCE and provide a basis for a source control decision (SCD) at the railyard.

EPA's comments are categorized as "Primary," which identify concerns that must be resolved to achieve the document's objectives, and "To Be Considered," which, if addressed or resolved, would reduce uncertainty, improve confidence in the document's conclusions, and/or best support the objectives.

Primary Comments

1. Section 7: Quality Assurance and Quality Control Procedures references use of the River Mile 10 East Project Area (RM10E) Quality Assurance Project Plan (QAPP) (Jacobs 2020a), that was submitted as an attachment to the Pre-Design Investigation (PDI) Work Plan (Jacobs 2020b). The upland work plan should be revised to include a QAPP addendum with the upland specific data quality objectives (DQOs), analytes/analytical methods, and reporting limits that are not included in the RM10E PDI QAPP. The QAPP should be developed consistent with the references listed below.

- a. EPA Guidance on Systematic Planning Using the Data Quality Objectives Process, QA/G-4 EPA/240/B-06/001 (Feb. 2006).
- b. EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 2000).

The objectives specific to the PHSS should include evaluating protection of the Willamette River by analyzing stormwater for Record of Decision (ROD) Table 17 surface water COCs, and groundwater samples for ROD Table 17 groundwater COCs (EPA 2020)¹.

2. Section 8: Screening and Reporting should include a statement that data compilation, reduction, and handling of non-detect results will follow Sections 6 and 7 of the Portland Harbor Program Data Management Plan (DMP). The DMP can be found at the Portland Harbor Environmental Data Portal website: <http://ph-public-data.com/document/DMP2021/>
3. The work plan Section 5.3 states that groundwater samples will be collected during two events: high water table (late spring) and low water table (late autumn). Considering this as an objective, the work plan should include a table or graph of the river stage and identify the planned dates for the sampling events using existing data. The groundwater data report should include the river stage compared to the monitoring well groundwater elevations at the time of sampling for each event.

Variations in river stage elevation could result in variations of chemical concentrations in groundwater. This effect is particularly relevant for nearshore wells, such as the six proposed in this study, resulting in concentration variations greater than what would be expected for a typical upland to river groundwater flow framework.

4. The work plan acknowledges the stormwater and groundwater evaluations will be used to revise the draft Sufficiency Assessment Report (SAR) for the RM10E project area. Planning the groundwater investigation should consider EPA's response to Draft SAR General Comment 4, dated August 7, 2020. To achieve the planned objective, the work plan and the data report should include the following:
 - a. A description of well construction and lithology, possibly a cross section correlating the screened intervals, sample collection depths, and lithology with the two distinct water-bearing units identified in the SAR. Identifying this information is important to understand groundwater data and contaminant transport. Section 5.2 of the work plan states that a 10 foot well screen will be installed in approximately 30-foot-deep boreholes at each of the eight proposed well locations with no explanation that potential plume(s) emanating from the upland will be adequately intercepted.
 - b. A description of the plan to evaluate the occurrence and potential migration of light non-aqueous phase liquid (LNAPL) that was previously documented and potentially related to releases and sources mentioned in work plan Section 3.2 and Table 3-1. The plan should reference methods that are supported by one or more guidance documents (ITRC 2018, EPA 2017, 1995). The evaluation is needed to support the SAR argument that LNAPL will not migrate to the Willamette River due to the "relatively flat gradient" in the area of the residual product (presented in SAR Figure 1.7).
 - c. The technical rationale and means for mapping and evaluating groundwater flow directions or gradients with data from the groundwater monitoring network presented in the work plan that consists of eight monitoring wells aligned at the property boundary along top of the riverbank. EPA requested during its review of the SAR that additional hydrogeological data be provided in the SCE to support evaluating groundwater gradients and potential contaminant migration to the river bank and/or to surface water of Willamette River. The current well network design does not provide adequate coverage of the upland area and will not allow for construction of a hydraulic head map to identify groundwater flow directions or gradients.

To Be Considered

1. The planned groundwater sample analytes should include the same information as provided in Table 6-1 for stormwater sample analytes.

References

- Interstate Technology & Regulatory Council (ITRC). 2018. Light Non-Aqueous Phase Liquid (LNAPL) Site Management: LCSM Evolution, Decision Process, and Remedial Technologies, LNAPL-3. Washington, D.C. Accessed February 2021 at; <https://lnapl-3.itrcweb.org>
- Jacobs. 2020a. River Mile 10 East Project Area, Portland, Oregon. Quality Assurance Project Plan (QAPP). July.
- Jacobs. 2020b. Pre-Design Investigation Work Plan. Final Revision 1. Prepared for Union Pacific Railroad. July.
- U.S. Environmental Protection Agency (EPA). 1995. Light Nonaqueous Phase Liquids, Ground Water Issue, Office of Solid Waste and Emergency Response, US EPA, Washington, DC July EPA/540/S-95/500 (NTIS 95-267738). Available at: <http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=10002DXR.txt>
- EPA. 2006. EPA Guidance on Systematic Planning Using the Data Quality Objectives Process, QA/G-4 EPA/240/B-06/001. Feb 2006.
Available at: <https://www.epa.gov/quality/guidance-systematic-planning-using-data-quality-objectives-process-epa-qag-4>
- EPA. 2000. EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 2000).
Available at: <https://www.epa.gov/sites/default/files/2015-06/documents/g9-final.pdf>
- EPA. 2017. How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites. EPA/510/B-17-003/128, Land and Emergency Management 5401R. October.
- EPA. 2020. *Memorandum re: Errata #2 for Portland Harbor Superfund Site Record of Decision ROD Table 17.* To Portland Harbor file. Office of Environmental Cleanup, USEPA Region 10, Seattle, Washington. January 14.