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SUPERFUND &
EMERGENCY
MANAGEMENT DIVISION

MEMORANDUM

DATE: May 31, 2022

SUBJECT: Stormwater Source Control Evaluation Work Plan
Union Pacific Railroad Albina Railyard Site, Portland, OR
ECSI #178
April 2022

FROM: Benjamin Leake, PMP BJL
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TO: Michael Romero
Project Manager
Oregon Department of Environmental Quality

Following are the U.S. Environmental Protection Agency's (EPA's) comments on the Stormwater Source Control Evaluation Work Plan (SCE WP) for the Union Pacific Railroad (UPRR) Albina Railyard (Site) prepared by Jacobs Engineering Group Inc. The Site is on the east side of the Willamette River, just downstream of the Fremont Bridge in Portland, OR. The Site is listed in the Oregon Department of Environmental Quality's (ODEQ's) Environmental Cleanup Site Information (ECSI) database as number 178 and is upland of Portland Harbor Superfund Site (PHSS) River Mile 10 East (RM 10E) Project Area.

EPA understands the objective of the SCE WP is to guide the collection of stormwater data to update the SCE and provide a basis for a source control decision (SCD) for the railyard.

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

Primary Comments

1. The SCE WP does not present a sufficient conceptual site model (CSM) or rationale to support the proposed stormwater sampling plan. Specific aspects of the CSM that should be provided are listed below.

    a. Historical sampling results should be provided in the SCE WP to support the proposed sampling locations and analytical suite.

b. The rationale for the sample locations at CB300 and CB400. In both cases the proposed sampling point is up-pipe from multiple catch basins. In general, the farthest down-pipe location that is not impacted by backflows during storms and that can be safely accessed should be sampled. Basis of a location as the same sampling location as the NPDES permit is not sufficient rationale.

c. Additional rationale based on the CSM for the proposed analytical suite. It is not clear based on the information provided whether additional contaminants should be analyzed. The CSM should include a discussion of historical site activities and investigations. In absence of adequate rationale for excluding contaminants from analysis, EPA recommends sampling for the full list of PHSS Record of Decision (ROD) Table 17 contaminants with surface water cleanup levels (CULs) [1] (EPA 2017). To best meet the study objectives to inform a source control decision, the analytical suite should be revised to include dioxin/furan analysis. Data presented in the RM 10E Pre-Design Investigation Evaluation Report (Jacobs 2021) shows ROD Table 21 (EPA 2017) exceedances of dioxin/furans in sediments near Site outfalls. Analysis for dioxin/furans in stormwater could clarify whether the stormwater pathway contributes to sediment contamination in the vicinity of the outfalls.

2. Section 4.1 Stormwater Sampling Frequency: The planned sampling frequency does not comply with guidance provided in Joint Source Control Strategy (JSCS) Appendix D Section D.5.2 (DEQ and EPA 2005). The sampling plan should be revised to include:
   - Four separate storm events per year
   - Two of the four events should be representative of "first flush" conditions (i.e., within the first 30 minutes of stormwater discharge)
   - The two remaining events should be collected within the first three hours of stormwater discharge, to the extent practicable

3. The SCE WP should clarify that the stormwater pathway will be assessed using the weight of evidence evaluation presented in ODEQ's *Guidance for Evaluating the Stormwater Pathway at Upland Sites* (DEQ 2009) and the JSCS (DEQ and EPA 2005). Historical data and data collected as part of the SCE WP should be used in the weight of evidence evaluation to determine whether potential sources at the Site require additional investigation and/or source control measures.

To Be Considered Comments

1. Provide a figure(s) that illustrate key site features such as spills, contaminated soil (if present), and best management practices/source control measures. This information would support review of the proposed sampling locations, further develop the CSM, and used to inform a future source control decision.

[1] Earlier in 2020, ROD Table 17 was modified in an errata memorandum that can be found on EPA's website: https://semspub.epa.gov/work/10/100200076.pdf. The Errata #2 Table 17 supersedes the ROD Table 17.

2. Section 3 Stormwater Discharge: The text states, “Some surface sheening on standing water and infiltration of shallow groundwater were observed at two catch basins near the Engine House.” Revise the text to clarify how "infiltration of shallow groundwater" was observed.

3. Section 3.1 Stormwater Conveyance System: The text indicates that City Outfall 46 is considered controlled based on conclusions from previous investigations. However, it is not clear whether the conclusions in the previous reports considered PHSS ROD RAOs. The data from the investigation should be provided and screened against PHSS CULs.

4. Section 4.3 Stormwater Sampling Methodology: For completeness, EPA recommends collecting field water quality parameters (e.g., pH, temperature, conductivity, turbidity) when sampling.

5. Section 4.4 Laboratory Analysis: Total suspended solids should be added to the analyte list. Those data could be used for evaluating the solids loading to the river from Site outfalls.

6. Section 6.2.3 Precision: Provide the relative percent difference thresholds for the field duplicate samples.

Matters of Style Comments

1. Section 4.1 Storm Event Criteria: The description of the stormwater event criteria is unclear. Revise the text to clearly state the following JSCS (DEQ and EPA 2005) requirements:
    - Antecedent dry period of at least 24 hours (as defined by <0.1 inches over the previous 24 hours)
    - Minimum predicted rainfall volume of >0.2 inches per event
    - Expected duration of storm event of at least 3 hours

2. Figure 2: Based on this figure, it appears that Drainage Basin 1 discharges via City of Portland Outfall #46 and Drainage Basin 5 discharges via City of Portland Outfall #47. However, the text in Section 3.1 indicates that stormwater from these drainage basins is diverted to the Columbia Boulevard Wastewater Treatment Plant. The figure should be revised to clarify where the flow is diverted and to confirm that there are no discharges to the Willamette River from these drainage basins.

3. Figures 2 and 3: The figures should be revised to show the southernmost outfall connected to Drainage Basin 6 (presumably WR-306) and subbasins 6A and 6B.

References

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

DEQ. 2009. *Guidance for Evaluating the Stormwater Pathway at Upland Sites.*

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

Jacobs. 2021. *Phase I Pre-Design Investigation Evaluation Report*. December.