



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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SUPERFUND &
EMERGENCY
MANAGEMENT DIVISION

MEMORANDUM

DATE: April 06, 2020

SUBJECT: Source Control Evaluation in Support of No Further Action Source Control Decision
Northwest Pipe Company Facility, Portland, OR
ECSI # 138
February 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) comments on the *Source Control Evaluation in Support of No Further Action Source Control Decision* (SCE Report), prepared by Jacobs on behalf of Northwest Pipe Company. This report was presented with a companion report, *Remedial Investigation in Support of Site-wide No Further Action Determination* (RI). These reports are dated February 2020 and were received by EPA on February 14, 2020.

The stated purpose of the SCE Report is to analyze and present existing site information sufficiently to support decision making with respect to the DEQ's Hazardous Substance Remedial Action rules. EPA's review focused on assessing the data presented in the SCE Report and evaluating the evidence presented to support the "No Further Action" request.

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

Primary Comments

1. Remove or revise the inaccurate statement regarding stability of the groundwater plume in Section 5.2.2 of the SCE Report. The statement "Based on the stability in the relative distribution of VOCs within the plume, and the consistently low to nondetectable results for VOCs detected in Port wells, with concentrations lower than reported previously, the plume extent is stable and possibly shrinking, with some variation in concentration increasing or decreasing, within the interior of the plume" is not supported by the data presented in this report. Concentration plots in

Figure 5-9a, 5-11a, and 5-12, show increasing VOC concentrations at NWP site monitoring wells MW-02, MW-03, MW-05, and MW-06. These increases must be correctly described and/or addressed with information from a statistical data evaluation of trends. Additionally, the well network downgradient of MW-03 is not sufficient to demonstrate that the plume is stable or possibly shrinking. VOC and other MNA parameter data should be collected over the extent of the plume during the planned MNA program to support the evaluation of plume stability.

2. The groundwater flow discussion Section 5.2.2 of the SCE Report should be revised to clearly describe potential preferential pathways that could influence groundwater flow. The historical location of Gatton Creek should not be the only preferential pathway considered. During deposition of the channel, the creek likely migrated and deposited more transmissive deposits in other channels that could act as preferential pathways to the river. The discussion in Section 5.2.2 suggests that there is an isolated pocket of more transmissive material, but given its location, it may indicate channel deposits from historical locations of Gatton Creek. The evidence as presented is not conclusive whether other vestiges of the former channel may exist and create preferential pathways for migration outside the monitoring network. Note that this discussion is related to the groundwater discussion in Section 6.2.2.1 and Figure 3-1 of the RI. Figure 3-1 could be improved in the context of this discussion by including the location of the groundwater monitoring wells.
3. The statement in Section 7.1.2.5 of the SCE Report that stormwater from the Northwest Pipe Company Site does not reach the Willamette River is misleading and should be removed or revised. The IT Slip is part of the Portland Harbor Superfund Site (PHSS) and is required to adhere to the same source control and remedial action requirements described in the Portland Harbor Record of Decision (ROD) (EPA 2017) as other portions of the Willamette River. As described in Section 7.1.2.5, stormwater discharging to the quiescent water in the IT Slip is more likely to settle near Outfall 18/WR-123 than stormwater that discharges to areas with higher flow rates and greater connectivity to the main channel of the Willamette River. This highlights the importance of controlling contaminant concentrations in stormwater that discharges from the Northwest Pipe Company Site because these contaminants will potentially settle below the outfall and could result in a localized area of recontamination if stormwater sources are not controlled. The conclusions in Section 7.1.2.5 should be reframed to describe the recontamination risk near the outfall because of the hydrodynamics in the IT Slip.
4. An evaluation of dioxins and furans in stormwater discharge should be presented in the SCE Report. Three of the six focused contaminants of concern identified in Table 21 of the ROD are dioxin/furan compounds, and there is a surface water cleanup level in Table 17 of the ROD for dioxins/furans (2,3,7,8-TCDD equivalent). Additionally, during 2018 pre-design investigation/baseline sampling, 1,2,3,7,8-PeCDD was detected in the IT Slip near Outfall 18/WR-123 at concentrations above the ROD remedial action level for sediment. Accordingly, the SCE Report should describe past and current site activities that may have produced dioxins/furans and include a performance evaluation of stormwater treatment source control measures at removing dioxins/furans. The performance evaluation can be accomplished either by collecting stormwater samples at SP-001 and SP-002 and analyzing for dioxins/furans, or

through a review of case studies (if available) with analytical data to evaluate the performance of the Aquip stormwater filtration system in removing dioxins/furans.

5. The statement in Section 8.1.3 of the SCE Report “groundwater containing detectable COIs on the Site poses no threat to the Willamette River and therefore, is contained, and an MNA program is being developed to demonstrate ongoing effectiveness” should be revised. Additional data at the leading edge of the plume, downgradient of well MW-03, are needed to demonstrate the extent of the plume and that natural attenuation processes are an effective means of containment.
6. The natural attenuation data presentation in Figure 5-13 of the SCE Report is misleading and should be revised. The plot in Figure 5-13 shows that VOCs are not detected at monitoring well T4S1MW-22, inferring complete natural attenuation of VOCs 1,000 feet away from the river. However, well T4S1MW-22 is a well that is cross gradient of the plume axis and unsuitable to include in the data presentation. No well exists along the plume axis directly downgradient of NWP site monitoring well MW-03, which is a significant data gap for evaluating performance of a potential MNA source control.

To Be Considered Comments

1. Corrections are needed for the following values in Table 3-4 of the SCE Report that were found to be at or in excess of ROD cleanup levels (CULs) or incorrectly screened against CULs for the indicated constituent and are organized by page number of the table:
 - a. **(p 6 of 22)** Cis-1,2-Dichloroethene in the highlighted cell for well MW-02 is below the ROD CUL.
 - b. **(p 6 of 22)** Trichloroethene (TCE) found in sample GP-111 is at the ROD CUL.
 - c. **(p 9 of 22)** Total cPAHs found in wells MW-01 and MW-02 exceed the ROD CUL and the cells should be highlighted.
 - d. **(p 12 of 22)** Benzene found in samples GP-203-W-0 and GP-203-W-1 is in excess of the ROD CUL and the cells should be highlighted.
 - e. **(p 12 of 22)** Tetrachloroethene (PCE) found in sample GP-204 is at the ROD CUL.
 - f. **(p 13 of 22)** Arsenic found in wells MW-7-61512, MW-7-53113, MW-8, and MW-9-53113 exceeds the ROD CUL.
 - g. **(p 16 of 22)** PCE found in well MW-02-072517 exceeds ROD CUL.
 - h. **(p 16 of 22)** Vinyl chloride found in wells MW-02-10216, MW-02-020117, and MW-02-120518 is in excess of the ROD CUL.
2. The drainage basin boundaries shown in Figure 2-4 of the SCE Report appear to be incorrect in the southern portion of the site based on roof drain downspout locations, catch basin locations, and storm drain flow directions shown in the figure. The drainage basin boundaries should be reviewed and if necessary, revised based on the flow patterns of the existing stormwater conveyance system.

3. Section 6.4 of the SCE Report states that the required stormwater treatment system capacity is 55,034 gallons, based on modeling consistent with the *City of Portland Stormwater Management Manual* and that the northwest and northeast treatment systems have storage capacities of 35,383 and 27,977 gallons, respectively. Because these are independent treatment systems, it would be helpful to present the required storage capacity for the independent basins instead of a total system capacity. Although the combined storage capacity of the two basins exceeds the total required system capacity, it is unclear if there is enough storage capacity in each independent basin. This analysis should include review and possible revisions to stormwater basin delineation as described in To Be Considered comment #2.
4. Section 8.1.4 of the SCE Report states, “Stormwater at the Site poses no threat to the Willamette River and, therefore, any potential sources of contamination to stormwater at the Site are contained” is misleading and should be removed or rephrased. Potential sources of contamination to stormwater must be controlled through ongoing implementation of source control measures and best management practices, and threat to the river (i.e., recontamination potential and threat to in-water receptors) is evaluated based on continued long-term effectiveness of these measures.
5. The argument presented in Section 8.1.5 of the SCE Report is misleading and should be rewritten. Outfall 18/WR-123 discharges into the IT Slip, which is a receiving water included as part of PHSS. The size of the potential area affected by stormwater discharges (estimated as 1.2 acres in this section) is not adequate evidence to conclude that stormwater is unlikely to result in sediment recontamination or contribute to unacceptable risk to in-water receptors in the IT Slip. Stormwater analytical data should be referenced as a basis of conclusions regarding recontamination potential or in-water risk for contaminants that continue to exceed cleanup levels and screening level values.
6. An explanation should be provided for why the reporting limits were so high for total polychlorinated biphenyls (PCBs) for stormwater samples collected before 11/30/18. As shown on Tables 7-1 and 7-3 of the SCE Report, the reporting limits before 11/30/18 ranged from 0.3 to 10.7 micrograms per liter ($\mu\text{g/L}$), whereas the ROD cleanup level is 0.0000064 $\mu\text{g/L}$, and the knee of the DEQ rank order curve for PCBs in stormwater at Portland Harbor Heavy Industrial sites is approximately 0.3 to 0.5 $\mu\text{g/L}$. At these reporting limits, even a non-detect result could be several orders of magnitude greater than the ROD cleanup level and at or above the knee of the rank order curve. Recent 1200-Z sampling data with more appropriate reporting limits (e.g., 0.063 $\mu\text{g/L}$ in 2018 and 2019) suggest that PCBs are not present in stormwater at unacceptable concentrations, but limited conclusions can be drawn from previous sampling with high reporting limits. Future sampling conducted under the 1200-Z permit should have appropriate reporting limits or use an alternative analytical method for evaluating PCB data and potential risk for recontamination of the Willamette River. EPA expects source control investigations to be conducted with laboratory analyses that apply the best commercially available analytical techniques and appropriate sampling methods, as described in Section 3.3 of the Joint Source Control Strategy (DEQ and EPA 2005).

7. Consider revising Figures 7-2a through 7-2k of the SCE Report to include all sample results and not just the minimum, maximum, and average. Understanding the number of samples collected, the sampling location, and distribution of concentrations allows for a complete evaluation of stormwater sampling data. Additionally, grouping data according to year and sampling program type (i.e., source control evaluation or 1200-z sampling) would be helpful for providing context to sampling results.

Matters of Style Comments

The detection limit should be presented in Figure 7-2c for cadmium, and values should be plotted on the rank order curves at the detection limit.

References

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

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