



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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SUPERFUND &
EMERGENCY
MANAGEMENT DIVISION

MEMORANDUM

DATE: June 2, 2023

SUBJECT: 2022 Annual Groundwater Monitoring Report
Northwest Pipe Company
ECSI #138
April 2023

FROM: Laura Hanna, RG *Laura Hanna*
Remedial Project Manager

TO: Jim Orr, RG
Project Manager
Oregon Department of Environmental Quality

The following are the U.S. Environmental Protection Agency's (EPA) comments on the April 2023 document titled *2022 Annual Groundwater Monitoring Report* prepared by Jacobs Engineering Group Inc. (Jacobs) on behalf of Northwest Pipe Company (Northwest Pipe). The Northwest Pipe Company facility (site) is located at 12005 North Burgard Road, Portland, Oregon, near river mile 4 east of the Portland Harbor Superfund Site (PHSS). The site is listed in the Oregon Department of Environmental Quality (DEQ) Environmental Cleanup Site Information (ECSI) as ECSI #138. The site groundwater is hydraulically upgradient from the Port of Portland's Terminal 4 facility in a southerly direction from the site. The site is listed in DEQ's upland reports and the PHSS record of decision (ROD) as having a shallow groundwater plume which contains volatile organic compounds (VOCs) at concentrations that exceed the EPA ROD cleanup levels (CULs). Groundwater from the site discharges to the sediment management area (SMA) at the Terminal 4 Slip 1 at approximately river mile 4.3 East.

EPA comments are categorized "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.

To Be Considered

1. The approach of using monitoring well MW-02 as a reference for comparison of background concentrations in evaluating geochemical conditions at the site should be reassessed by evaluating the presence of VOCs in groundwater at MW-02. Based on the potentiometric surface maps presented in this report, MW-02 is located cross gradient or downgradient of source area groundwater contamination at MW-05 and MW-06, with respect to the hydraulic gradient that varies seasonally (Figures 3-1 and 3-2). The most recent sampling indicates the VOC plume is impacting groundwater at this well and may indicate biodegradation.
2. To best support assessment of the functioning biodegradation, the information used with application of the EPA 1998 anaerobic biodegradation process worksheet should focus on wells within or adjacent to the margins of the plume. Screening the Port of Portland downgradient well data against the criteria does not provide meaningful information because VOCs have not been detected at these wells since 2017 and their role might best be as "sentinel" wells to confirm no further migration of VOCs.

3. Executive Summary, second bullet – Clarify the statement that “Groundwater flow observations in 2022 show the plume is stable.” It is not clear whether the statement is referring to potentiometric surface maps, hydraulic gradient directions, or other conditions affecting migration of VOCs in the groundwater plume.
4. Section 2.1 Monitoring Network, seventh bullet – Describe the expected extent of the high permeability zone around MW-05.
5. Section 2.2 Groundwater Monitoring Frequency, second paragraph – Identify the timing and rationale for the 2024 annual monitoring events. Alternatively, explain when this schedule will be determined.
6. Section 2.2 Groundwater Monitoring Frequency, second paragraph – Include in the report an evaluation of seasonality of the VOC concentrations in groundwater at the MNA network and estimates of attenuation rates for key constituents.
7. Section 3.3 Data Quality Review – Include the groundwater sampling field forms for purging, sampling, and equipment calibration as an attachment to this and future groundwater monitoring reports.
8. Section 4, Review of the Southeast Area Conceptual Site Model, first paragraph – Reference the document and data that are the basis for the statement that “sampling at the Site determined that VOCs do not extend below the confining layer.”
9. Section 4.1 Hydrologic Setting, last paragraph – Add discussion of potential groundwater flow to the west and northwest in the vicinity of MW-06, MW-05, and MW-02, as indicated in the potentiometric surface maps presented in Figure 3-1 and 3-2. The report should include a discussion of potential affect to VOC transport by the localized horizontal hydraulic gradient shown on the figures.
10. Section 4.2 Geochemical Environment, second paragraph – Clarify the statement that “the alkalinity is sufficient for buffering the pH against acids naturally produced by bacteria during biodegradation.” Table 3-2 indicates that alkalinity was not monitored.

References

U.S. Environmental Protection Agency (EPA). 1998. *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water*. United States Environmental Protection Agency Office of Research and Development. EPA/600/R- 98/128. September.