UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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SUPERFUND &
EMERGENCY
MANAGEMENT DIVISION

MEMORANDUM

DATE: February 16, 2022

SUBJECT: Draft Monitored Natural Attenuation Evaluation Workplan
Northwest Pipe Company Facility, Portland, OR
ECSI #138
January 2022

FROM: Benjamin Leake, PMP BJL
Remedial Project Manager

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

Following are the U.S. Environmental Protection Agency (EPA) comments on the January 2022 document titled *Draft Monitored Natural Attenuation Evaluation Workplan* (Workplan). Jacobs, on behalf of Northwest Pipe Company (Northwest Pipe), prepared the Workplan. The Northwest Pipe Company facility (hereinafter referred to as the 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 (referred to as ECSI) as #138. The Site is an upland area located within Burgard Industrial Park at 12005 North Burgard Way, Portland, Oregon. The Site groundwater is hydraulically upgradient from the Port of Portland's Terminal 4 facility in a southerly direction for the site. The site does not have a riverbank but is listed in DEQ's upland reports and the Portland Harbor Superfund Site (PHSS) Record of Decision (ROD) as having a shallow groundwater plume which contains volatile organic compounds (VOCs) at concentrations that exceed the U.S. Environmental Protection Agency (EPA) Record of Decision (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 E. The stormwater conveyances collect and discharge water towards the north into surface water of the International Slip (IT Slip) on the Willamette River.

EPA understands that the purpose of this Monitored Natural Attenuation (MNA) Evaluation Workplan is to evaluate if natural attenuation of VOCs in the shallow groundwater at the Southeast Area is an appropriate and functional source control measure to contain VOCs and prevent the adverse effects to the Willamette River and the planned in-water remedy at the SMA.

EPA comments are categorized 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

EPA has no primary comments and is in general agreement with the proposed monitoring well locations, analytical program, sampling frequency, and reporting as outlined in the Workplan.

To Be Considered Comments

1. Section 6.2, first paragraph of the Sampling and Analysis Plan (SAP), included as Appendix B, states that purging and sampling will be conducted using a peristaltic pump. According to EPA Guidance on low stress purging and sampling procedures, adjustable rate, peristaltic pumps (suction) are to be used with caution when collecting samples for VOCs and dissolved gas (e.g., methane, carbon dioxide, etc.) analyses (EPA 2017). Additional information on the use of peristaltic pumps can be found in Appendix A of the referenced guidance document. Peristaltic pumps can cause degassing resulting in alteration of pH, alkalinity, and some volatiles loss and sampling techniques should carefully consider potential impacts on the results. EPA considers the use of a peristaltic pump for the collection of groundwater samples acceptable for meeting the objectives of this study, but the SAP should discuss potential limitations of using a peristaltic pump to purge and sample the monitoring wells with respect to potential loss of VOCs, dissolved gasses, and alteration of groundwater geochemistry results.

2. Section 6.2, third paragraph states that the pumping rate used for sample collection will be approximately 0.1 liter per minute or less; however, in the second paragraph the text states purging flow rates will be in the range of 0.1 to 0.3 liter per minute. The text should clarify that the sampling flow rate should be equal to the flow rate used for purging whenever possible. Stabilization of the measurements of drawdown, pH, specific conductance, dissolved oxygen, turbidity, and temperature are an indicator of an equilibrium condition. Therefore, sample collection should be conducted at the same flow rate used during purging, when possible, to preserve the equilibrium condition represented by stabilized parameters measured during purging. If the pump's flow rate is too high to collect the VOC/dissolved gases samples, collect the other samples first, then lower the pump's flow rate to a reasonable rate and collect the VOC/dissolved gases samples and record the new flow rate.

3. Section 7.1, Field Instrument Decontamination, should be revised to say that instruments coming into contact with groundwater should be decontaminated with an Alconox wash and distilled water rinse between monitoring sites in order to minimize the potential of cross contamination between monitoring wells.

4. Consider revision of Section 7, Sample Handling and Quality Assurance to include discussion of the water level indicator, which is a non-disposable field instrument that comes into contact with groundwater in-between sampling locations. Decontamination of the water level indicator using an Alconox wash and distilled water rinse in between sampling locations is considered adequate to prevent cross contamination and collection of an equipment blank is not required.

5. Consider adding an Appendix to the SAP containing copy of the field form that will be used to collect measurements during purging and sampling.

Matters of Style Comments

1. Section 6.2, second paragraph, fourth sentence states "The initial measurements of pH, specific conductance, dissolved oxygen, turbidity, and temperature of the purge water will be observed and recorded in the field logbook or sampling log for the well." This sentence should be revised to include the measurement of oxidation reduction potential (ORP).

References

EPA 2017. *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples From Monitoring Wells.* Quality Assurance Unit U.S. Environmental Protection Agency – Region 1. EQASOP-GW4 Region 1 Low-Stress (Low-Flow) SOP Revision Number: 4. July 30, 1996. Revised September 19, 2017. Accessed online January 20, 2022 at: https://www.epa.gov/sites/default/files/2017-10/documents/eqasop-gw4.pdf