HAHN AND ASSOCIATES, INC.

ENVIRONMENTAL CONSULTANTS

November 16, 2020

Mr. Dana Bayuk Oregon Department of Environmental Quality Northwest Region, Portland Office Portland Harbor Section 700 NE Multnomah Street, #600 Portland, Oregon 97232

HAI Project No. 2708 DEQ ECSI File No. 84

SUBJECT: Progress Report, NW Natural Site, 7900 NW St. Helens Avenue and 7200 NW Front Avenue, Portland, Oregon

Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report to summarize Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural relating to historic manufactured gas plant (MGP) activities at the NW Natural Site during the month of October 2020. NW Natural is completing upland investigation and cleanup activities at the NW Natural Site under the Voluntary Agreement No. ECVC-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

1. ACTIONS TAKEN UNDER THE VOLUNTARY AGREEMENT DURING THE PREVIOUS MONTH

Tasks related to maintenance of the HC&C system and the groundwater treatment system were conducted during October 2020, with the system operating in full long-term operational mode.

A total of 9,548,600 gallons of water were treated in the on-site groundwater treatment plant and discharged during October 2020 with all monitoring and reporting completed in accordance with the facility's NPDES permit.

HAI field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at Fill WBZ well locations MW-6-32 and MW-13-30 occurred during October 2020. The system recovered approximately 41 gallons of fluids in October, estimated to be between 30% and 40% DNAPL.

Weekly manual water level measurements within the former Koppers tank basin and select adjacent wells and piezometers were completed during October 2020.

Baseline DNAPL removal as needed to maintain levels below the top of the well sumps was conducted by Anchor QEA during October 2020 in the following wells near the river shoreline.

- MW-18-30
- MW-26U
- MW-27U
- MW-PW2L

- PW-2L
- PW-6U
- PW-13U

Routine groundwater monitoring activities as part of the Integrated Groundwater Monitoring Program, initiated in September 2020, continued through October 2020.

The installation of new extraction well PW-8Ub was initiated in October 2020.

The following upland FS related field tasks were in progress during October 2020:

 Weekly measurements of DNAPL presence at Fill WBZ wells MW-43F, MW-44F, and MW-45F have been conducted since September 2017. During October, measurements recorded up to 0.02 feet of DNAPL in the base of well MW-43F (black; high viscosity appearance); 0.02 feet of DNAPL within well MW-44F (black oily sediment on probe tip); and up to 1.6 feet of DNAPL within well MW-45F (brown; low viscosity appearance).

2. ACTIONS SCHEDULED TO BE TAKEN IN THE NEXT MONTH

NW Natural and DEQ technical working group communications and meetings will occur as needed within the next month to discuss ongoing project tasks.

Routine baseline DNAPL measurements and removal will continue as needed to maintain levels below the top of the well sumps in nearshore HC&C-related wells.

Tasks related to routine maintenance of the HC&C system and the groundwater treatment system will be conducted.

Weekly manual water level measurements within the former Koppers tank basin and select adjacent wells or piezometers will be conducted.

A DNAPL sample will be collected for laboratory DNAPL mobility assessment testing from wells MW-43F and MW-44F should measurable thicknesses / sufficient volumes be identified at these locations during this timeframe. It is estimated that a minimum thickness of 0.5 feet of DNAPL accumulation will be necessary in order to collect sufficient sample volume for the laboratory.

Routine groundwater monitoring activities as part of the Integrated Groundwater Monitoring Program, initiated in September 2020, will be completed during November.

Construction of the Fill Water Bearing Zone interceptor trenches will be initiated in November (initiated during the week of November 2, 2020).

3. LABORATORY TEST RESULTS RECEIVED DURING THE PREVIOUS MONTH

NW Natural receives test results on a regular basis as a result of routine monitoring related to groundwater quality or as specified by various permit requirements. Additionally, test results are periodically received through implementation of task-specific investigation activities resulting from agency-approved work plans. These data are provided to DEQ or the permitting authority (if different than DEQ) in accordance with previously approved formats and schedules.

4. PROBLEMS EXPERIENCED DURING THE PREVIOUS MONTH

There were no problems of significance experienced during the previous month.

Should you have any questions, please contact the undersigned.

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