

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

December 15, 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 November 2020. NW Natural is completing upland investigation and cleanup activities at the NW Natural Site under the Voluntary Agreement No. ECVV-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 November 2020, with the system operating in full long-term operational mode.

A total of 8,823,865 gallons of water were treated in the on-site groundwater treatment plant and discharged during November 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 November 2020. The system recovered approximately 45 gallons of fluids in November, 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 November 2020.

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

- MW-26U
- MW-27U
- MW-38U

- PW-2L
- PW-6U

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

Construction of the Fill Water Bearing Zone interceptor trenches was completed during November 2020. Plumbing to, and expansion of, the NW Natural groundwater pre-treatment system, as necessary to bring trenches on-line, were conducted during November 2020.

The installation of new extraction well PW-8Ub including pump placement was completed during November 2020.

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

- Weekly measurements of DNAPL presence at Fill WBZ wells MW-43F, MW-44F, and MW-45F have been conducted since September 2017. During November, 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 1.5 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.

Newly installed extraction well PW-8Ub will be connected to the HC&C system and operation will be initiated during December 2020.

Former extraction well PW-8-39, replaced by PW-8Ub, will be decommissioned during December 2020.

Pumps, piping, and controls will be installed within Fill WBZ trenches during December 2020. Plumbing and expansion of the NW Natural groundwater pre-treatment system, as necessary to bring Fill Water Bearing Zone interceptor trenches on-line, will continue through December.

3. LABORATORY TEST RESULTS RECEIVED DURING THE PREVIOUS MONTH

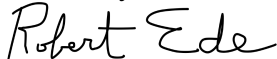
NW Natural receives test results on a regular basis as a result of routine monitoring related to groundwater quality or as specified by various permit requirements. Additionally, test results are periodically received through implementation of task-specific investigation activities resulting from agency-approved 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.

Sincerely,



Rob Ede, R.G.
Principal

robe@hahnenv.com

cc: Mr. Bob Wyatt, NW Natural
Ms. Patty Dost, Pearl Legal Group PC
Ms. Sarah Riddle, Pearl Legal Group PC
Mr. John Edwards, Anchor QEA, L.L.C.
Mr. Ben Hung, Coalition Environmental LLC
Mr. Ryan Barth, Anchor QEA, L.L.C.
Ms. Halah Voges, Anchor QEA, L.L.C.
Ms. Jen Mott, Anchor QEA, L.L.C.
Mr. John Renda, Anchor QEA, L.L.C.
Mr. Tim Stone, Anchor QEA, L.L.C.
Mr. Todd Thornburg, Anchor QEA, L.L.C.
Ms. Grace Weatherford, Anchor QEA, L.L.C.
Mr. Chip Byrd, Severson Environmental Services, Inc.
Mr. Henning Larsen, DEQ NW Region
Mr. Paul Seidel, DEQ NW Region
Mr. Dan Hafley, DEQ NW Region
Ms. Jennifer Peterson, DEQ NW Region
Mr. Mike Poulsen, DEQ NW Region
Mr. Myron Burr, Siltronic Corporation
Mr. Mike Murray, Maul Foster & Alongi, Inc.
Ms. Mary Benzinger, Maul Foster & Alongi, Inc.
Ms. Kelly Titkemeier, Maul Foster & Alongi, Inc.
Mr. David Rabbino, Jordan Ramis, PC
Mr. Hunter Young, Region 10 EPA
Mr. Lance Peterson, CDM, Inc.