

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

April 15, 2014

Mr. Dana Bayuk
Oregon Department of Environmental Quality
Northwest Region, Portland Office
Portland Harbor Section
2020 SW Fourth Avenue, Suite 400
Portland Oregon 97201-4987

HAI Project No. 2708
DEQ ECSI File No. 84

SUBJECT: Progress Report, NW Natural Gasco Property, 7900 NW St. Helens Avenue, Portland, Oregon

Dear Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report summarizing Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural that have occurred relating to the Gasco property during the month of March 2014. NW Natural is completing upland investigatory activities at the subject property under the Voluntary Agreement No. ECVC-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

1.0 Communications and Document Submittals

In correspondence dated March 6, 2014 (Rob Ede to Dana Bayuk), HAI provided notice of pending field activities related to the implementation of the Integrated Groundwater Monitoring Program in March 2014.

In correspondence dated March 12, 2014 (Dana Bayuk to Rob Ede), DEQ provided acknowledgement of receiving notice from NW Natural related to implementation of the Integrated Groundwater Monitoring Program.

In correspondence dated March 13, 2014 (Ben Hung to Dana Bayuk), NW Natural proposed that the standing Gasco Technical meeting be cancelled. DEQ agreed with NW Natural's proposal in e-mail correspondence on the same day.

In correspondence dated March 14, 2014 (Rob Ede to Dana Bayuk), HAI transmitted responses to the February 28, 2014 DEQ letter regarding implementation of field sampling plans approving completion of NW Natural's RI on the Siltronic property.

A Program Management Implementation meeting was conducted with DEQ on March 20 to discuss the NW Natural program management and project schedules.

In e-mail correspondence dated March 17, 2014 (Dana Bayuk to Ben Hung), DEQ indicated that comments from review of the Draft Human and Ecological Risk Assessment Report will be delivered on March 31 instead of March 19, 2014.

In e-mail correspondence dated March 17, 2014 (Dana Bayuk to Ben Hung), DEQ provided NW Natural with Geosyntec's project progress and billings reports for assisting DEQ with the Gasco human health and ecological risk assessment.

In correspondence dated March 18, 2014 (John Edwards to Dana Bayuk) Anchor QEA provided a model assumption limitations table to DEQ for use during discussions with DEQ on March 19, 2014.

During a conference call on March 19th, Anchor QEA and DEQ discussed the model assumptions limitation table provided on March 18, 2014, as well as other technical issues related to finalization of the Groundwater Model Update Report.

A Program Management Implementation meeting was conducted with DEQ on March 20 to discuss the NW Natural program management and project schedules.

In correspondence dated March 21, 2014 (Rob Ede to Dana Bayuk), HAI transmitted documentation related to NW Natural's intended excavation and disposal of soils as related to a pipeline inspection and repair project on the Gasco and Siltronic properties.

In correspondence dated March 21, 2014 (John Edwards to Dana Bayuk) Anchor QEA documented an agreement with DEQ regarding delivery of the *HC&C System Model Update Report* on March 25, 2014.

In correspondence dated March 25, 2014 (Pradeep Mugunthan to Dana Bayuk), Anchor QEA, on behalf of NW Natural, submitted the *Final Hydraulic Source Control and Containment System Groundwater Model Update Report* in response to a February 13, 2014 DEQ comment letter.

In correspondence dated March 28, 2014 (Tim Stone to Dana Bayuk), Anchor QEA, on behalf of NW Natural, submitted a spill release report for the 42-inch pipe encountered during construction of the Gasco groundwater treatment plant.

In correspondence dated March 31, 2014 (Dana Bayuk to Ben Hung) DEQ indicated that comments from review of the Draft Human and Ecological Risk Assessment Report will be delivered in April instead of March 2014.

2.0 Field Work

Groundwater sampling activities as described within the Integrated Groundwater Monitoring Program (combined HC&C system Performance Monitoring and the Routine Monitoring Programs) were completed on behalf on NW Natural in March by representatives of Anchor QEA and HAI.

HAI field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at surficial fill well locations MW-6-32 and MW-13-30 occurred during March. The system recovered approximately 53 gallons of fluids, primarily DNAPL, during this time.

Tasks related to optimization of the hydraulic control and containment system and the wastewater treatment system were conducted in March 2014, including completion of the Phase 1 Step 4 -0.3 foot set-point test (ended March 10, 2014), followed by continued operation and testing.

Baseline DNAPL removal as needed to maintain at levels below the tops of the well sumps, was conducted by Anchor QEA in the following wells near the river shoreline.

- PW-01-80
- PW-2L
- MW-PW2L
- MW-38U

Discharge of treated water to the City of Portland sanitary sewer was initiated on March 16, 2007 under Industrial Wastewater Discharge Permit 500.022 (expires February 15,

2017). Results from NW Natural's effluent sampling are provided to BES in Discharge Monitoring Reports that are submitted for any month that effluent sampling occurs – which is at least quarterly in accordance with the permit. As of March 31, 2014 a total of 4,749,977 gallons of treated water have been discharged to the sanitary sewer in 2014, of which 2,454,723 gallons were treated groundwater from the LNG containment basin, with the remainder being treated groundwater from the source control extraction system.

On February 17, 2014, NW Natural began discharging treated groundwater from the source control extraction system to the river under National Pollutant Discharge Elimination System (NPDES) Permit No. 103061 (expires August 31, 2018). On March 31, 2014 NW Natural also discontinued discharges of treated groundwater from the LNG basin to the sanitary sewer, with all water being directed to NW Natural's on-site wastewater treatment plant followed by discharge to the Willamette River via permitted outfall. Results from NW Natural's NPDES effluent sampling are provided to DEQ in Discharge Monitoring Reports that are submitted on a monthly basis in accordance with the permit. As of March 31, 2014 a total of 6,310,722 gallons of treated water were discharged under the NPDES permit.

The existing (now dormant) treatment system plumbed to the sanitary sewer as described in Industrial Wastewater Discharge Permit 500.022 will be maintained as a backup through May 2014, subsequent to which it is tentatively scheduled for decommissioning and removal from the site.

3.0 Anticipated Activities April and May 2014

NW Natural and DEQ technical working group communications and meetings are anticipated to occur as needed during April and May 2014 to discuss ongoing project tasks.

Field activities associated with approved RI Field Sampling Plans related to Historical Manufactured Gas Plant Activities at the Siltronic property are anticipated to be completed by NW Natural during the referenced timeframe, contingent upon DEQ confirmation as requested in NW Natural's March 14, 2014 correspondence.

Piezometers approved by DEQ for installation within the Willamette River as part of the HC&C Performance Monitoring Program are anticipated to be installed by NW Natural during the referenced timeframe assuming river levels stay sufficiently high to maintain barge access (initiated April 2014).

The following reports and work plans for the Site have been submitted to DEQ through the date of this progress report. Unless otherwise noted, NW Natural has not received DEQ comments on these documents.

- *Gasco Upland Human Health and Ecological Risk Assessment Report*, dated October 24, 2013, Anchor QEA. (Preliminary comments received December 12, 2013). Most recently, DEQ has stated that comments will be provided at the end of April.
- *Fill Water-Bearing Zone Trench Investigation Work Plan*, dated November 18, 2013, Anchor QEA. DEQ has not at this time provided a specific date by which comments from review of this document will be provided.
- NW Natural's March 14, 2014 Responses to a February 28, 2014 DEQ letter providing approval for implementation of field sampling plans related to completion of NW Natural's RI on the Siltronic property. NW Natural has asked

for verification from DEQ on several items prior to implementation of the DNAPL and Doane Creek-related FSPs.

- *Final Hydraulic Source Control and Containment System Groundwater Model Update Report*, dated March 25, 2014, Anchor QEA.

Should you have any questions, please contact the undersigned.

Sincerely,



Rob Ede, R.G.
Principal

robe@hahnenv.com

- c:
- Mr. Bob Wyatt, NW Natural (electronic only)
 - Ms. Patty Dost, Pearl Legal Group PC (electronic only)
 - Ms. Sarah Riddle, Pearl Legal Group PC (electronic only)
 - Mr. Carl Stivers, Anchor QEA, L.L.C. (electronic only)
 - Mr. John Edwards, Anchor QEA, L.L.C. (electronic only)
 - Mr. Ben Hung, Anchor QEA, L.L.C. (electronic only)
 - Mr. Ryan Barth, Anchor QEA, L.L.C. (electronic only)
 - Mr. Henning Larsen, DEQ NW Region (electronic only)
 - Mr. Tom Gainer, DEQ NW Region (electronic only)
 - Mr. Keith Johnson, DEQ NW Region (electronic only)
 - Mr. Myron Burr, Siltronic Corporation (electronic only)
 - Ms. Kristine Koch, Region 10 EPA (electronic only)
 - Mr. Sean Sheldrake, Region 10 EPA (electronic only)
 - Mr. Rene Fuentes, Region 10 EPA (electronic only)
 - Mr. Chip Humphrey, Region 10 EPA (electronic only)
 - Mr. Lance Peterson, CDM, Inc. (electronic only)