

**HAHN AND ASSOCIATES, INC.**  
ENVIRONMENTAL CONSULTANTS

September 16, 2013

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 August 2013. 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 memoranda dated August 5, 12, 19, and 26 (John Renda to Dana Bayuk) Anchor QEA provided DEQ with weekly updates and field work notifications as related to the Gasco source control construction progress.

In e-mail correspondence dated August 1, 2013 (John Edwards to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted the *Groundwater Source Control Extraction System Test Plan*.

In e-mail correspondence dated August 5, 2013 (Dana Bayuk to John Edwards and Matt Wilson), DEQ provided comments and conditional approval from review of the Anchor QEA Memorandum entitled *Review of TarGOST Monitoring Areas, Gasco Site, Portland Oregon*, dated July 3, 2013.

Program Management Implementation meetings were conducted with DEQ on August 8 and August 22, 2013 to discuss the NW Natural program management and project schedules.

In correspondence dated August 12, 2013 (Dana Bayuk to John Edwards), DEQ provided preliminary comments from review of the Anchor QEA documents entitled *Groundwater Source Control Extraction System Test Plan*, dated July 2013 and the *Hydraulic Source Control and Containment System Groundwater Model Update Report - NW Natural Gasco Site*, dated August 2013.

In correspondence dated August 14, 2013 (Dana Bayuk to John Edwards), DEQ provided comments on, and conditional approval of, the Anchor QEA document entitled *PZ-PW10L and PZ-PW2L Piezometer Installation Work Plan – NW Natural Gasco Site*, dated July 2013. Anchor QEA accepted the conditions of the approval in e-mail correspondence dated August 20, 2013 (John Renda to Dana Bayuk), with DEQ

confirming the approval in correspondence date August 23, 2013 (Dana Bayuk to John Renda).

A teleconference with representatives of NW Natural, Siltronic, DEQ, and EPA was conducted on August 14, 2013 to discuss technical items and scheduling as related to upland source control construction and implementation.

On August 14, representatives of Anchor QEA and Severson Environmental Services met with Darryl Hughes, the Portland Bureau of Environmental Services manager for the NW Natural wastewater discharge permit. The meeting was held to discuss and confirm plans to discharge to the POTW during startup and initial testing of the HC&C and treatment system.

Anchor QEA presented a workshop on August 15, 2013 to representatives of DEQ and EPA to review and describe the *Groundwater Model Update Report* and the *Source Control Extraction System Test Plan*.

In correspondence dated August 19, 2013 (Rob Ede to Dana Bayuk), HAI, on behalf of NW Natural, transmitted the August 16, 2013 *Memorandum – Wastewater Treatment Plant Construction Excavation Activities*, documenting DEQ-required soil removal activities completed beneath the footprint of the wastewater treatment plant building.

In correspondence dated August 21, 2013 (Tim Stone to Cory LaVelle), Anchor QEA provided waste profile documentation to Trictor Rig, LLC for the disposal of an estimated 1,000 cubic yards of soil generated during installation of utility corridors within the MGP-only area during construction of NW Natural's groundwater source control system at the Gasco property.

In correspondence dated August 21, 2013 (Tim Stone to Cory LaVelle), Anchor QEA provided waste profile documentation to Trictor Rig, LLC for the disposal of an estimated 1,000 cubic yards of soil generated during installation of utility corridors within the trichloroethene contaminated media management area during construction of NW Natural's groundwater source control system at the Gasco and Siltronic properties.

In e-mail correspondence dated August 22, 2013 (Rob Ede to Dana Bayuk), HAI provided notification to DEQ of pending field activities (water level and DNAPL measurements) to be conducted by NW Natural at the Gasco and Siltronic properties.

Several emails were exchanged and teleconferences occurred between DEQ and NW Natural/Anchor QEA in August related to the source control test plan and process schedule. Correspondence dated August 23, 2013 (John Edwards to Dana Bayuk) provided the final draft schedule as agreed to by DEQ and Anchor QEA/NW Natural.

In e-mail correspondence dated August 23, 2013 (Dana Bayuk to Rob Ede), DEQ acknowledged HAI's August 22, 2013 field work notification and the understanding that the routine groundwater monitoring event scheduled for September would instead be completed within approximately 3 months of starting the initial phase of source control testing.

In correspondence dated August 23, 2013 (Dana Bayuk to John Edwards), DEQ provided comments and conditional approval the June 2013 *Fill WBZ Investigation Work Plan – Gasco/Siltronic*.

## 2.0 Field Work

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 August. The system recovered 24 gallons of fluids, primarily DNAPL, during this time.

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-16-45
- MW-18-30
- MW-34L
- MW-38U

Discharge of treated water (groundwater from the LNG containment basin) to the City of Portland sanitary sewer was initiated on March 16, 2007 under Temporary 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 August 30, 2013 a total of 4,806,626 gallons of treated water have been discharged to the sanitary sewer in 2013.

The Third Quarter 2013 routine groundwater monitoring event was completed by NW Natural in August with groundwater level and DNAPL measurements collected at the NW Natural and Siltronic properties on August 30, 2013.

Construction of the groundwater source control extraction system and wastewater treatment system continued during August. A summary of the source control construction work completed each week and the work anticipated over the next two-week period is provided in weekly memoranda to DEQ.

## 3.0 Anticipated Activities in September and October 2013

NW Natural and DEQ technical working group communications and meetings are anticipated to occur as needed during September and October 2013 to discuss ongoing project tasks.

Construction and system start-up testing related to the groundwater source control system will be conducted during this timeframe, as described in weekly Gasco source control construction progress updates.

Baseline DNAPL monitoring and removal, as needed to maintain at levels below the tops of the well sumps, will be conducted during the September and October timeframe.

Sampling of new wells and piezometers installed as part of the hydraulic source control performance monitoring program will be completed during September.

Preparation of the Upland Human Health and Ecological Risk Assessments will occur during September and October. The risk assessment will be submitted to DEQ by October 24, 2013.

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.

- *Source Control Evaluation Report, "Segment 3" Siltronic Property Related to NW Natural "Gasco" Site*, February 19, 2009, Anchor QEA.
- *Final Stormwater Source Control Data Summary Report*, September 2010, Anchor QEA.
- *Remedial Investigation Data Summary Report, Historical Manufactured Gas Plant Activities, Siltronic Corporation Property*, March 31, 2011, HAI.
- *Supplemental Remedial Investigation Field Sampling Activities, Doane Creek Embankment Soil and Sediment, Siltronic Corporation Property*, dated March 29, 2012 (HAI, 2012).
- *Supplemental Remedial Investigation Field Sampling Activities, DNAPL Characterization, Siltronic Corporation Property*, dated April 23, 2012 (HAI, 2012).
- *Request for Concurrence: Discharge of Groundwater Monitoring Purge Water, NW Natural – Gasco Property*, dated May 24, 2012 (HAI, 2012).
- *Supplemental Remedial Investigation Field Sampling Activities, Groundwater Monitoring Well Installations, Siltronic Corporation Property*, dated July 23, 2012 (HAI, 2012).
- *Memorandum – Wastewater Treatment Plant Construction Excavation Activities*, dated August 16, 2013 (HAI, 2013).
- *Revised Groundwater Source Control Extraction System Test Plan, NW Natural Gasco Site*, dated September 2013 (Anchor QEA, 2013)

Should you have any questions, please contact the undersigned.

Sincerely,



Rob Ede, R.G.  
Principal

robe@hahnenv.com

- c: Ms. Sandra Hart, NW Natural (electronic only)
- 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. Tom McCue, 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)