

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

October 15, 2012

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 September 2012. 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 e-mail correspondence dated September 10, 2012 (Dana Bayuk to Rob Ede), DEQ acknowledged receipt of adequate notice concerning initiation of field work related to the third quarter 2012 groundwater monitoring event. In the same e-mail, and with one exception, DEQ approved revisions to the groundwater monitoring program as outlined in HAI correspondence dated August 14, 2012. DEQ approved all requested modifications with the exception of the removal of thallium from the analyte list.

Anchor QEA, on behalf of NW Natural, submitted a memorandum to DEQ dated September 12, 2012 (Mike Riley to Dana Bayuk) entitled *Additional Analyses Related to the August 1, 2012 Summary Reporting of Upper Alluvium Extraction Well Installation, Development, and Step Testing*.

In e-mail correspondence dated September 12, 2012 (Dana Bayuk to John Edwards) DEQ provided a response to an August 13, 2012 Anchor QEA memorandum entitled *Grain Size Test Results for Upper Alluvium Extraction Wells*. The email comments included DEQ approval of the upper alluvium extraction well design and approval to drill and install the remaining upper alluvium extraction wells. The email also included conditional approval to drill and install the remaining lower alluvium extraction wells.

In e-mail correspondence dated September 13, 2012 (Dana Bayuk to John Edwards) DEQ provided clarifying information related to DEQ's September 12, 2012 email. The email clarified that NW Natural was not approved to construct the upper alluvium extraction wells, and that approval was pending DEQ's review and approval of the MODFLOW modeling analysis of drawdown requested in DEQ's August 9, 2012 letter.

In e-mail correspondence dated September 14, 2012 (John Edwards to Dana Bayuk), Anchor QEA provided two memoranda responding to DEQ requests for information related to groundwater source control. A September 14 memorandum entitled *Analysis*

*of Drawdown in Upper Alluvium Wells under Low Water Level Conditions*, provides extraction well design information as requested in an August 9 DEQ comment letter, and a September 12 memorandum entitled *Additional Analyses Related to the August 1, 2012 Summary Report* responds to DEQ's request for additional information relative to the August 1 *Step Testing* Memorandum.

A Meeting with DEQ, EPA, City of Portland and NW Natural was conducted on September 17 to obtain an update on the DEQ review of the Gasco Risk Assessment Work Plan and to discuss technical items and scheduling related to source control design and construction. The City of Portland provided an update on the status of the permit for constructing the Gasco groundwater source control wastewater treatment plant building.

In correspondence dated September 24, 2012 (John Edwards to Dana Bayuk), Anchor QEA transmitted a letter to DEQ regarding construction of the Gasco Source Control Groundwater Treatment Plant.

In e-mail correspondence dated September 24, 2012 (Dana Bayuk to John Edwards), DEQ summarized two telephone conversations regarding extraction well design and installation and approval to construct extraction well PW-10-L.

In correspondence dated September 25, 2012 (Tim Stone to Hank Stukey), Anchor QEA provided profiling data to the disposal contractor for the disposal of investigation-derived soil wastes as non-hazardous petroleum-impacted soil at the Waste Management, Inc. Hillsboro Landfill.

In e-mail correspondence dated September 26, 2012 (Dana Bayuk to John Edwards), DEQ provided a summary of a September 25 teleconference and approval for NW Natural to proceed with installation of all alluvium WBZ groundwater extraction wells.

## **2.0 Field Work**

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 September. The system recovered approximately 15 gallons of fluids (primarily DNAPL) during September. The storage tank reached capacity in September and scheduling for product removal was conducted during the latter part of September. Approximately 0.5 gallons of DNAPL were manually removed from well PW-01-80 during September.

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 September 27, 2012 a total of 7,356,986 gallons of treated water have been discharged to the sanitary sewer in 2012.

The Third Quarter 2012 routine groundwater monitoring event was initiated on September 17 with collection of water levels from wells at Gasco and Siltronic. The groundwater level collection event was coordinated with representatives of Siltronic to coincide with measurements they were collecting from their well network the same day. Groundwater sample collection activities were completed by NW Natural at Gasco and Siltronic between September 18 and September 27, 2012, with completion to occur in October.

Temporary piezometers PZ-PW-2, PZ-PW-3, and monitoring well MW-17-79 were decommissioned by removal during September. Additionally, monitoring wells MW-21U, MW-22U, MW-23U, MW-25L, MW-26U, MW-31L, MW-31U, MW-35U, MW-36U, and OW-10F were installed as part of the groundwater source control performance monitoring well network.

### 3.0 Anticipated Activities in October and November 2012

NW Natural and DEQ technical working group communications and meetings are anticipated to occur as needed during October and November 2012 to work toward approval of proposed workplans and discuss ongoing project tasks.

Construction related activities associated with the groundwater source control system will be conducted during this timeframe. Permits for construction of the groundwater source control wastewater treatment plant building are expected to be approved by the City of Portland in mid-October, with building foundation preparations anticipated to commence shortly thereafter. DEQ approval of the treatment plant construction is anticipated on a similar timeline. Wastewater treatment plant construction is expected to begin during October and will continue into the first quarter of 2013. Installation of the approved alluvium water-bearing zone extraction wells is expected to commence in October and continue through December. Installation of the source control performance monitoring wells and piezometers will continue.

DEQ is presently reviewing information related to the Beneficial Water Use Determination for the Alluvium Water-Bearing Zone at Gasco as discussed during May and June. A decision or additional feedback is anticipated from DEQ during the specified timeframe.

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. Based on DEQ feedback, DEQ review of this document is prioritized behind reviews for Segments 1 and 2 Source Control Design documents and upland Risk Assessment-related reviews.
- *Final Stormwater Source Control Data Summary Report*, September 2010, Anchor QEA. Based on DEQ feedback, DEQ review of this document is prioritized behind reviews for Segments 1 and 2 source control design documents and upland risk assessment-related reviews.
- *Remedial Investigation Data Summary Report, Historical Manufactured Gas Plant Activities, Siltronic Corporation Property*, March 31, 2011, HAI. Based on DEQ feedback, it is understood that DEQ review is being conducted at this time, but the priority is lower than source control and risk assessment items.
- *Work Plan, Human Health and Ecological Risk Assessment, NW Natural Gasco Site, March 2012* (Anchor QEA, 2012).
- *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).*
- *Discharge of Groundwater Monitoring Purge Water, NW Natural – Gasco Property, dated May 24, 2012 (HAI, 2012).*
- *Intent to Dispose of Water Generated within the Trichloroethene Contaminated Media Management Area, dated July 18, 2012 (Anchor QEA, 2012)*
- *Supplemental Remedial Investigation Field Sampling Activities, Groundwater Monitoring Well Installations, Siltronic Corporation Property, dated July 23, 2012 (HAI, 2012).*

Should you have any questions, please contact the undersigned.

Sincerely,



Rob Ede, R.G.  
Principal

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- c:
- Ms. Sandra Hart, NW Natural (electronic only)
  - Mr. Bob Wyatt, NW Natural (electronic only)
  - Ms. Patty Dost, Pearl Legal Group PC (electronic only)
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  - 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)