

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

August 15, 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 July 2013. NW Natural is completing upland investigatory activities at the subject property under the Voluntary Agreement No. ECVV-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 July 1, 8, 15, 22 (John Renda to Dana Bayuk), and July 29, 2013 (Tim Stone 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 July 3, 2013 (John Renda to Dana Bayuk), Anchor QEA provided DEQ with a response to their June 20 summary of a June 17 source control meeting. The July 3 correspondence included a suggested agenda for the technical team meeting scheduled to occur on July 15.

In e-mail correspondence dated July 3, 2013 (John Edwards to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted the technical memorandum titled *Review of TarGOST Monitoring Areas, Gasco Site, Portland, Oregon* for DEQ consideration.

In e-mail correspondence dated July 9, 2013 (Dana Bayuk to Ben Hung), DEQ transmitted a proposed timeline for document review as related to the MGP RI on the Siltronic property.

In e-mail correspondence dated July 10, 2013 (Marty Folan to Mark Krening), Severson Environmental Services, Inc. (SES) provided waste profile documentation to Waste Management, Inc. for the disposal of an estimated 400 cubic yards of soil generated during installation of piping as part of wastewater treatment plant construction.

In e-mail correspondence dated July 12, 2013 (Dana Bayuk to Marty Folan), DEQ provided comments on the July 10, 2013 soil disposal profile and requested SES review and correct as needed certain of the information provided to Waste Management, Inc.

In e-mail correspondence dated July 12, 2013 (Marty Folan to Mark Krening), SES provided revised disposal profile documentation to Waste Management, Inc., superseding the July 10 SES request.

A meeting with representatives of NW Natural, Siltronic, DEQ, and EPA was conducted on July 15, 2013 to discuss technical items and scheduling as related to upland source control construction and implementation.

In correspondence dated July 16, 2013 (Tim Stone to Dana Bayuk), Anchor QEA provided testing results and a request for approval to treat approximately 35,000 gallons of water IDW generated within the TCE Contaminated Media Management Area (CMMA) through the onsite granular activated carbon (GAC) with subsequent permitted discharge to the sanitary sewer.

In correspondence dated July 23, 2013 (Dana Bayuk to Bob Wyatt), DEQ provided concurrence with the July 16, 2013 request to treat water IDW using on-site GAC units with subsequent discharge to the City sanitary sewer system.

In correspondence dated July 24, 2013 (Dana Bayuk to Taku Fuji), DEQ provided NW Natural/Anchor QEA the approved risk assessment tables and requested that NW Natural/Anchor QEA begin preparation of the risk assessments for the Gasco Uplands Site. In correspondence dated July 24, 2013 (Taku Fuji to Dana Bayuk), Anchor QEA, on behalf of NW Natural, accepted the DEQ submitted risk assessment tables and agreed to move forward with the preparation of the uplands risk assessments. The risk assessment will be submitted to DEQ by October 24, 2013.

Program Management Implementation meetings were conducted with DEQ on July 11 and July 25, 2013 to discuss the NW Natural program management and project schedules.

In e-mail correspondence dated July 29, 2013 (John Edwards to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted the *PZ-PW-10L and PZ-PW2L Piezometer Installation Work Plan* for DEQ consideration.

In e-mail correspondence dated July 29, 2013 (John Edwards to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted the *Hydraulic Source Control and Containment System Groundwater Model Update Report* for DEQ consideration.

In e-mail correspondence dated July 29, 2013 (John Edwards to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted the *Fill WBZ Investigation Work Plan* for DEQ consideration.

Several emails were exchanged and teleconferences occurred between DEQ and NW Natural/Anchor QEA in mid-to-late July related to technical items for moving forward with the uplands risk assessment.

A July 30, 2013 meeting was conducted at the Gasco property with representatives of NW Natural and DEQ for the purpose of reviewing and selecting primary and alternative TarGOST boring areas.

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 July. The system recovered 45 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 July 29, 2013 a total of 4,531,239 gallons of treated water have been discharged to the sanitary sewer in 2013.

Construction of the groundwater source control extraction system and wastewater treatment system continued during July. 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 August and September 2013

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

The *Groundwater Source Control Extraction System Test Plan* will be submitted to DEQ in August (submitted August 1, 2013).

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

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 August and September timeframe.

The third quarter 2013 routine groundwater monitoring event will be conducted by NW Natural at the Gasco and Siltronic properties during September 2013. The quarterly sampling of new wells and piezometers installed as part of the hydraulic source control performance monitoring program will also be completed during September.

Preparation of the Upland Human Health and Ecological Risk Assessments will occur during the August and September 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.

- *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).*
- *Fill WBZ Trench Investigation Work Plan Gasco/Siltronic, dated June 2013 (Anchor QEA, 2013).*
- *Memorandum: Review of TarGOST Monitoring Areas, Gasco Site, Portland, Oregon (Anchor QEA, 2013). DEQ approved in e-mail correspondence dated August 5, 2013.*
- *PZ-PW-10L and PZ-PW2L Piezometer Installation Work Plan, NW Natural Gasco Site, dated July 2013 (Anchor QEA, 2013). Dana Bayuk has provided preliminary verbal comments to John Renda (Anchor QEA). The document is also being reviewed by Oregon Water Resources Department.*
- *Hydraulic Source Control and Containment System Groundwater Model Update Report, NW Natural Gasco Site, dated July 2013 (Anchor QEA, 2013). DEQ provided preliminary comments to this document on August 12, 2013.*
- *Groundwater Source Control Extraction System Test Plan, NW Natural Gasco Site, dated August 2013 (Anchor QEA, 2013). DEQ provided preliminary comments to this document on August 12, 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)