

April 17, 2009

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 2009. NW Natural is completing upland investigatory activities at the subject property under the Voluntary Agreement No. ECVC-WMCVC-NWR-94-13 between NW Natural and the Oregon Department of Environmental Quality (DEQ).

**1.0 Communications and Document Submittals**

In correspondence dated March 3, 2009 (John Edwards to Dana Bayuk), Anchor QEA, on behalf of NW Natural, submitted a map and figures to DEQ as requested by the agency in a comment made to Section 4.5 of NW Natural's June 2008 *Preliminary Design Report, Groundwater Source Control*. The requested figures depict the planned source control capture zone as well as the nature and extent of potential manufactured gas plant (MGP)-related contaminants and chlorinated volatile organic compounds (VOCs) in groundwater.

A meeting was held with DEQ on March 5 to discuss the status of the Reasonable Potential Analysis (RPA) being conducted by DEQ for the source control groundwater treatment system.

A NW Natural/DEQ project coordination meeting, established to discuss technical issues related to upland risk assessment, feasibility study, and preliminary design and scheduling of groundwater/DNAPL source control activities, occurred on March 16, 2009. Further discussion concerning the RPA and the groundwater effluent discharge permit were completed during this meeting.

A Technical Memo prepared on behalf of NW Natural by Anchor QEA entitled *Evaluation of Potential DNAPL Mobilization in Former Effluent Pond Area by Shoreline Source Control Extraction Wells*, dated March 18, 2009 was submitted to DEQ on March 19, 2009.

In e-mail correspondence dated March 25, 2009 (Dana Bayuk to John Edwards, Carl Stivers, and Rob Ede), DEQ provided a reminder and clarification for submittal of electronic documents that meet EPA "web-ready" posting requirements.

In correspondence dated March 25, 2009 (Rob Ede to Dana Bayuk), HAI, on behalf of NW Natural, submitted to DEQ a summary of the proposed 2009 routine groundwater monitoring program for the Gasco and Siltronic properties.

In correspondence dated March 26, 2009 (John Edwards to Dana Bayuk), Anchor QEA, on behalf of NW Natural, submitted sixteen additional figures as requested by DEQ as being needed for completion of the agency's review of the October 2008 *Groundwater Flow Model and DNAPL Evaluation Supplement Report*. The Figures were based on additional Modflow model simulations and primarily depict groundwater gradient profiles at various additional locations and under various source control scenarios.

In e-mail correspondence dated March 27, 2009 (Dana Bayuk to John Edwards), DEQ provided several comments related to the data used for depiction of the chlorinated VOC plume on Figures submitted March 3, 2009. Although no revisions were requested for submittal, DEQ requested that the figures be updated consistent with DEQ's comments in the pending *Interim Source Control Design Report*.

## 2.0 □ Field Work

Field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at the surficial fill MW-6-32 well location occurred during March. Approximately 15 gallons of DNAPL / water was pumped from well MW-6-32 during March. Based on visual observations during select pumping cycles, it is estimated that approximately 25% of the liquid pumped in March was DNAPL.

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 September 15, 2009). Results of 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 every other month in accordance with the permit. As of March 26, 2009, a total of 19,528,847 gallons of treated water have been discharged to the sanitary sewer since initiation of the permit.

DNAPL sampling for physical and chemical property data collection purposes, as described in the January 16, 2009 *Technical Memorandum: Supplemental RI Activities, DNAPL Characterization, Siltronic Property*, were completed. DNAPL samples were collected from wells WS-10-27 and WS-15-85. No DNAPL was present in well WS-14-125, so no sample from that well was possible.

Sonic borehole drilling with soil and groundwater sampling as proposed in the RI Work Plan for the Siltronic property were initiated at that property on March 9, 2009 and were completed on March 23, 2009.

The First Quarter 2009 groundwater monitoring event for the Gasco property was initiated on March 25, 2009 with the collection of groundwater elevation data from all

wells. Groundwater sampling activities were conducted between March 26 and April 10, 2009. The monitoring event was conducted in accordance with the March 25, 2009 plan as submitted to DEQ (Rob Ede to Dana Bayuk), and verbally approved (first quarter event) by DEQ in a March 27, 2009 telephone conversation between Dana Bayuk and Rob Ede.

Ongoing visual sheen monitoring, consistent with a DEQ-approved monitoring plan, of the boom / sheen containment area immediately offshore of the Gasco/Siltronic property boundary were conducted throughout March.

### **3.0 Anticipated Activities in April and May 2009**

Meetings with NW Natural and DEQ will occur through April and May 2009 as needed to expedite discussions and resolution to issues concerning design of groundwater/DNAPL source control, as well as other project related items such as upland risk assessment and feasibility study activities.

A meeting with the City of Portland will occur on April 17, 2009 to discuss the possible extension of Temporary Wastewater Discharge Permit 500.022 (expires September 15, 2009) to accommodate continued treatment during the likely interval that would occur between temporary permit expiration and construction and operation of the new treatment system being designed as part of the groundwater/DNAPL source control program.

The next general meeting with DEQ is scheduled for April 20<sup>th</sup> at DEQ's office; the agenda for that meeting has not been established.

NW Natural and Koppers are working on an agreement to secure access to the Koppers Leasehold portion of the Gasco property for the purpose of stormwater sampling as per the November 30, 2007 *Source Control Data Gaps Work Plan, Section 2, Catch Basin Sediment and Stormwater Sample Collection, Processing, and Analysis Procedures*. NW Natural will schedule stormwater sampling for the remainder of the property after receipt of approval from DEQ on the October 23, 2008 *Draft Source Control Data Gaps Catch Basin Sediment Sampling Report*.

In April, Anchor QEA will submit a combined report covering sheen monitoring for the period of November 2008 through March 2009.

An Environmental Monitoring Report, to include groundwater elevation maps, DNAPL thickness measurements, and final laboratory data and validation reports for the third and fourth quarters of 2008 will be submitted to DEQ in early May.

Remedial Investigation activities anticipated to be conducted by NW Natural at the Siltronic property during the April / May 2009 timeframe include Doane Creek sampling-related activities with the assumption that access from BNSF is received and executed in April (agreement is pending and anticipated for late April). Further, with the approval of the bentonite-organoclay grout as a borehole sealant, a proposal for the abandonment of Gasco monitoring wells MW-13-61 and MW-16-125, both with suspected well seal failure, is anticipated to be available for submittal to DEQ during April/May timeframe.

Manual removal of DNAPL from surficial fill well MW-13-31 has been occurring at the Gasco site since August 2007. In an effort to enhance the removal of DNAPL at this location, NW Natural will expand the existing automated DNAPL recovery system at the nearby MW-6-32 location to include automated recovery from the MW-13-31 location. A pump was placed and tested at this location in September and plans and schematic depiction for the proposed plumbing and operation of the automated recovery at this location are presently under development and are expected to be submitted to DEQ for approval in late April or early May 2009.

The following activities in support of groundwater source control are in progress.

- Anchor QEA and Siltronic preparing a report of vibration test findings for DEQ
- Severson preparing a groundwater treatment system Pilot Test Plan for DEQ
- Anchor QEA preparing a Segment 2 Capture Zone Field Test Plan for DEQ

The following reports and work plans on the Site have been submitted to DEQ for review and comment.

- Revised Baseline Ecological and Human Health Risk Assessment Report, December 2004, Anchor Environmental, LLC.
- Groundwater Flow Model and DNAPL Evaluation Supplemental Report, October, 2008, Anchor Environmental, LLC.
- Draft Source Control Data Gaps Catch Basin Sediment Sampling Report, October 23, 2008 Anchor Environmental, LLC.
- Groundwater Source Control Treatability Testing, December 2008, Anchor Environmental, LLC.
- Source Control Evaluation Report, "Segment 3" Siltronic Property Related to NW Natural "Gasco" Site, February 19, 2009.
- *Evaluation of Potential DNAPL Mobilization in Former Effluent Pond Area by Shoreline Source Control Extraction Wells*, March 18, 2009.
- *Proposed 2009 Routine Groundwater Monitoring Program for Gasco and Siltronic Properties*, March 25, 2009.

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  
Mr. Bob Wyatt, NW Natural  
Ms. Patty Dost, Schwabe, Williamson & Wyatt  
Mr. Carl Stivers, Anchor Environmental, L.L.C.  
Mr. John Edwards, Anchor Environmental, L.L.C.  
Mr. Henning Larsen, DEQ NW Region  
Mr. Tom Gainer, DEQ NW Region (electronic only)  
Mr. Tom McCue, Siltronic Corporation  
Ms. Kristine Koch, Region 10 EPA (electronic only)  
Mr. Sean Sheldrake, Region 10 EPA (electronic only)  
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