

HAHN AND ASSOCIATES, INC.

ENVIRONMENTAL CONSULTANTS

March 18, 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 February 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

Written approval of the January 16, 2009 Technical Memorandum entitled *Supplemental RI Field Sampling Activities – DNAPL Characterization, Siltronic Property* was provided by DEQ in e-mail correspondence dated February 4, 2009 (Dana Bayuk to Bob Wyatt).

A monthly report entitled *Visual Monitoring Results for Sheen Offshore of the Gasco/Siltronic Property Boundary: October 1 through October 31, 2008*, prepared on behalf of NW Natural by Anchor QEA, LLC (Anchor QEA) was submitted to the DEQ on February 5, 2009 (Tim Stone to Dana Bayuk).

In correspondence dated February 10, 2009 (John Edwards to Dana Bayuk) Anchor QEA, on behalf of NW Natural, provided a response to DEQ's January 22, 2009 comment letter on the October 2008 *Gasco DNAPL Pilot Program Plan*.

In correspondence dated February 12, 2009 (Carl Stivers to Dana Bayuk), Anchor QEA, on behalf of NW Natural, provided a draft working Gasco Source Control schedule to DEQ. The schedule is meant to facilitate an understanding of the interrelationship of differing tasks and subtasks over time.

In correspondence dated February 19, 2009 (Rob Ede to Dana Bayuk), HAI, on behalf of NW Natural, provided DEQ with an electronic (pdf format) copy of *the Environmental Monitoring Report, Summer 2007 through Spring 2008, NW Natural, Gasco Property* dated February 19, 2009.

In correspondence dated February 19, 2009 (Chris Torell to Dana Bayuk), Anchor QEA, on behalf of NW Natural, provided a working draft Uplands Feasibility Study schedule to DEQ. The schedule was provided to facilitate discussion during the February project coordination meeting.

Anchor QEA, on behalf of NW Natural, submitted the document entitled *Source Control Evaluation Report, "Segment 3" Siltronic Property Related to NW Natural "Gasco" Site*, dated February 19, 2009.

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 February 23, 2009.

In correspondence dated February 25, 2009 (Dana Bayuk to John Edwards), and as a follow-up to the February 23 project coordination meeting, DEQ identified those figures that are needed for completion of the agency's review of the October 2008 *Groundwater Flow Model and DNAPL Evaluation Supplement Report*.

In correspondence dated February 27, 2009 (Rob Ede to Dana Bayuk) HAI provided characterization results and intended disposal disposition for soils generated during the assessment/repair of a leaking water line valve on the Kopper's Inc. Lease portion of the Gasco property. Disposal of these soils are awaiting DEQ concurrence with the waste characterization determination.

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 February. Approximately 33 gallons of DNAPL / water was pumped from well MW-6-32 during February. Based on visual observations during select pumping cycles, it is estimated that approximately 40% to 90% of the liquid pumped in February 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 February 25, 2009, a total of 18,963,386 gallons of treated water have been discharged to the sanitary sewer since initiation of the permit.

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 February.

Soil core and DNAPL sample collection as described within the January 16, 2009 Technical Memorandum entitled *Supplemental RI Field Sampling Activities – DNAPL Characterization, Siltronic Property* were completed during the first week of February.

Field implementation of the source control-related vibration study was completed in February, with active field testing initiated February 9, 2009 and completed on February 19. The active testing was preceded and followed by ambient monitoring.

3.0 Anticipated Activities in March and April 2009

Meetings with NW Natural and DEQ will occur through March and April 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 was held with DEQ on March 5 to discuss the status of the Reasonable Potential Analysis being conducted by DEQ for the source control groundwater treatment system. At the meeting DEQ proposed having another meeting in two weeks or so for the purpose of further discussing the RPA and groundwater effluent discharge permit. A discussion of the RPA and permit status could be combined with the general meeting on March 16.

The next general meeting with DEQ is scheduled for 1:30 on March 16 at DEQ's office; the agenda for that meeting has not been established.

The next quarterly groundwater monitoring event for the Gasco property (first quarter) is scheduled to commence in late March. An updated groundwater monitoring schedule for 2009 will be provided to DEQ for review prior to initiation of the March event.

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 April.

Remedial Investigation activities anticipated to be conducted by NW Natural at the Siltronic property during the March / April 2009 timeframe include Doane Creek sampling-related activities with the assumption that access from BNSF is received in March (agreement is pending and anticipated for March). Further, sonic drilling activities as proposed in the RI Work Plan will be scheduled for the March timeframe (initiated March 9 and estimated to continue for 2 weeks). Finally, 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 March/April 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 March 2009.

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

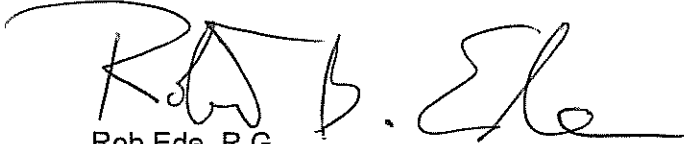
- Working to assist DEQ in their development of groundwater discharge effluent criteria
- Evaluating the data obtained during the vibration testing and preparing a report of findings
- Providing DEQ with the report, Evaluation of Potential DNAPL Mobilization, Anchor QEA, March, 2009
- Meeting with DEQ to discuss the status of the proposed DNAPL Removal Pilot Program

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.
- Request for Disposal of Petroleum-Contaminated Investigative and Construction-Derived Waste, December 3, 2008, Hahn and Associates, Inc.
- Source Control Evaluation Report, "Segment 3" Siltronic Property Related to NW Natural "Gasco" Site, February 19, 2009.
- Request for Disposal of Petroleum-Contaminated Construction-Derived Waste, Koppers Inc. Property, February 27, 2009, Hahn and Associates, Inc.

Should you have any questions, please contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Ede", with a large, sweeping flourish above the first name.

Rob Ede, R.G.
Principal

robe@hahnenv.com

- 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)
- Mr. Rene Fuentes, Region 10 EPA (electronic only)
- Mr. Eric Blischke, Region 10 EPA (electronic only)
- Mr. Chip Humphrey, Region 10 EPA (electronic only)