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Memorandum

To: Sean Sheldrake, U.S. Environmental Protection Agency
From: Ryan Barth and Carl Stivers, Anchor Environmental, L.L.C.
CC: Robert Wyatt, NW Natural
Patty Dost, Schwabe Williamson & Wyatt
Rick Wadsworth, Parametrix
Date: January 18, 2006
Re: January 3, 2006 Post-Construction Visual Monitoring Report, NW Natural Gasco Site, Portland, Oregon

On December 31, 2005 (email correspondence) the United States Environmental Protection Agency (EPA) requested that NW Natural conduct visual monitoring of the tar body removal area at the Gasco site (Site) due to the presence of heavy rains in the Portland area. Visual monitoring is a proposed element for long-term monitoring at the Site, but the Monitoring and Reporting Plan (MARF) is currently in draft form, so no visual monitoring has been conducted to date. Therefore, the requested visual monitoring was to be an interim monitoring activity during finalization of the MARF.

In accordance with EPA's request, Anchor field staff mobilized to the Site on January 3, 2005 from 16:10 to 16:50 to perform visual observations of the tar body removal area. The visual monitoring was conducted in accordance with the procedures discussed in the EPA-reviewed draft MARF. Observations were recorded on a Visual Observations Log Form designed specifically for this project (Attachment A). At the time of the Site visit, the temperature was between 40 – 45° F with a light steady rain and moderate wind from the east. Small, wind-generated ripples were observed in the tar body removal area. Visual observations were performed from the top of the bank and along the oil pipeline structure. Photographs (Attachment B) were taken and observations were made from a variety of vantage points to ensure visual coverage of the tar body removal area.

Monitoring occurred right before a daily low tide (17:07) and before, during, and after sunset (16:40). Although monitoring was conducted during a low tide, the shoreline cap extents, beach area, and riprap were completely underwater due to the high stage of the river. The water level was above the line of vegetation along the banks of the river. According to USGS real-time water data for gage 14211720 (Willamette River at Portland, OR; Attachment C), the gage height of the river at this time was approximately 13 feet NAVD 88. The river water was turbid and light brown in color. In addition, several very large logs (i.e., approximately 2 feet in diameter) and other wood debris were observed floating in the project area or otherwise snagged on pilings.

Given the high water level, observations of erosion/deposition of the cap and fringe cover were not physically possible. Otherwise, there were no areas where sheen/product releases were observed in the project vicinity. The oil containment boom that was left in place following construction has become detached from the shoreline and floated out into the river (see Attachment B). Given there was no sheen observed, NW Natural did not see an immediate need for replacement of the boom. Leaving this segment of boom in place was not a part of the EPA-approved design and was a voluntary measure by NW Natural to assist in limiting of potential sheens should they occur. As visual observations continue in coming weeks, NW Natural will assess the need for replacing/reconnecting the boom if sheens are observed. A specific proposal for the type, configuration, and maintenance of such a boom will be submitted to EPA should this condition occur. It should be noted that the tenant currently leasing the NW Natural oil pipeline facilities has a permanent boom installed at the Site (see Attachment B). This boom would act as a second containment barrier for sheens associated with the removal action area should they occur in the short term or over the longer term.

List of Attachments

Attachment A—Visual Observations Log Form

Attachment B—Photographs

Attachment C—USGS Real-Time Water Data for the Willamette River at Portland, Oregon

ATTACHMENT A



ANCHOR
ENVIRONMENTAL, L.L.C.

Visual Observations Log Form

Date: 1-3-06

Location: Gasco

Project Name: Gasco

Project Number: 00029-02

Monitoring Period:

Time Observations Started: 1610

Time Observation Concluded: 1650

Weather Conditions: 40-45° F, light steady rain, moderate wind from E

Wave Action Observations: Small, wind-generated ripples

Photographs Taken: Yes No

Tidal Conditions: High Low Ebb Slack Flood

Observations of Erosion/Deposition: Cap and rip-rap shoreline ^{beach} completely underwater. Water level above line of vegetation on banks of river.

Observations of Longterm Controls (i.e., oil booms, organo-clay mat, etc.): Oil boom has become detached at one end. Organo-clay mat presumably in place underwater.

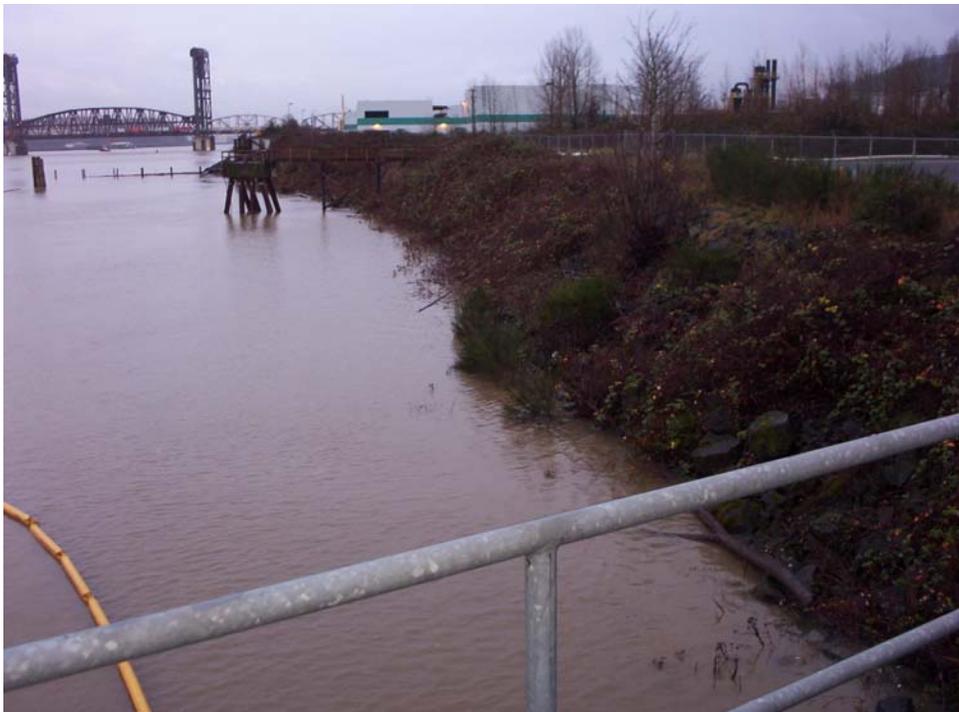
Other Comments: No sheen seen anywhere at the site. Water is turbid, light brown. Large volume of water entering river from GASCO outfall. Visual monitoring conducted from top of bank and along pipeline structure. Large logs and other floating wood debris present along shorelines and snagged on pilings.

Recorded by: KRT / Brn H

ATTACHMENT B



View from the pipeline walkway looking upstream toward outer removal area. Note boom placed to restrict vessel track within the tar body removal area.



View from the pipeline walkway looking upstream along shoreline.



View from upstream observation deck looking downstream along shoreline.

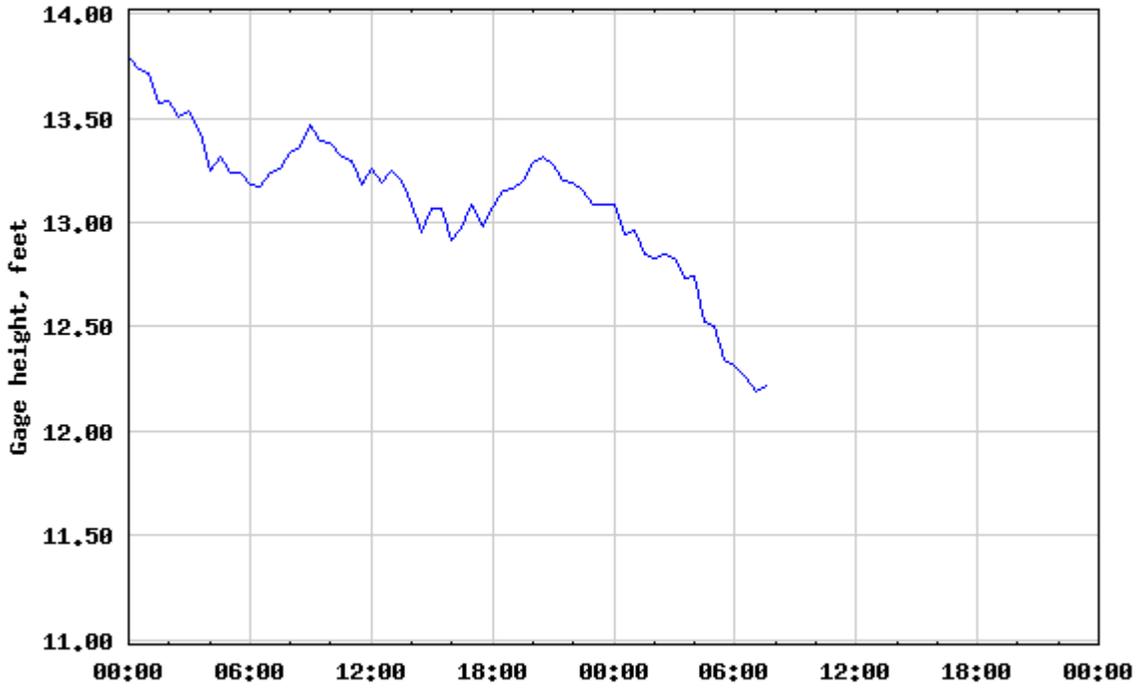


View from top of bank looking channel ward toward tar body removal area. Note oil containment boom present near the channel ward pipeline support has become detached from the shoreline.

ATTACHMENT C



USGS 14211720 WILLAMETTE RIVER AT PORTLAND, OR



Provisional Data Subject to Revision