



Oregon

Theodore R. Kulongoski, Governor

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December 23, 2009

Kristine Koch
Remedial Project Manager
U.S. Environmental Protection Agency
1200 Sixth Avenue, Ste 900, M/S ECL-115
Seattle, WA 98101-3140

RE: Milestone Report for Upland Source Control at the Portland Harbor Superfund Site

Dear Kristine,

Please find enclosed two copies of the DEQ "*Milestone Report for Upland Source Control at the Portland Harbor Superfund Site*" dated December 2009. The report will also be posted on DEQ's web site within the next two weeks.¹ DEQ will provide hard copies to project partners upon request.

DEQ continues to be an active partner with EPA in the Portland Harbor project on a number of fronts. In addition to the many source control milestones highlighted below, we continue to be an active partner to EPA in its important work completing the in-water the remedial investigation (RI), feasibility study (FS), and record of decision (ROD); in addition to our support for EPA's early actions and emerging Natural Resource Damage Assessment (NRDA) work.

As you will see below and in the report, DEQ continues our work with potentially responsible parties (PRPs) in the Harbor, and continues to progress our efforts to identify, evaluate and control sources of contamination in Portland Harbor. Several important source control removal actions have either been recently completed, selected, or are being considered for the near future. In addition to moving forward with source control measures at a number of sites, our focus over this past year has been to ensure each site has a clear path forward to evaluating and controlling sources. Each DEQ project manager identified source control goals at each site and established clear actions, timelines, and agreements to complete them. As a result, we feel confident that all significant sources will be controlled prior to or shortly after EPA's Record of Decision, now anticipated in 2012.

¹ Milestone Reports are available at www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/jointsource.htm.

Significant Achievements

Some of the more significant achievements we've made in Portland Harbor source control in the past year include:

- 1) **Evrax Oregon Steel Mills (EOSM)**- Two separate source control efforts are moving forward at the EOSM site. 1st, stormwater is being addressed through a combination of best management practices and end-of-pipe treatment. Phase I of the end-of-pipe treatment, addressing stormwater flow to the northern facility outfall, was installed in 2007 and underwent pilot testing in 2007/2008. Based on the results of the pilot test, the system was expanded to capture stormwater flow going to the central facility outfall. A Phase II pilot study was conducted in 2009. EOSM will conduct a loading evaluation in 2010 to assess contaminant releases to the Willamette River via stormwater, and determine if any further stormwater source control action is necessary. 2nd, riverbank treatment source control measures are in re-design largely to resolve stakeholder concerns regarding mitigation, habitat conservation and restoration, and to incorporate bioengineering components. EOSM plans to re-submit their 404 Permit application in 1st quarter 2010, re-engage natural resource trustee stakeholders in the new design, and construct the riverbank source control measure in 2011 or 2012.
- 2) **Schnitzer Steel**- Schnitzer Steel proposed a stormwater management plan in fall 2008. The plan will provide comprehensive management of stormwater including both re-use as on-site process water and end-of-pipe treatment. Phase 1A of the plan calls for abandoning a number of stormwater outfalls, collecting stormwater from most of the site, routing the stormwater thru screen filters to a storage tank, and then either re-using the water or discharging the water under an NPDES permit. Phase 1A was completed late 2009. Phase 1B consists of paving the Phase 1A construction area. Phase 2 will capture stormwater from several additional on-site drainage basins and route the stormwater to the new filtration and storage system. Phase 2 stormwater improvements are expected to be constructed in fall 2010.
- 3) **Arco/BP**- A new permanent seawall sheetpile wall was installed in summer 2007. The sheetpile wall will enhance existing hydraulic control of contaminated groundwater. A riverbank soil and near-shore sediment removal and capping completed in fall 2008. Approximately 16,000 cubic yards (cy) of petroleum-contaminated soil/sediment were removed and shipped offsite for disposal. The project was completed in summer 2009 by removing the in-river temporary sheetpile wall, final site grading, and planting.
- 4) **Gasco**- An amended Focused Feasibility Study (FFS) was submitted November 2007 for a groundwater and non-aqueous phase liquid (NAPL) source control measure (SCM). DEQ accepted NW Natural's recommendation for a vertical barrier wall/extraction wells system as the SCM. NW Natural submitted an Interim Design Report to DEQ in 11/09. SCM construction is scheduled to begin in late 2010.
- 5) **Siltronic**- An amended FFS was submitted December 2007 recommending an enhanced in-situ bioremediation (EIB) SCM for the Siltronic chlorinated solvent groundwater plume. DEQ selected EIB to be applied in the release area. Siltronic completed application of EIB in the source area in summer 2008, has recently expanded the EIB application area, and is currently monitoring results from the SCM.
- 6) **Arkema**- Arkema is working on three separate upland source control efforts at their site. 1st, Arkema submitted an FFS for groundwater/NAPL in summer 2008. DEQ selected a slurry wall/groundwater extraction system as the SCM in 2009, and the SCM is in design. We anticipate SCM construction to begin in 2010. 2nd, Arkema submitted a stormwater

FFS in summer 2008, DEQ selected a stormwater SCM earlier this year and the SCM is in design and permitting. The stormwater SCM will consist of berming the perimeter of the site to prevent off-site overland flow, temporarily capping higher-level contaminated soil, abandoning 3 existing outfalls, installing a new collection/conveyance system, conveying the stormwater to a detention pond to reduce suspended load, and discharging the stormwater thru a sand/carbon filter under an NPDES permit. Stormwater SCM construction is expected to begin in 2010 and conclude in 2011. 3rd, Arkema evaluated their riverbank and the threat that portion of the site poses to the river. Riverbank source control will likely be incorporated into the EPA-lead in-water Early Action at Arkema. Arkema will evaluate riverbank SCM options in 2009-10

- 7) **Rhone Poulenc-** The responsible party at Rhone Poulenc, SLLI, is working on three major upland source control/evaluation efforts at their site. 1st, SLLI submitted a comprehensive source control evaluation (SCE) report in early-2008, DEQ reviewed the report, SLLI will revise the report after collecting significant additional hydrogeologic information to inform the conceptual site model, and submit the revised report in mid-2010. 2nd, SLLI pilot tested several SCMs to treat and/or control their most significant groundwater plume threatening the river. SLLI is currently conducting an extensive, long-term groundwater pumping test to support the design of their North Front Avenue SCM which targets contaminated groundwater moving in the highly conductive deep gravel zone. The pumping test includes a number of extraction wells that could largely comprise the SCM. The pumping test should conclude in late 2010. Construction of any supplemental portions of the SCM are anticipated for early 2011. 3rd, SLLI removed accumulated sediment from Outfall 22B stormwater lines and grouted the lines to at least partially prevent contaminated groundwater from invading the lines. In the second half of 2009, SLLI cleaned out the lines and installed impermeable liners in the stormwater lines to further prevent groundwater invasion. In addition to these three ongoing source control efforts, SLLI: 1) spent two field seasons removing drums and debris from the Doane Lake area, 2) completed an on-site Facility Structures Interim Remedial Action Measure (IRAM); and 3) completed the Groundwater Extraction and Treatment System (GETS IRAM) in 2005 designed to capture alluvial zone groundwater in the Herbicide Area.

Other Recent Achievements

- 1) **Collaboration with the City of Portland-** DEQ continues to work collaboratively with the City to identify and evaluate stormwater discharges under the Joint Source Control Strategy. DEQ is working closely with the City of Portland to identify upland sources contributing contamination via both the City's municipal stormwater system and private stormwater systems (see Section 2.1 of the report).
- 2) **River Mile 11 east Focused Stormwater Investigation-** Round 3 Portland Harbor sediment data collected by the Lower Willamette Group identified sediments contaminated by polychlorinated biphenyls (PCBs) in the River Mile (RM) 11-11.8 east area. Our current conceptual model is that the sediment contamination is largely due to past releases from historic operations in the area, but that current stormwater and bank erosion pathways may still exist. The City implemented a sampling plan in three outfall basins on the east side of the river between RM 11 and 11.8 (Outfalls 43, 44, and 44A). This is part of a comprehensive source identification effort in the area that DEQ initiated

in 2008. DEQ is also working with PacifiCorp to evaluate whether source control measures at their sites in this area will be needed.

- 3) **Downtown Portland Sediment Characterization-** DEQ continues our work with the City of Portland and other partners to investigate sediment quality in the Willamette River upstream of the Portland Harbor in downtown Portland. The results of the initial investigation broadened our understanding of the previously existing limited sediment quality data, and allowed us to gain a better understanding of the nature and extent of hazardous substances in the downtown reach. The field work for the downtown reach sediment investigation was completed in June 2008. Results from this first phase are compiled in the "*Field and Data Report, Downtown Portland Sediment Characterization*" (GSI, 2009). DEQ completed a review of this first phase of the investigation. The results of the review are found in a report entitled "*Downtown Portland Willamette River Sediment Evaluation- Preliminary Identification of Areas of Interest* (DEQ, 2009)." A focused second phase is planned for early 2010. This Phase II sampling will be completed to better prioritize areas for follow-up action, lay the foundation for source identification investigations, and in some cases begin to assess contaminant extent.
- 4) **Portland Manufactured Gas Plant Site-** An initial in-river sediment investigation was completed in August 2009 with DEQ oversight. Upland investigation, consisting of installation of multiple monitoring wells and sampling was completed in fall 2009. Sediment and groundwater investigation results are expected to be available in early 2010. Based on the results, DEQ will determine whether additional investigation or remedial action is necessary.

General Status

DEQ believes we have identified all of the significant upland sources threatening the river in the Portland Harbor Study area. All of these sites are under agreement to complete SCE or develop and/or construct SCMs. Where progress has been lagging or delayed, DEQ worked to clarify source control expectations and timing, and provide guidance for expected work.

DEQ continues to primarily focus on completing SCEs and implementing SCMs at High Priority sites. While much work remains to be done, we've made significant progress in all the High Priority sites, and for the majority of the High Priority sites, the stormwater pathway is the only remaining contaminant migration pathway that needs to be evaluated. Furthermore, interim SCMs are in-place in 12 of the 16 High Priority sites.

Focus for the Future

The primary focus for the future will continue to be completing SCEs and implementing SCMs at the Portland Harbor High Priority sites. With our new stormwater guidance, and further refinement of the in-water RI, we should also be able to close out many stormwater pathway sites we are working on. Continued progress at stormwater sites, as well as the implementation of groundwater and bankline remedies will help inform broader source control tools and actions that will be required in order to achieve our shared objectives for a healthy river.

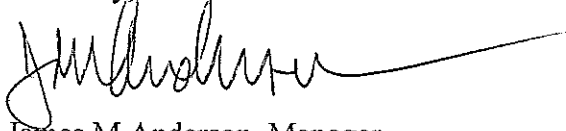
As you review the December 2009 Milestone Report, please contact me or Matt McClincy with any suggestions, comments, or questions.

Portland Harbor Upland Source Control Milestone Report
December 2009

Thank you for your continued assistance in coordinating EPA's support to DEQ on Portland Harbor source control work. Please let us know if you would like to convene a meeting with DEQ and interested EPA partners to discuss the December 2009 Milestone Report, including site prioritization and source control progress.

We anticipate submitting the next Milestone Report in June 2010.

Sincerely,

A handwritten signature in black ink, appearing to read "James M. Anderson", with a long horizontal flourish extending to the right.

James M Anderson, Manager
Portland Harbor Section

cc: Matt McClincy, DEQ/NWR (without report)
Keith Johnson, DEQ/NWR (without report)
Dick Pedersen, DEQ/HQ (without report)
Nina DeConcini, DEQ/NWR (without report)
EPA Oregon Operations Office (full report)