

Zavala, Angie

From: Zavala, Angie
Sent: Thursday, July 17, 2014 9:49 AM
To: Zavala, Angie
Subject: FW: Pier 99
Attachments: Leter to Penisnsule Drainage Distric-PEN-1.docx; 1975-01 03a Updated.pdf

FYI.

From: Zavala, Angie
Sent: Thursday, April 17, 2014 5:58 PM
To: miller.sarah@deq.state.or.us
Subject: FW: Pier 99

Thank you Sarah.

I am addressing below one by one all your concerns regarding the site. Please let me know if you still have concerns or questions.

In addition to lead, PCB concentrations in several areas (RAC-2; REX-15; SS-9; SS-11; SS-13) are above DEQ's Occupational risk based concentration (0.56 mg/kg). Any additional removal should include these areas. Please refer to the EE/CA section 5, page 27, "Removal Action Evaluation", for more explanation on how the cleanup levels were selected. The bottom line is that we used Industrial EPA Region Removal Management Levels not Residential.

These sample locations referred to above are located within the bank area. During the removal action, the bank area was stabilized by re-vegetation and, in some places, more aggressive means such as excavation and backfill. Excavation of the entire bank area was evaluated in the EE/CA and EPA's Removal Action Decision Document that was distributed for public comment. The key reasons that Bank Stabilization was selected compared to Removal included:

1. The Bank Stabilization alternative is considered more effective because it limits the potential for disturbance and subsequent shoreline impacts as a result of bank-over steepening that would result after removal.
2. The Bank Stabilization alternative was considered to be more implementable because PEN 1 and USACE will seek to avoid actions that would impact the integrity of the levee. Attached is a letter (PENINSULA DRAINAGE DISTRICT NO. 1) from PEN 1 that described that the least-invasive removal action is preferred to manage site impacts. Stabilizing the bank was deemed the best way to accomplish both PEN 1 and EPA's goals.

DEQ agrees with the RAO to prevent contaminated soils from entering into the Columbia River from the bank. Several questions do not appear to be fully addressed.

1. Bank contamination appears to be heterogeneous and it is unclear if the lateral extent of contamination from identified elevated areas has been fully defined. In general, composite samples would have been preferred to better address the heterogeneity.

Sampling and analysis plans and procedures were developed jointly between EPA and the consulting team. Because of the area being relatively small, it was agreed that previous soil samples were sufficient to assess the lateral extent of contamination. Throughout the course of the removal action, and as documented in the final report, several surface accumulations of similar materials encountered in the gravel filter (soil with residual sandblast grit) were removed prior to stabilization. Significant removal was completed because surface accumulations of these residuals were identified during the work (REX-1, REX-2, REX-3, REX-12, REX-13, REX-14, REX-17, RAC-1, and RAC-2 areas). At REX-1, REX-2, REX-3, REX-13, REX-14, REX-17, soils with residual sandblast grit (soils with a greenish hue) were removed from these areas based visual observation, and the confirmation samples supported that complete removal occurred here. Soils with

sandblast grit were not observed at RAC-1, RAC-2 or REX-12. Excavation in the area of REX-12 was completed based on a historical sample result. The areas of RAC-1 and RAC-2 were excavated as part of the bank repair and these samples were collected and analyzed to document the conditions left after excavation.

2. It appears that removal confirmation samples were collected from the bottom of the excavation which would not address whether the lateral extent of removal was adequate. Again composite samples would likely better represent the new surface in these areas.

There really were no deep excavations on the bank area. At each excavation area, excavation was based on visual occurrence of soil and sandblast grit. These materials were surface deposited and completely removed based on visual observation. Also, the materials that were excavated at the top of the bank and the end of pipe were often mounded accumulations on the surface. So removal just brought the excavation down to an even surface or a slight depression. At the top of bank (REX-14 to REX-17 area), the southern part of the excavation could be considered a sidewall, but that was entirely comprised of a cement-concrete footing. At the end of pipe area, REX-3 could be considered a sidewall sample because we excavated back into the bank. Since the excavations were shallow or removed mounds, sidewall samples were not considered. Sidewall samples are appropriate when you have a subsurface release mechanism (like we had at the gravel filter area). Everything on the bank is surface deposited.

3. PCBs and dioxins were not analyzed in the sample collected in the burn pile area (REX-16).

Please refer to the sample results in Appendix F of the removal action report, lab report A310420. The sample from the "Ash Stockpile". This sample was analyzed for PCBs and metals. Detected PCB concentrations were well below EPA RMLs and TSCA thresholds. The TCLP metals data necessitated disposal as a hazardous waste. The source of material from the REX-16 area was different from that of the rest of the bank, this was from burn debris.

4. Previous sediment samples were collected approximately 60 ft from the high water line. Only copper was detected at elevated concentration in one sample. However, the sediment immediately adjacent to the steep bank was not sampled. Also, we could not find documentation of when the dock area was most recently dredged which could impact the interpretation of the sediment data.

The owner does not have any records describing dredging events. Since the current owner took possession of the property in 1988, no dredging has occurred.

The sediment adjacent to the bank was not sampled due to safety issues (steep banks, debris, deep water, etc.). The RP conducted a survey of the bank area adjacent to the water line looking for former outfalls from the upland area and none were found. The RP was also not allowed by the Multnomah County Drainage District to conduct a removal below the high water line due to potentially destabilizing the levee.

5. DEQ would likely consider the bank area to be a functional ecological habitat in which case contaminant levels would need to be compared to ecological criteria. In addition, the stabilization provided by a layer of jute matting is limited and unlikely to be adequate for preventing erosion of contaminants into the adjacent river; considering the significant exceedances of inwater ecological and bioaccumulative criteria for several constituents (e.g., copper, lead, mercury, PCBs, butyl tins, and pesticides).

The primary stabilization technique that was applied was re-vegetation. The driver behind this was the Multnomah County Drainage District did not want to remove too much soil and destabilize the levee. With the exception of one area at the top of the bank where the grass is slow to establish, a dense mat of grass has grown across the entire bank, and a significant amount of contaminated source material has been removed. Prior conditions, included 1) the bank being covered in blackberries that provided little stabilization from root structure, 2) an erodible channel cutting through the bank, and 3) an outfall with a direct connection to the river. We would describe the stabilization actions (re-vegetation, bank repair, and outfall removal) are not limited and will effectively result in a stable bank condition.

6. FYI-Figure 5 concentrations are listed as mg/kg, but should be ug/kg. Also I wasn't sure what the hash mark area (with question marks) on the right side of the figure that goes through REX-1/REX-2. Is this the utility corridor? Yes. What is the potential for a facilitated transport pathway to exist considering the gravel filter discharged directly to this area?

The unit will be corrected to µg/kg. Based on the site investigation results, contaminant sources are not present in the area of the buried utility corridor. Contaminant sources are not present on the site which would move within a preferential flow path such as utility backfill. A removal was conducted in this area and confirmation samples indicated that contamination had not migrated to the depth of the Right Of Way

7. The remedial action report does not clearly document the amount of top soil placed along with the jute matting and where envirolok was placed. It appears the limited vegetation was planted in conjunction with the envirolok.

The figure will be updated in the removal action report to reflect areas where topsoil was placed. Topsoil was placed at the end of pipe removal area, along the excavation completed at the top of bank (REX-14 to REX-17 area), and at some other areas on the site where organic-lean soils were present. Topsoil is intended to provide a growing medium, not a cover to isolate contaminants. The entire bank area was covered with jute matting and the entire bank area was hydroseeded. As indicated earlier, a thick blanket of grass has been established at the site.

Sincerely,

Angie Zavala
Federal On-Scene Coordinator
Emergency Response Unit
U.S. EPA Region 10
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(206) 553-2101(Office)
(206) 304-8829 (Cell)
To report a spill call the National Response Center at 800-424-8802

From: MILLER Sarah [<mailto:MILLER.Sarah@deg.state.or.us>]
Sent: Monday, April 07, 2014 8:20 AM
To: Zavala, Angie
Subject: RE: Pier 99

Hi Angie-

Hopefully my explanation below will help.

While the bank habitat is limited, the bank stabilization work needs to ensure that short-term acute exposure to contaminants is minimized for terrestrial animals. Several bank samples contain pesticides concentrations above DEQ bird population hotspot concentrations. It is not clear that jute matting and revegetation will be effective in reducing short term acute exposure risks to terrestrial animals in these locations. Elevated contaminant levels along the bank are immediately adjacent to the river, but there is no data below the OHW line to evaluate what/if erosion has occurred in this area. Also jute matting without any additional cover material will provide limited protection against erosion of the contaminated material.

Also, in some areas occupational screening levels were exceeded so additional evaluation of direct contact risk will be needed.

I have scheduled a meeting with DEQ management on this project in a few weeks so they can have input on potential next steps.

I realize this project has had several project managers and it's taken me awhile to get up to speed on it. There has been a lot of good work done on the site.

I will let you know what I find out in the meeting as to any potential next steps.

Thanks-
Sarah

From: Zavala, Angie [<mailto:zavala.angie@epa.gov>]
Sent: Wednesday, April 02, 2014 8:35 AM
To: MILLER Sarah
Subject: RE: Pier 99

Sarah,
To help me better understand your comments, please tell me what is the criteria used to decide that an area is "functional ecological habitat"? Also, what do you mean by "need additional work/assessment under the DEQ Cleanup Program"? Does it mean that after we finished the removal action, ODEQ will conduct more work/assessment?

Thank you,

Angie

From: MILLER Sarah [<mailto:MILLER.Sarah@deg.state.or.us>]
Sent: Tuesday, April 01, 2014 3:34 PM
To: Zavala, Angie
Subject: RE: Pier 99

Hi Angie-
Please see the update to DEQs PCB Risk based concentration in red below.
Thanks-

From: MILLER Sarah
Sent: Tuesday, April 01, 2014 9:43 AM
To: 'Zavala, Angie'
Subject: Pier 99

Hi Angie-

Thank you for the opportunity to comment on the Pier 99 Removal Action Completion Report. I understand that you needed a response very soon, so DEQ review is somewhat cursory and may raise questions that have been answered in prior investigative work. Below are items that the current Pier 99 work does not appear to address. Given the potential risk associated with the issues identified below, I believe the Pier 99 site will need additional work/evaluation under the DEQ Cleanup Program.

- In addition to lead, PCB concentrations in several areas(RAC-2; REX-15; SS-9; SS-11; SS-13) are above DEQ's Occupational risk based concentration (0.56 mg/kg). Any additional removal should include these areas.
- DEQ agrees with the RAO to prevent contaminated soils from entering into the Columbia River from the bank. Several questions do not appear to be fully addressed.
 - Bank contamination appears to be heterogeneous and it is unclear if the lateral extent of contamination from identified elevated areas has been fully defined. In general, composite samples would have been preferred to better address the heterogeneity.

- It appears that removal confirmation samples were collected from the bottom of the excavation which would not address whether the lateral extent of removal was adequate. Again composite samples would likely better represent the new surface in these areas.
- PCBs and dioxins were not analyzed in the sample collected in the burn pile area (REX-16).
- Previous sediment samples were collected approximately 60 ft from the high water line. Only copper was detected at elevated concentration in one sample. However, the sediment immediately adjacent to the steep bank was not sampled. Also, we could not find documentation of when the dock area was most recently dredged which could impact the interpretation of the sediment data.
- DEQ would likely consider the bank area to be a functional ecological habitat in which case contaminant levels would need to be compared to ecological criteria. In addition, the stabilization provided by a layer of jute matting is limited and unlikely to be adequate for preventing erosion of contaminants into the adjacent river; considering the significant exceedances of inwater ecological and bioaccumulative criteria for several constituents (e.g., copper, lead, mercury, PCBs, butyl tins, and pesticides).
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- The remedial action report does not clearly document the amount of top soil placed along with the jute matting and where envirolok was placed. It appears the limited vegetation was planted in conjunction with the envirolok.

Please contact me with any questions you may have.

Thanks-

Sarah

Sarah Miller

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