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LETTER AND ADDITIONAL COMMENTS FROM U S EPA REGION I REGARDING DRAFT FEASIBILITY STUDY SITE 19 FORMER DERECKTOR SHIPYARD MARINE SEDIMENT NS NEWPORT RI
9/30/2013
U S EPA REGION I

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION I
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Site 19
OU5

September 30, 2013

Mr. Dominic O'Connor
Remedial Project Manager
Environmental Restoration
NAVFAC MIDLANT OPNEEV
Bldg. Z-144
9742 Maryland Avenue
Norfolk, VA 23511-3095

Re: Responses to EPA's Comments on the Draft Feasibility Study for Site 19 - Former Derecktor Shipyard Marine Sediment

Dear Mr. O'Connor:

Thank you for the opportunity to review the August 13, 2013 responses to our May 8, 2013 comments on the March 2013 *Draft Feasibility Study for the Former Derecktor Shipyard* (FS). The FS evaluates remedial alternatives to mitigate unacceptable human health and ecological risk associated with chemicals of concern in sediment and porewater at Site 19, Operable Unit 05. Given the disagreement remaining over the Draft FS, EPA believes that the Navy should expend an extra effort to resolve the issues before issuing a Draft Final FS. Detailed comments are provided in Attachment A.

GC1. The Navy has qualified their response to consider only data collected for the Supplemental Site Investigation that disregards data related to other known contamination known at the site. EPA expects the FS to consider all available data and to use all pertinent data to develop the conceptual remedial plans, including additional investigation (pre-design investigation) for those areas where historic contamination was present but not addressed directly by the conceptual remedial plans.

GC2. As indicated in EPA's comment, the coring data and historical drawings suggest that the volume of sediment under Pier 2 at the eastern end may be much less than assumed. This would impact the VWACs and SWACs. The depth of water adjacent to Pier 2 at J26 and J30 is 20 feet greater than at the adjacent G29 and at J24 the water depth is 16 feet greater than at G25. This indicates that a significant sediment slope exists from G25/G29 to J24/J26 suggesting that the sediment depth is greater in the center of the pier and decreases toward the sides. Also, the shallow sediment depth at G29 suggests that sediment is also shallower between G29 and G25. The area under the eastern end of Pier 2 has not been adequately investigated to support the conceptual remedial design. Not only may the extent of contamination be very different from the assumptions, but the physical characteristics may prevent implementation of an effective remedial action to cover contaminated sediment. Consequently, a pre-design investigation of the chemical and physical characteristics of the sediment beneath the eastern end of Pier 2 is warranted.

GC3. Given the nature and physical configuration of the sediment beneath and adjacent to the eastern end of Pier 2, a capping only alternative is not likely to be effective. The Navy may have to remove some sediment for the cap to be effective. EPA notes that the Navy has claimed credit for a 2-foot cap in their volume-weighted average calculations. However, placing two feet of sediment in that area will not result in a 2-foot thick clean cap. Furthermore, the cap remedy should require the placement of cap material in

two separate lifts to achieve the desired one foot of clean cover over contaminated sediment because of mixing during placement of the first lift.

GC4. EPA suggested that the description of alternatives that leave contamination in place needs to also discuss the potential deficiencies in those alternatives based on the characteristics of the existing sediment bed. Such deficiencies are likely to result in maintenance or corrective actions that have not been considered in either the description or cost for those alternatives.

GC6. EPA maintains that the contamination in the area south of Pier 1 where extensive ship maintenance was conducted is not adequately represented by the analytical results for the samples collected during the Supplemental Site Investigation. The sampling performed for the SSI was limited. Contamination exists north of the eastern end of Pier 1. This area was originally designated for remediation following sampling in 2004. Contaminants just beneath the surface sediment are vulnerable to disturbance and could migrate to the surface sediment. As noted earlier, sitewide concentrations underestimate exposure of shellfish within the contaminated areas because of their limited home.

GC7. Backfilling dredged areas with no known residual contamination is not productive. Using those saved funds to actually remove contaminated sediment is productive.

GC8 & GC9. The subsistence fishing scenario should be relabeled as recreational fishing.

GC10. Source control is a principal requirement to preserve the integrity of a remedy. While Navy has and will continue to cleanup the on-shore site, there are discharges that could contaminate the offshore. Please ensure the selected remedy is not compromised by on-going contamination sources. EPA recommends addressing the storm drains as a monitoring component of the remedy.

GC11. Demolition of the piers will require the action identified in the response but also will require confirmation sampling along the length of the piers based on the assumption that deep sediment will be disturbed by the demolition. It is unlikely that the cap would not be disturbed therefore sampling and repair of the cap beneath Pier 2 will be a requirement.

Releases of asbestos from the steam lines have occurred and threat of additional releases remains. The surface water and the sediment likely were affected by asbestos releases. Consequently, EPA's request for supplemental information regarding the management of the existing asbestos is appropriate. The pier and piping are part of the site and CERCLA has jurisdiction over the asbestos pipe insulation since it poses a threat of release into the environment.

I look forward to working with you and the Rhode Island Department of Environmental Management toward the cleanup of the Derecktor Shipyard. Please contact me at (617) 918-1385 to arrange a meeting to resolve the issues raised herein.

Sincerely,

Kymberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc: Lynne Jennings, USEPA, Boston, MA

Pam Crump, RIDEM, Providence, RI
Darlene Ward, NETC, Newport, RI
Steven Parker, Tetra Tech-NUS, Wilmington, MA

ATTACHMENT A

Page	Comment
SC1. p. ES-2	As noted in EPA's response to GC 11, the pier and piping are part of the site and CERCLA has jurisdiction over the asbestos pipe insulation since it poses a threat of release into the environment.
SC2. p. ES-4	Include the RAOs from EPA's comment based on the continued presence of asbestos within the site and the requirement for any remedy selected to be protective of ecological receptors.
SC4. p. ES-5, Alt.2	A thin layer cap would not immediately satisfy the remedial goals. Armoring is not acceptable as it will harm the ecological environment the remedy aims to restore. A remedial action objective to restore sediment as suitable habitat for indigenous species should be added. It is incorrect to state that a thin layer cap itself would be protective because clams and worms can burrow 1 to 3 feet into the sediment.
SC5. p. ES-6, Alt.3	Armoring is not a viable design option for a cap because it is not the least environmentally damaging practicable alternative and it will harm the habitat that is to be remediated. Extreme storms could mix underlying contaminated sediment with cap sediment potentially damaging the remedy.
SC6. p. ES-6, Alt.4	By leaving contaminated sediment in place beneath the backfill, the Navy is creating a cap that will need to be monitored as part of the long term monitoring program for the site. If the volume-weighted average COC concentrations in the top four feet achieve the PRGs, the monitoring would be much less onerous than a less proactive remedy and would require much less maintenance and repair.
SC12. p. 1-7	Releases of asbestos from the steam lines have occurred and threat of additional releases remains. The pier and piping are part of the site and CERCLA has jurisdiction over the asbestos pipe insulation since it poses a threat of release into the environment. The surface water and the sediment likely were affected by asbestos releases. Consequently, EPA's request for supplemental information regarding the management of the existing asbestos is appropriate.
SC14. p. 1-11, §1.3.5	Please refer to specific comment 12.
SC15. p. 1-32, §1.4.7	Please refer to specific comment 12.
SC16. p. 1-33, §1.6	Please refer to specific comment 12.
SC17. p. 2-5, §2.2.1	Please refer to specific comment 12. Note also that asbestos in deteriorated insulation on the steam lines can be transported via air in addition to potential transport from impacted dried sediment. The former is a potential current threat, the later is a potential future threat to human health.

SC18. p. 2-6, §2.2.2 The information EPA requested is not readily available in the PRG document and the FS would benefit from the inclusion of the information requested. EPA reiterates its request to include this information.

Regarding the development of a PRG for asbestos, please see specific comment 12.

SC21. p. 2-9, §2.3 Supplement the FS with the two additional RAOs requested in EPA's comment.

SC22. p. 2-9, §2.4, ¶1 Please refer to General Comment 6.

SC27.p. 3-11,§3.3.3.2The selected remedy must be the least environmentally damaging practicable alternative to comply with the federal Clean Water Act. Armoring will harm the habitat that is to be remediated.

SC28. p. 3-12, §3.3.3.2 Please refer to specific comment 36.

SC29. p. 3-19, §3.3.5.2 EPA's comment also refers to sediment removed from under the piers during the sediment remedial action. It is likely that sediment sloughing will occur when dredging adjacent to the piers and some sediment removal from under the piers could also become necessary as part of the sediment remedial action.

SC33. p. 3-25, §3.5 Please refer to specific comment 12.

SC36. p. 4-2, §4.0, ¶1As the response states, both SWACs and VWACs must satisfy the PRGs. When evaluated on a VWAC basis the backfill is not acting as a cover if the PRGs will have been satisfied down to the designated depth (four feet per the FS). However, when evaluated on a SWAC basis disruption of the backfill could potentially mix with underlying contaminated sediment and cause the SWACs to no longer satisfy the PRGs. This is feasible for lead because a number of cells will only have one foot of backfill over contaminated sediment. Therefore, long-term monitoring of the remedy will be required for all the proposed alternatives.

SC37. p. 4-2, §4.1, ¶1Please refer to specific comments 12 and 17.

SC39. p. 4-3, §4.1.2 As previously discussed, EPA stated that MNR could be retained in the FS as long as it was dropped from detailed analysis. Alternatively, EPA agreed that it could be retained as long as the numerous uncertainties that EPA identified were discussed in the text. It is still unclear whether Alternative 2 meets either the protectiveness or ARARs criteria (refer to EPA's comments as far as what issues need to be addressed for the NCP analysis).

SC40. p. 4-4, §4.1.2, b) EPA does not agree that Alternative 2 would achieve the RAOs upon completion of construction or likely any time in the future and recommends that it be deleted from the alternatives brought forward for detailed evaluation. EPA will not accept Alternative 2 as the preferred remedy.

SC42. p. 4-4, §4.1.2, ¶3 The selected remedy must be the least environmentally damaging practicable alternative to comply with the federal Clean Water Act. Armoring will harm the habitat that is to be remediated.

SC48. p. 4-8, §4.1.4 Please refer to specific comment 36.

SC49. p. 4-9, §4.1.4 The selected remedy must be the least environmentally damaging practicable alternative. The response addresses blue mussels (intertidal creatures) but not clams or crabs. What evidence does the Navy have that clams or crabs do not inhabit the sediment under the piers?

SC50. p. 4-9, §4.1.4, ¶3 The Navy's attached VWAC spreadsheets have eliminated grid cells G25 and G29 from the calculations in order to achieve the PRGs. This is not acceptable. Please refer to the comments below on the attached spreadsheets. The PRG has not been satisfied for benzo(a)pyrene for the reasons cited below. Sitewide concentrations are not relevant for shellfish within the contaminated areas because of their limited range.

Historical samples of sediment south of Pier 1 had more extensive lead contamination and greater concentrations than were detected for the Supplemental Site Investigation (SSI). EPA believes that it is possible that lead contaminated sediment remains even though it was not identified in the limited sampling performed for the SSI.

SC52. p. 4-10, §4.1.4, ¶3 SWACs would also have to be achieved. It is unlikely that an alternative that does not include post-dredging confirmation sampling could be approved. EPA requested a minimum two foot thick cap throughout the area, not a minimum 1 foot cap.

SC53. p. 4-11, §4.1.4, ¶4 CERCLA addresses both releases and threats of releases. Please refer to specific comment 12.

SC54: p. 4-13, §4.1.5, ¶4 As noted from previous EPA comments, the alternative relies on keeping the remnant, deeper contaminated sediment at depth below the backfill layer. Therefore the layer needs to be managed and monitored to ensure is remains in place.

SC64. p. 4-11, §4.1.4, ¶4 The selected remedy must be the least environmentally damaging practicable alternative under the federal Clean Water Act. Armoring would not be the least environmentally damaging practicable alternative because it will harm the habitat that is to be remediated.

SC69. p. 4-40, §4.3.4, ¶1 EPA expects that a pre-design investigation will provide the necessary data to support the design of a cap beneath Pier 2. This should be listed in the FS for alternatives that include a cap beneath Pier 2.

SC78. Table ES-1 EPA needs to review how its comments concerning the alternative have been incorporated before it decides whether Alternative 2 meets the NCP criteria.

SC82. Table 2-3, p. 2 Include Section 404 of the Clean Water Act. The Asbestos framework applies to sediments that are excavated and handled as part of a response action.

SC86, Table 4-5 & SC99 See EPA's response to SC78.

SC87. Table 4-6 Alternative 2 will not meet RAOs when the thin layer cover is placed.

SC91. Alt. 4 ARARs Tables & SC95 & SC95 See previous EPA comments about the status of the backfill as a cover over the deeper contaminated sediments to be left in place.

SC106. The key word was inconsistently. In some cases, no adjustment of the cell dimensions were made when they should have been.

Comments on Revised Spreadsheets Presenting SWACs and VWACs:

1. The latest VWAC spreadsheet erroneously includes grid cell BE-28 with only two sample intervals when all three intervals have analytical results. Based on the weighted averages for all three intervals, there are no PRG exceedances. In accordance with the protocol used for volume-weighted averaging, BE-28 should not be included in the VWAC calculations. Please remove.

2. EPA does not agree with the removal of grid cells G25 and G29 from the VWAC. The COC concentrations in those grid cells should be calculated by taking credit for two feet of clean fill and accounting only for the COCs in the top two feet of the existing sediment at G25 and 1.5 feet at G29, thereby calculating the COC concentrations in the top four (or 3.5) feet of sediment following remediation.

3. With the above noted corrections to the VWAC calculations, benzo(a)pyrene remains over the PRG at 627 µg/Kg. All other COCs would achieve their PRG.