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LETTER AND COMMENTS FROM U S EPA REGION I REGARDING DRAFT FINAL
FEASIBILITY STUDY FORMER DERECKTOR SHIPYARD SITE 19 MARINE SEDIMENT NS
NEWPORT RI
2/18/2014
U S EPA REGION I



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION I

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Newport
Site 19
OU5

February 18, 2014

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

Re: Draft Final Feasibility Study for the Former Derecktor Shipyard Marine Sediment

Dear Mr. O'Connor:

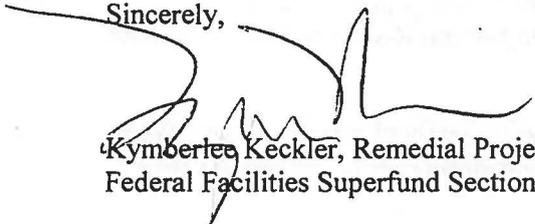
Thank you for the opportunity to review the *Draft Final Feasibility Study for Site 19, Former Derecktor Shipyard* dated February 2014 (FS). The FS develops and evaluates remedial alternatives to mitigate unacceptable human health and ecological risk associated with chemicals of concern in off-shore sediment and porewater at Operable Unit 5. Detailed comments are provided in Attachment A.

While the projected SWAC values for Alternative 5 shown in the table on page ES-8 are based on the calculations provided in Appendix D (page 799 of 843), the assumptions used in the calculations related to which grids were dredged do not match the description of Alternative 5 in the FS text. Two grids included in the dredging for Alternative 5 based on the text description are omitted from the calculations. Grids Y-25 and Y-28 are both dredged to two feet based on the FS text description but are not addressed in the calculations. Benzo(a)pyrene concentrations in the 1-2 foot intervals are three to four times greater than the PRG and HMW PAH concentrations in the 1-2 foot interval at both grids are more than double the PRG they were included in Alternative 5 during the October 2013 meeting. Please address this inconsistency in the FS.

The calculations now show that the area-wide residual lead concentration for Alternative 5 will be 190 milligrams per kilogram (mg/kg), which exceeds the PRG of 168 mg/kg. A more favorable outcome can be achieved with less sediment removal by not dredging at BB26 where the benzo(a)pyrene concentrations barely exceed the PRG and not dredging at C29, but instead dredging the top one foot at both AD13 and C21. This change would reduce the area-wide residual lead concentration to 170 mg/kg while dredging 2,300 cubic yards less and without causing any area-wide PRG exceedances for other COCs. Please consider revising Alternative 5.

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 with any questions.

Sincerely,



Kimberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

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

ATTACHMENT A

<u>Page</u>	<u>Comment</u>
ES-1	Please discuss the asbestos releases into the water from the steam pipes under the pier in the Background section.
ES-2	Please discuss the asbestos releases from the pier in the Conclusions section.
ES-5	In the bullets for Alternatives 4 and 5, include "LUCs, and Monitoring."
ES-6	In the Summary of Alternatives, describe the LUCs and monitoring for Alternatives 4 and 5 (both for under the piers and open water areas for Alternative 4 and under the piers for Alternative 5). Also, for Alternatives 2-5 describe that there will be LUCs regarding O&M and any potential removal of pier structures where contamination will be left in place (including asbestos).
ES-8	Add a table presenting the estimated mass of each contaminant removed for each alternative.
p. 1-39, ¶4	In the asbestos paragraph, remove the fourth and fifth sentences since one of the RAOs is to prevent exposure to asbestos in sediments, which needs to be further discussed in the FS text.
p. 2-6, ¶5	At the end of the last sentence there is a ")". Is there a missing section of this sentence or should the ")" be removed?
p. 2-14, §2.4	The discussion does not represent the conclusions of the team as to the extent of remediation required. The areas requiring remedial action were determined by the amount of contaminated sediment left in place for each alternative and therefore, excavation deeper than the 0-1 foot interval was considered appropriate to complete the list of potential alternatives that addressed the concerns of all team members. In particular, the conclusion of the October 2013 meeting was that Alternative 4 would require LUCs and monitoring for the backfilled areas in open water and therefore Alternative 5 was developed to avoid having to implement LUCs and monitoring in the open water areas. Please revise the FS to include this information that is documented in the October 2013 meeting minutes.
p. 2-14, §2.4, ¶4	Please explain how the minimum area of 340,012 square feet was determined. For example, Alternative 4 addresses 275,229 square feet including the capped areas (less than the minimum) and the volume excavated is 7,098 cubic yards, not 12,593 cubic yards.
p. 3-7, §3.3.2.1	<p>In the second paragraph, change the last sentence to: "If the cove is no longer used by the Navy, enforceable use restrictions will be developed with federal/state authorities to prevent disturbance to areas with contaminated sediments left in place."</p> <p>In addition, this section should describe that there will be LUCs regarding O&M and for any potential removal of pier structures where contamination will be left in place (including asbestos).p. 3-11, §3.3.3.1 Thin-layer cover is an Enhanced Natural Recovery technology, not Containment.</p> <p>Regarding the last paragraph, it is unclear why the technology is retained since there are stated protectiveness issues with the alternative's ability to withstand storm events and protect deep burrowing aquatic creatures.</p>
p. 3-12, §3.3.3.2	In the Implementability bullet, describe how the native subaquatic habitat will be restored on the new fill substrate, once established.

- p. 3-22, 1st bullet Describe implementability issues if the sediment needs to be disposed as asbestos contaminated material.
- p. 3-24, ¶2 At the end of the last sentence, add: “or a POTW.”
- p. 3-25, §3.3.6 Is treatment needed to address potential asbestos in the sediment from under the piers before off-site disposal?
- p. 3-26, §3.3.7 In the Table, Thin-Layer Cover should be an Enhanced Natural Recovery technology, not Containment.
- p. 3-27, Table For the Representative Process Option text under Treatment, add at end of the text: “to surface waters or a POTW.”
- p. 3-29, 4th bullet The description of Alternative 4 is not consistent with the description agreed to in the October 2013 meeting. Alternative 4 requires LUCs and monitoring of the open water backfilled areas. In addition, confirmation sampling is required to document whether the remedial action has been effective and is consistent with EPA’s and the Army Corps of Engineer’s guidance for sediment remediation.
- p. 3-29, 4th & 5th bul. In the last sentences of each bullet, replace “Pier 2 only” with “Piers 1 and 2” because of the restrictions required for asbestos.
- p. 4-1, §4.0 Throughout this section, the descriptions of Alternatives 2-5 should state that there will be LUCs regarding O&M and any potential removal of pier structures where contamination will be left in place (including asbestos).
- Throughout this section, the descriptions of Alternatives 2-5 should explain how the natural restoration of native subaquatic habitat will be monitored on the new cover substrate, once established, or where the existing sediment is excavated without installing a cover.
- p. 4-1, §4.0, ¶5 The description of Alternative 4 is not consistent with the description agreed to in the October 2013 meeting. Alternative 4 requires LUCs and monitoring of the open water backfilled areas. In addition, confirmation sampling is required to document whether the remedial action has been effective and is consistent with EPA’s and the Army Corps of Engineer’s guidance for sediment remediation.
- Upon removal of either Pier 1 or 2, or construction that disturbs any sediment, all areas under and around the piers would need samples to determine the magnitude and extent of recontamination to evaluate the need for further remedial action. Please edit accordingly.
- p. 4-2, ¶2 In the fourth bullet, LUCs need to be applied under Pier 1 where asbestos may be present. In the sixth bullet, five-year reviews also have to include the area of Pier 1, where asbestos may be present and LUCs will be in place.
- p. 4-2, §4.2, ¶1 Add at the end of the paragraph: “In addition, risk management measures are incorporated into Alternatives 2-5 to address asbestos that may be present in sediment and could pose a risk under circumstances where the sediment is allowed to dry (in particular under Piers 1 and 2)
- p. 4-7, ¶2 Add at the end of the paragraph: “If the cove is no longer used by the Navy, enforceable use restrictions will be developed with federal/state authorities to prevent disturbance to areas with contaminated sediments left in place. There will be, at a minimum, annual compliance monitoring of the LUCs.”
- p. 4-9, ¶2 In the fourth sentence, change “Inspections” to “At least annual inspections” and change “also

include ensuring” to “ensure.”p. 4-11, ¶2 Add at the end of the paragraph: “If the cove is no longer used by the Navy, enforceable use restrictions will be developed with federal/state authorities to prevent disturbance to areas with contaminated sediments left in place. There will be, at a minimum, annual compliance monitoring of the LUCs.”

- p. 4-12, ¶4 In the third sentence, change “Inspections” to “At least annual inspections” and change “also include ensuring” to “ensure.”
- p. 4-13, §4.1.4 The description of Alternative 4 is not consistent with the description agreed to at the October 2013 meeting. Alternative 4 requires LUCs and monitoring of the open water backfilled areas. In addition, confirmation sampling is required to document whether the remedial action has been effective and is consistent with EPA’s and the Army Corps of Engineer’s guidance for sediment remediation.
- Upon removal of either Pier 1 or 2, or construction that disturbs any sediment, all areas under and around the piers would need to be sampled to determine the magnitude and extent of recontamination to evaluate the need for further remedial action. Please edit accordingly.
- p. 4-14, ¶4 Add at the end of the paragraph: “If the cove is no longer used by the Navy, enforceable use restrictions will be developed with federal/state authorities to prevent disturbance to areas with contaminated sediments left in place. There will be, at a minimum, annual compliance monitoring of the LUCs.”
- p. 4-15, ¶2 Add a new last sentence: “Sediments will also be tested for asbestos before being transported for disposal.”
- p. 4-16, §4.1.4, ¶4 The first sentence that states that LTM would not extend to areas beyond the cap beneath Pier 2 is not correct and is not what was agreed to in October 2013. The concern with placing a one foot cap over areas with significant concentrations of COCs is that the contaminants could migrate to the surface. Edit the FS to require LTM and LUCs for all backfilled areas as well as for the cap under Pier 2.
- p. 4-17, §4.1.5 LUCs also need to be applied to the area under Pier 1 where asbestos may be present. Five-year reviews shall include the area of Pier 1, where asbestos may be present and LUCs will be in place.
- p. 4-17, §4.1.5, ¶1 The first sentence highlights an inconsistency between Alternatives 4 and 5. The text states that no LUCs in open water are required for Alternative 5, but the description of Alternative 4 does not state that LUCs are required in open water for that alternative owing to the reliance on backfill rather than dredging to achieve the RAOs. The backfill is susceptible to disturbance that could compromise the integrity of the remedy. Therefore, LUCs and LTM are necessary components of Alternative 4. Please revise the text accordingly.
- p. 4-18, ¶1 Regarding the last sentence, LUCs for asbestos would only be needed for the areas under the piers that are not dredged as part of the alternative.
- Insert a new paragraph: “If the cove is no longer used by the Navy, enforceable use restrictions will be developed with federal/state authorities to prevent disturbance to areas with contaminated sediments left in place. There will be, at a minimum, annual compliance monitoring of the LUCs.”
- p. 4-18, ¶4 Add a new last sentence: “Sediments will also be tested for asbestos before being transported for disposal.”
- p. 4-19, ¶1 Add at the end of the first sentence: “or a POTW.”

- p. 4-19, §4.1.4, ¶2 The same rationale used here for confirmation sampling for Alternative 5 is applicable for Alternative 4 except the confirmation sampling would be required after completion of backfilling operations. The same protocol would also be applicable to confirm that the remedial goals have been achieved. Please revise the FS accordingly.
- p. 4-21, ¶2 In the second sentence, change “Inspections” to “At least annual inspections” and change “also include ensuring” to “ensure.”
- p. 4-28, ¶3 In the first sentence change “would” to “may” and add at the end of the sentence: “owing to uncertainty concerning the long-term effectiveness of the cover to prevent releases in the event of major disturbances, such as storm events.”
- p. 4-28, ¶4 Add a new last sentence: “Furthermore, LUCs will require proper management of sediments to prevent exposure to possible asbestos-contaminated sediments and meet RAO requirements.”
- p. 4-29, ¶2 Change the second sentence to: “In the short-term, Alternative 2 will meet the sediment PRGs that are derived in part from federal and state water quality chemical-specific ARARs. However, over the long-term it is unclear if these standards can be maintained if the cover is disturbed by storm events or other factors.”
- p. 4-29, ¶3 Change the first sentence to: “In the short-term, Alternative 2 would meet all state and federal location-specific ARARs by conducting the activities in accordance with wetlands, coastal resource management, endangered species, fish and wildlife protection, and historic preservation regulations. However, over the long-term it is unclear if these standards can be maintained if the cover is disturbed by storm events or other factors.”
- p. 4-29, ¶4 Change the first sentence to: “In the short-term, Alternative 2 would be conducted in accordance with all identified state and federal action-specific ARARs.
- Add a third sentence: However, over the long-term it is unclear if these standards would be maintained if the cover is disturbed by storm events or other factors.”
- p. 4-29, ¶5 Change the fourth sentence: The alternative will meet risk-based standards under TSCA as long as the cover can remain protective in the event of storms or other disturbance.
- Remove the sixth sentence.
- p. 4-29, ¶6 Add at the end of the first sentence: “and the cover is not disturbed by storms or other factors.”
- p. 4-30, ¶1 In the second sentence remove “a minor level of.”
- p. 4-31, ¶2 Add at the end of the paragraph: “If the cove is no longer used by the Navy, enforceable use restrictions would need to be developed with federal/state authorities to prevent disturbance to areas with contaminated sediments left in place.
- p. 4-33, ¶6 Change the fourth sentence: The alternative will meet risk-based standards under TSCA as long as the cover can remain protective in the event of storms or other disturbance.
- Remove the sixth sentence.
- p. 4-35, ¶3 Add at the end of the paragraph: “If the cove is no longer used by the Navy, enforceable use restrictions would need to be developed with federal/state authorities to prevent disturbance to areas with contaminated sediments left in place.

- p. 4-37, §4.3.4 The description of Alternative 4 is not consistent with the description agreed to at the October 2013 meeting. Alternative 4 requires LUCs and monitoring of the open water backfilled areas. In addition, confirmation sampling is required to document whether the remedial action has been effective and is consistent with EPA's and the Army Corps of Engineer's guidance for sediment remediation.
- Upon removal of either Pier 1 or 2, or construction that disturbs any sediment, all areas under and around the piers would need to be sampled to determine the magnitude and extent of recontamination to evaluate the need for further remedial action. Please edit accordingly.
- p. 4-37, §4.3.4, ¶2 Add at the end of the paragraph: "If the cove is no longer used by the Navy, enforceable use restrictions would need to be developed with federal/state authorities to prevent disturbance to areas with contaminated sediments left in place.
- p. 4-37, §4.3.4, ¶5 See previous comments concerning the need for LTM to apply to excavated/backfilled areas, as well as covered areas.
- p. 4-37, §4.3.4, ¶6 Since the sediment throughout the site is silty, it will likely result in significant disturbance of the underlying contaminated sediment and mixing with the backfill. The resulting backfill cover will have less ecological benefit than predicted because of mixing. Therefore, the calculated SWACs overestimate the protectiveness of this alternative.
- p. 4-38, ¶2 In the second sentence after "capping" add ", LUCs."
- p. 4-38, ¶5 Change the fourth sentence to: The alternative will meet risk-based standards under TSCA as long as the cover and backfill can remain protective in the event of storms or other disturbance.
- Remove the sixth sentence.
- p. 4-38, ¶6 After "target sediment" add "and establishing LUCs and LTM."
- p. 4-39, ¶3 In the last sentence, insert "or to a POTW" after "Narragansett Bay."
- p. 4-40, ¶4 In the last sentence, change: "and would have to reach agreement with RIDEM on permitted times to conduct the work" to "and would coordinate with natural resource agencies to minimize disturbance to aquatic species."
- p. 4-41, ¶1 Change "at the capping area beneath Pier 2 would" to "beneath Piers 1 and 2 may."
- p. 4-41, ¶4 In the last sentence after "capped areas," insert "and areas under Piers 1 and 2 where asbestos may be present in the sediment."
- p. 4-42, ¶2 In the third sentence, add at the end: "except in the areas under Piers 1 and 2 where LUCs will be established and contamination left in place.
- p. 4-42, ¶3 In the second sentence, change "Long-term maintenance, monitoring, and five-year reviews would be required for capped areas beneath Pier 2..." to "LUCs, long-term maintenance, monitoring and five-year reviews would be required for capped areas beneath Pier 2 and areas under Piers 1 and 2 where asbestos contaminated sediments may be located..."
- p. 4-42, ¶4 After "permanent removal" add ", LUCs, LTM."
- p. 4-43, ¶2 Insert a new third sentence: "LUC will prevent disturbance of sediments that may contain asbestos located under Piers 1 and 2."

- p. 4-43, ¶3 In the last sentence, insert “or to a POTW” after “Narragansett Bay.”
- p. 4-44, ¶4 In the last sentence, change: “and would have to reach agreement with RIDEM on permitted times to conduct the work” to “and would coordinate with natural resource agencies to minimize disturbance to aquatic species.”
- p. 4-45, ¶2 Add at the end of the paragraph: “If the cove is no longer used by the Navy, enforceable use restrictions would need to be developed with federal/state authorities to prevent disturbance to areas with contaminated sediments left in place.
- p. 4-47, ¶2 Replace the fifth sentence with: “Dredging and covering operations under Alternatives 2-5 will require consultation with natural resource agencies to minimize disturbance to aquatic species.”
- p. 4-47, ¶4 In the first sentence, change “Alternative 3 because it was” to “Alternatives 3 and 4 because they were” and after “engineered cap” insert “/backfill.”
- In the last sentence, change “Alternative 3” to “Alternatives 1, 2, 3, 4, and 5.”
- p. 4-48, ¶1 In the third sentence, insert “and potential asbestos-contaminated sediment under Piers 1 and 2” after “Pier 2.”
- p. 4-48, ¶4 In the third sentence, insert “1,” after “Alternatives.”
- Table ES-1 Alternative 2 only partially meets ARARs.
- Table 1-5, p. 6 There are duplicate entries for the DSY-SD-J24 0-1 foot sample. Please correct.
- Table 2-1, p. 2 Remove citations to MCL and MCLGs.
- Table 2-2, p. 2 For the CWA, Section 404, Consideration text, insert a new second sentence: “If shoreland staging, processing and stockpile areas are within protected resource areas, these standards will be met.”
- Table 2-2, p. 3 For the Wetland and Floodplain, Synopsis insert in the first sentence “and Executive Order 11988 (Floodplain Management” after “Wetlands).” In the second sentence, insert “and floodplain” after “wetland” and “and floodplain” after “wetlands.”
- In the Consideration text in the second, third and fourth sentences, insert “and floodplain” after “wetlands.”
- Table 2-3, p. 1 For the NPDES Synopsis text, add at the end: “Substantive requirements under NPDES are written such that state and federal NRWQC are met. Permits are required for offsite discharges. RI Standards apply to POTWs and includes stormwater requirements for construction projects that disturb over one acre.” In the Consideration text, add: “If over an acre of shoreland will be used for staging, processing and/or stockpiling stormwater requirements under these regulations will be met.
- Insert federal CWA pretreatment standards for potential discharge to a POTW (33 U.S.C. § 1251 *et seq.*, 40 CFR Part 403) – see Table E-12, p. 2 of the NUSC ROD.
- Table 2-3, p. 5 For the State NPDES Synopsis text, add a second sentence: “These regulations also include stormwater standards applicable if shoreland staging, processing and stockpiling areas cover

over one acre.” In the Consideration text, insert “or a POTW” after “surface water” and add: “If over an acre of shoreland will be used for staging, processing and/or stockpiling stormwater requirements under these regulations will be met.

Insert State pretreatment regulations for potential discharge to a POTW (RIGL 46-12, 4217.1, 42-45) – see Table E-12, p. 3 of the NUSC ROD.

- Table 3-1, p. 2 Thin-Layer Cover is a Monitored Natural Recovery General Response Action.
- Table 4-6, p. 1 Sediment Guidance, Action to be Taken text add a new second sentence: “May not meet sediment standards in the long-term if there are releases of contaminated sediment during storm events or other disturbance of the cover.”
- Table 4-6 If this alternative will take over an acre of shoreland for stockpiling cover material/operations, federal and state NPDES stormwater standards should be cited (*see* comments to Table 2-3).
- Table 4-9 If this alternative will take over an acre of shoreland for stockpiling cover material/operations, federal and state NPDES stormwater standards should be cited (*see* comments to Table 2-3).
- Table 4-12 If there will be potential discharges to a POTW, add federal and state pretreatment standards (*see* comments to Table 2-3).
- If this alternative will take over an acre of shoreland for stockpiling cover, managing dredged sediments, dewatering and other operations then federal and state NPDES stormwater standards should be cited (*see* comments to Table 2-3).
- Table 4-13 For the Action to be Taken text for each alternative in the second sentence, insert “and capping under Pier 2” after “dredging.”
- Tables 4-14 & 4-15 In the Action to be Taken text for all of the citations replace “backfill” when it occurs with “capping under Pier 2.)
- Table 4-15 If there will be potential discharges to a POTW, add federal and state pretreatment standards (*see* comments to Table 2-3).
- If this alternative will take up over an acre of shoreland for stockpiling cover, managing dredged sediments, dewatering and other operations, federal and state NPDES stormwater standards should be cited (*see* comments to Table 2-3).
- Table 4-15, p. 2 For the Coast Guard Anchorage standards Action to be Taken text, LUCs are required under both Pier 1 and 2 because of potential asbestos and the capped area under Pier 2.
- Table 4-16, p. 1 For Alternative 4, five-year review and LTM are required for both the backfilled areas and the areas under Pier 1 and 2. For Alternative 5 Five-Year Review and LTM are required under Piers 1 and 2 because of the asbestos restrictions.
- Figure 1-11B Correct the colored symbols for N28, N30, and Q29, changing them from orange to yellow.
- Figure 1-11C Please change the colored symbol for N24 to red.
- App. D, p.787/843 Please correct the Visual of New SD5 to include backfill. Also, edit it to reflect the dredging revisions suggested in the general comments.
- App. D, p.789/843 The post-meeting clarifications are not consistent with the October 23, 2013 meeting action

items and they are not consistent with the descriptions of the alternatives in the Draft Final FS.

Alternative 4 requires long-term monitoring and LUCs for the backfilled areas as agreed in October 2013.

No confirmation sampling is indicated for both Alternative 4 and 5, but the text specifies confirmation sampling for Alternative 5 but not Alternative 4. Please edit the FS to require confirmation sampling following backfilling for Alternative 4.

The remedial goal for lead is still of 168 mg/Kg. Please delete that language.

- App. D, p. 792/843 The last sentence in the first paragraph is not correct. The grid cells with the greatest concentrations of each COC were not always remediated first and the final results for the alternatives presented leave some grid cells with COC concentrations greater than twice the PRG in place. Cells with PRGs less than twice the PRG are proposed for remediation. Please correct the text to reflect this.
- App. D, p. 801/843 Regarding Figure D8-A, the first sentence on page 792 states that the areas requiring remedial action to reduce the baseline SWACs to below PRGs are shown on Figure D8-A. This is not correct because there are multiple groupings of grids that could be remediated to achieve the PRGs. While Alternatives 2 and 3 remediate only those grids shown in Figure D8-A, Alternative 4 achieves the PRGs using fewer grids and Alternative 5 uses more. The basis and relevancy for Figure D8-A are not clear. Please include a figure depicting all the grid cells where a PRG was exceeded.
- Appendix E Table E1-4.2: The post-remediation monitoring costs assumed for Alternative 4 do not include the monitoring agreed to in the October 2013 meeting. Long-term monitoring will be required for Alternative 4 in the open water areas that were backfilled. Chemical monitoring and bathymetry are required to verify that the cover has been effectively placed over the contaminated material and that there is no migration of the contaminants (*i.e.*, either through the cap or displaced by placement of the cap). Please edit the FS accordingly.