

ATTACHMENT A

RESPONSES TO COMMENTS FROM THE USEPA REVISED DRAFT FEASIBILITY STUDY (DECEMBER 2007), OLD FIRE FIGHTING TRAINING AREA NAVAL STATION NEWPORT, NEWPORT RHODE ISLAND COMMENTS DATED APRIL 15, 2008

GENERAL COMMENTS

1. *EPA acknowledges that the Navy has invested a significant amount of time and effort in re-evaluating owing to change the future use of the site to industrial/commercial. However, EPA notes that two of the three active soil alternatives evaluated in this FS are based on a cleanup to achieve residential standards under the Rhode Island regulations. Both soil Alternatives 2 and 3 propose to excavate contaminated soil to a depth of five feet (for practical purposes to the site water table) to remove all contaminated soil from the vadose zone. The only apparent reason to do this would be to satisfy the Rhode Island remediation regulations wherein the residential direct exposure criteria are applicable throughout the vadose zone.*

Because the Navy states that the site use has been changed to industrial/commercial only, there is no reason to do this because the industrial/commercial direct exposure criteria only need to be applied to at least the top two feet of soil. At a minimum, the FS needs to be revised to include additional alternatives designed to cleanup the site to the proposed usage.

Response: The alternatives are established to meet risk based PRGs that were calculated for the industrial commercial receptors, not RIDEM criteria. Vadose zone soils exceed both the I/C PRGs and the RIDEM criteria for PAHs (refer to Table 2-17, which shows concentrations above PRGs). The applicability of the upper two feet of soil appears to be correct and the Navy concurs with this as being a protective approach for this receptor.

2. *This FS does not mention the planned removal action to remove several buried structures and soils exceeding upper concentration limits in the area north of Taylor Drive. Please edit the FS to acknowledge that this removal activity will be completed prior to implementation of any remedial action that may be completed at the site.*

Response: Agreed: At the time this version of the FS was being developed, the extent of the removal action was not established since both were being conducted concurrently. In accordance with this comment, a discussion on this subject will be provided in the FS, and maps of the excavation areas will be added to the revised FS.

3. *As referenced in the cover letter, there is a degree of confusion with regard to the treatment of sediments in this revised feasibility study. EPA observes that the sediment alternatives may not address how the second human health remedial action objective will be met. Sediment alternatives should be revised to incorporate actions (i.e., monitoring and/or land use controls) for subtidal sediments. Additionally, there is uncertainty to the remaining extent of sediments*

above PRGs in the intertidal area because installation of the revetment wall is not complete.

Response: The comment applies to sediment alternative 3. The Navy will add long term monitoring of subtidal sediment at the site under this alternative, unless sediments are removed from the FS as other comments suggest. Please note that both sediment alternatives include monitoring or post – action sampling of intertidal sediment, which will address the uncertainty of the effects of the revetment on the contaminant levels in the intertidal area.

The comments within this response summary suggest removal of sediment as a media of concern from the FS. While the Navy would concur with this, the logic is that there is risk measured from the sediment, but the uncertainty of the source of the contaminants and the level of the risk posed by those contaminants suggests that the sediment PRGs should not be selected for a remedial action. Thus the PRGs for sediment and the sediments should not be considered “actionable”.

4. *No matter which alternatives are selected for any of the media, the alternative ultimately selected needs to include long-term monitoring of sediment and groundwater because significant concentrations of contaminants will be left in place at the site. Please edit the descriptions of the alternatives to include this requirement.*

Response: All groundwater alternatives (except the no action alternative) include long-term monitoring of the groundwater after action. The Navy will add monitoring subtidal sediment under sediment alternatives 2 and 3. See response to comment 3 above.

5. *The Supplemental Risk Evaluation included as Appendix C should be revised to include the risk calculations previously performed in the RI. The specific calculations that must be included involve the construction worker's exposure to soil. These values are necessary to determine the cumulative risk to the construction worker receptor. A similar comment was made on the Draft Final FS (March 2002) regarding cumulative risk. It is not apparent that the cumulative risk for receptors has been compared to the regulatory standard.*

Response: Total (cumulative) risk to construction workers for the site is provided in Table 10 of Appendix C. Cumulative cancer risk is 2.325E-5. Cumulative non cancer hazard index is 3.9. Appendix C, Page 7-1 provides this information.

SPECIFIC COMMENTS

1. *Title Page and Page 2 - Need to identify the Old Fire Fighter Training Area as an Operable Unit [ID OU #] of the Naval Education Training Center Superfund Site.*

Response: The requested information will be included.

2. *Abbreviations and Acronyms - Add “NCP – National Contingency Plan”; remove “MADEP” and “MCP”; add RI DEM – Rhode Island Department of Environmental Management”; add “ROD – Record of Decision”; remove “VDEQ”*

Response: The requested information will be included.

3. *ES-1 - Add a new second sentence – “OFFTA is Operable Unit ___ of the Naval Education Training Center Superfund Site.”*

Response: The requested information will be included. This site is Operable Unit 3.

4. *ES-1 - Add a new third paragraph: "The remedial action will also incorporate two CERCLA removal actions conducted by the Navy at the Site in 2004 and 2007. During the first removal action, which was completed in March 2005, earthen mounds on the Site were removed totaling 11,100 cubic yards of soil and debris. The 2007 removal action, which is continuing through 2008, consists of: removal of petroleum-contaminated soil; removal of a manhole and suspected oil-water separator uncovered during the 2004 removal action; removal of three foundations located in the subsurface; removal of one eight-inch cast iron drainage pipe presumed to have discharged contaminated water and waste from the Site; investigate whether a second drainage pipe shown on historic plans is present and remove if found; and remove building debris from the shoreline, design and install an engineered stone revetment that will prevent erosion of soil containing contaminants to the sediments of Coaster's Harbor."*

Response: The requested information will be included, however, the revised text will provide actual work conducted and not predicted work to be conducted.

5. *ES-2 - In the second paragraph change the first sentence: "sediment at concentrations that exceed federal and State regulatory criteria, and risk based benchmarks..."*

Response: The requested revision will be made.

6. *ES-2 - In the second bullet, the Groundwater PRG needs to be established based on the current federal groundwater classification for the area (based on MCLs). Remove the second sentence.*

Response: It is the Navy's understanding that the state of RI has an approved classification system in place. Based on that, it is believed that the RIDEM has classified groundwater in this area as "non-potable" (GB). This is the basis of understanding for groundwater at all of the NETC Newport sites under the FFA due to RIDEM considering their groundwater regulations to be ARARs.

7. *ES-2 - For the third bullet, since the revetment constructed through the removal action is to be incorporated into the final remedial action, the entire volume of contaminated sediments should be identified and/or recalculated (including the sediments "capped" by the revetment).*

Response: The quantity of sediments removed by construction of the revetment will be added, and the issue will be clarified.

8. *ES-3 - In the first paragraph, if the sediment contamination is from off-site sources change: "exceeding PRGs in soil and groundwater and sediment."*

Response: Additional discussion on this topic is necessary. By making this change, the sediment would be dismissed from the FS. While the Navy is agreeable to the change, be advised that no agreement on the source of the sediment contamination was previously documented, although the Navy has presented EPA and RIDEM with a forensic study conducted as part of the Tiger Team

review to suggest that the contamination can be attributable to urban background.

At this time, the Navy recommends that the team discuss this topic at the next RPM meeting before to be certain that the intent of the comment is understood before making such a drastic revision. The Navy's position has historically been that there is enough evidence to believe that PAHs and fuels were, in the past, discharged through outfalls to the harbor and, to a lesser extent, from the shoreline of the fire training area, however, there is enough uncertainty regarding current risks from the sediment and to shellfish to consider them "not actionable" at this time. These uncertainties are explained in sections 2.3.3.2 and 2.3.3.3 of the FS report.

9. *ES-3 - In the second paragraph, add to #4: "maintain revetment along shoreline to prevent erosion of contaminated soil to sediments." Add this to #2 and #3 also if some contaminated soil is to be left under the revetment even after the rest of the Site is excavated and either treated or removed off-site.*

Response: The requested information will be included.

10. *ES-3- In the third paragraph which discusses groundwater alternatives – no vapor risks that need to be addressed?*

Response: The current and future vapor intrusion pathway is considered incomplete as described in Section 3.3 of Appendix C of the FS report. There is no risk from vapor and groundwater.

11. *ES-3 - Add to #2 and #3: "Maintain revetment "cap" over contaminated sediments,..."*

Response: While the revetment may function as a cap, it is misleading to label it as such. A revision will be included to state "maintain revetment to prevent erosion".

12. *ES-3 - In the sixth paragraph revise last sentence to meet the requirements under Paragraph 17.3 of the FFA: "Once input from USEPA, RIDEM State and the public is gathered, the Navy will ~~select a final remedy~~ submit a draft Record of Decision (ROD) and Responsiveness summary to EPA and the State. EPA or the State may either concur with the draft document or submit written comments. If comments are submitted, the Navy shall then respond to the comments and issued a revised draft ROD. If the Parties are unable to reach agreement on the draft ROD, selection of the remedy shall be by EPA and EPA will prepare and issue the final ROD."*

Response: The requested revision will be made.

13. *ES-4 – Table ES-1, for the No Action Alternative cost need to add the cost for 5-year reviews.*

For Alternative #4 add: "maintain revetment along shoreline to prevent erosion" Add this to #2 and #3 also if some contaminated soil is to be left under the revetment even after the rest of the Site is excavated and either treated or removed off-site.

Response: The requested revisions will be made.

14. *ES-4: Table ES-2, for the No Action Alternative cost need to add the cost for 5-year reviews; for Alternative 2 for "Does the Alternative reduce residual risk?" should be answered yes – since institutional controls should prevent exposure to contaminated groundwater (including vapor risks, if required).*

Response: The requested revision will be made.

15. *ES-5 - If there is on-site contamination, for the No Action Alternative cost need to add the cost for 5-year reviews; add to #2 and #3: "Maintain revetment "cap" over contaminated sediments."*

Response: The first requested revision will be made. The second will be made to state "maintain revetment to prevent erosion".

16. *Page 1-1 - In the first paragraph add a new second sentence – "OFFTA is Operable Unit ___ of the Naval Education Training Center Superfund Site."*

Response: The requested revision will be made. OFFTA is Operable Unit 3 of the Naval Education and Training Center Superfund Site.

17. *"Page 1-1 - Add a new third paragraph: "The remedial action will also incorporate two CERCLA removal actions conducted by the Navy at the Site in 2004 and 2007. During the first removal action, which was completed in March 2005, earthen mounds on the Site were removed totaling 11,100 cubic yards of soil and debris. The 2007 removal action, which is continuing through 2008, consists of: removal of petroleum-contaminated soil; removal of a manhole and suspected oil-water separator uncovered during the 2004 removal action; removal of three foundations located in the subsurface; removal of one eight-inch cast iron drainage pipe presumed to have discharged contaminated water and waste from the Site; investigate whether a second drainage pipe shown on historic plans is present and remove if found; and remove building debris from the shoreline, design and install an engineered stone revetment that will prevent erosion of soil containing contaminants to the sediments of Coaster's Harbor."*

Response: The requested revision will be made, though the details may be different than that presented in the comment above, given that the removal action is still ongoing.

18. *Page 1-3 - In the second paragraph change: "The FFA outlines response action requirements under ~~the Department of Defense IRP at NAVSTA Newport~~ CERCLA at the NETC Superfund Site."*

Response: Comment noted, this revision will be made.

19. *Page 1-4 - In the fourth paragraph add to the fifth sentence: "In 2004 ~~under the CERCLA removal action~~, the mounds were removed and the topography was reduced to a base grade elevation of the former ground level."*

Response: The requested revision will be made.

20. *Page 1-4 - At the end of the page add a new eighth paragraph: "In addition to the 2004 CERCLA removal action, a 2007 CERCLA removal action, which continued into 2008, consists of: removal of petroleum-contaminated soil; removal of a manhole and suspected oil-water separator uncovered during the 2004 removal action; removal of three foundations located in the subsurface; removal of one eight-inch cast iron drainage pipe presumed to have discharged*

contaminated water and waste from the Site; investigate whether a second drainage pipe shown on historic plans is present and remove if found; and remove building debris from the shoreline, design and install an engineered stone revetment that will prevent erosion of soil containing contaminants to the sediments of Coaster's Harbor."

Response: The requested revision will be made, though the details may be different than that presented in the comment above, given that the removal action is still ongoing.

21. *Page 1-6 - For the last sentence of the first paragraph is there a citation (possibly a POLREP for the Removal Action?) for the statement that most of the soils excavated were found not to be contaminated?*

Response: The passage cited will be clarified.

22. *Page 1-7, §1.4.2 - In the fourth paragraph, please change "groundwater floor" to "groundwater flow".*

Response: The requested revision will be made.

23. *Page 1-8, §1.5 - Section 1.5 discusses terrestrial habitats in the introduction section of the report. It is stated in the last sentence of Section 1.5 that "In 1994, habitats and wildlife present in the vicinity of OFFTA were identified in the methods and detailed results of those survey are reported in the Ecological Risk Assessment Report, TRC, 1994." It is assumed that the surveys being referred to in this sentence are the wildlife and/or habitat surveys performed by Menzie-Cura and Associates, Inc. but based on the wording in the sentence, it is not clear. This sentence should be revised so it is clear to the reader what surveys are being referenced.*

Response: The primary document which describes the surveys is the "Ecological Risk Assessment Report" Draft Final, October 1 1994; prepared by TRC. This document will be added to the references section.

24. *Page 1-10 - The last sentence of the fourth paragraph states: "As a whole, this community is potentially exposed to bulk sediment and water-borne contaminants, which may originate from OFFTA." Revise this statement to either reflect whether OFFTA contaminants are present in sediments or not (or if there is just a risk of future contamination).*

Response: The Statement is taken from the Final Ecological Risk Assessment, and it is agreed that the statement needs revision based on the information developed since that document was completed. Please refer also to the response to comment 8 above.

25. *Page 1-15 - In the second paragraph the following sentences are not clear as to what the standard was ultimately used: "Some details regarding the implementation of the Background Soil Investigation were not agreed to by RIDEM, including the use of some of the data points they believed were outliers. The 95 percent UTL value shown for arsenic in background soil was not an actual calculated value, but instead a value negotiated to be acceptable for use at the OFFTA site. The arsenic background concentrations to be used for site soil comparisons remain an issue of discussion between the Navy and RIDEM." What is the CERCLA-based cleanup level for arsenic? If an alternative value was "negotiated" there needs to be more of a discussion concerning the basis for setting an alternative value that meets CERCLA standards.*

Response: The PRGs calculated for the site are presented in Table 2-9. The statements are correct as written. The background value was negotiated during the completion of the background report.

26. *Page 1-16 - Replace the last sentence of the first paragraph with: "Petroleum and TPH are not regulated under CERCLA."*

Response: The statement is correct as written. However, the requested language will be added as a new passage.

27. *Page 1-16 - Second paragraph is unclear what the applicable standard for assessing VOCs and SVOCs (need to meet MCLs not State standards, unless the State standards are more stringent or if there are contaminants regulated by the State that don't have MCLs). It is unclear whether there is a potential risk from vapor or not if a building is put on the site (would institutional control need to include vapor restrictions?).*

Response: The language will be clarified as to whether the groundwater exceeds MCLs. Indoor air is addressed in Section 1.10.3.

28. *Page 1-16, 3rd Para - Please clarify in-text whether manganese exceeds federal risk-based standard.*

Response: There is no federal risk based standard for manganese. A secondary MCL of 0.05 mg/l is established but not enforceable. The measured concentrations of manganese at the site are 0.4 to 12.5 mg/l (Table 2-1, Appendix B) which exceed this secondary MCL. There is no drinking water pathway for groundwater exposure at the site. Such discussions do not lend themselves to clarifying the document.

29. *Page 1-6, Section 1.8.3, 1st Paragraph - Please present/explain sediment in terms of use of subtidal and intertidal sediments which is used throughout the rest of the document.*

Response: The following explanation will be provided: Subtidal sediment is substrate below the mean low tide and intertidal sediment is substrate between mean low tide and mean high tide. The mean low and mean high tides are not clear lines that can be depicted on a map without a detailed tidal study. For the purposes of this document the mean low tide is assumed to be 0.0 feet elevation, and the mean high tide is estimated at approximately 3.4 feet elevation, Navy MLW datum.

30. *Page 1-19 - Remove the first bullet and fourth bullets, since TPH is not regulated under CERCLA. Or suggest noting that TPH is being addressed as a State contaminant and kept in the FS for continuity.*

Response: Because the Navy has to be responsive to RIDEM comments as well as EPAs comments, the latter approach is advisable.

31. *Page 1-19, 2nd Groundwater Bullet - Groundwater standard to be used is federal MCLs, State standards to be used only if more stringent than federal standards.*

Response: Please refer to the response to comment No. 6 above.

32. *Page 1-19, 3rd Groundwater Bullet - Federal health advisory standard should be used for manganese unless the State standard is more stringent.*

Response: It is assumed that the comment is referring to the secondary MCL for manganese. Refer to the response to comment 31 above.

33. *Page 1-19, 1st Sediment Bullet – If PAHs are not site-related, remove the bullet. If there are some site related PAHs intermixed retain.*

Response: The text is correct as written. Please refer to the response to comment no. 24 above.

34. *Page 1-19, 2nd Sediment Bullet – Please clarify if there is there a risk from lead to human health or the environment from 39 mg/kg.*

Response: Risks are summarized in Section 1.10.

35. *Page 1-20 – The presence of this subsection requires clarification. Based on the text in the first bullet, it is unclear as to whether the contaminants present in shellfish are from the site. If not, remove the bullet.*

Response: The text is correct as stated.

36. *Page 1-20, 2nd Para – Change the last sentence to: “These chemicals are not contaminants associated with releases that occurred at the OFFTA site during its operation as a fire fighting training school from Navy activities at the Site.” CERCLA liability is derived from any Navy activity (i.e. fire fighting, filling, dumping) that caused a release or threat of release of contamination from the Site.*

Response: The text is correct as stated.

37. *Page 1-20 - First paragraph of Sec. 1.8.7, groundwater levels should be set by federal MCLs and only by State standards if they are more stringent than MCL. Potential vapor risks from VOCs should also be discussed.*

Response: Regarding the use of MCLs, please refer to the response to comment 6 above. Vapor risks are described in Section 1.10.

38. *Page 1-20 - Third paragraph of Sec. 1.8.7, third sentence “All pesticide concentrations were low.” is not clear, since it doesn’t identify whether pesticides exceeded any regulatory or risk-based standard or not.*

Response: This statement will be clarified.

39. *Page 1-20 - Last paragraph, concerning PCBs, no discussion whether PCB levels exceeded risk-based federal TSCA standards (1ppm for residential soils or levels for eco-risk/human consumption of seafood).*

Response: This information will be added.

40. *Page 1-22 - First paragraph concerning PAHs, no discussion of erosion of PAH contaminated soil being released to the shoreline and sediments. This risk was one of the grounds for installing the shoreline revetment under the 2007 CERCLA removal action.*

Response: This information will be added.

41. *Page 1-22, 2nd Para, Last Sentence – Clarify whether lead contamination found in sediments is connected to on-site sources or not since, if from on-site sources that would establish a basis from addressing sediments under the OFFTA CERCLA remedy.*
- Response: There is no way to determine if lead in soil is related to lead in sediment. Because there is no risk from lead in sediment, it seems immaterial to the FS.
42. *Page 1-23 - In the first paragraph, the fourth sentence should be clarified to address that if the source of lead was from fill or debris deposited by the Navy, there would be a CERCLA basis for addressing it through the OFFTA remedy.*
- Response: Please refer to the response to comment 41.
43. *Page 1-23. Section 1.10.1 – TSCA risk-based standards for PCBs should be discussed in this section (if PCB levels in soil exceed 1ppm or exceed eco-risk or human consumption risk levels in sediment or fish/shellfish tissue). No discussion of sediments is required if the contaminants are not Site-related.*
- Response: This information will be added.
44. *a) Page 1-26, Last paragraph, Second to Last Sentence - "...following reasons: the State's groundwater classification of the aquifer underlying the site; the site's proximity to the ocean and the groundwater salinity measured at the site; and the availability of nearby alternative potable water supplies." Federal drinking water classification, rather than State classification is to be used for the Site.*
- Response: The statement is correct as written.
- b) Remove the last sentence, since the cleanup to drinking water standards is required by ARARs (MCLs).*
- Response: Please refer to the response to comment no. 6.
45. *a) Page 1-27, §1.10.3 - a) In the fifth sentence of the first paragraph, if soil samples collected from beneath the baseline ground surface prior to removal of the mounds were not used for the 2007 supplemental risk evaluation, please clarify if those soil sample results would have changed the supplemental risk evaluation conclusions. If they were included, please clarify this in the FS.*
- Response: The cited passage states that soil data from the post-mound removal sampling **was** used in the 2007 risk evaluation (i.e. the existing condition after the mound removal). Other variances in data use would seem unhelpful.
- 45b) In the fourth sentence of the second paragraph, clarify that the construction worker exposure is only to soil, if that is the intent.*
- Response: The risk is from soil and groundwater, additive. This will be clarified.
- 45c) There appears to be something missing from the last sentence in the second paragraph. Please review and correct the sentence as appropriate.*
- Response: This paragraph will be clarified.
- 45d) In the last sentence in this section, please state why the vapor intrusion pathway was considered incomplete. (if it's because no structures are currently*

present, there still may be a basis for an institutional control to require vapor mitigation on any future buildings built on the site).

Response: Appendix C, Section 3.3 addresses vapor intrusion. The last sentence states that because all groundwater concentrations are below screening values the pathway is considered insignificant. This will be clarified in the text.

46. *Page 1-28, Section 1.10.4 – This is an important section to the overall FS and needs clarity. It is important to present the rationale for action in the various site media and identification of COCs. Specifically, the last sentence of the 2nd Paragraph talks of “unrestricted use,” then the 3^d paragraph begins to talk about the “industrial/commercial worker scenario” that is being used for the site. Presentation of the base’s future plans for this area should be made.*

Response: The artifact describing unrestricted use is in error. This will be clarified.

47. *Page 1-28 - In Section 1.10.4 if sediment contamination is not from on-site sources remove all references to soil contamination (including the summary of sediment contaminants on pp 29-30).*

Response: The question of sediment contamination has been extensively evaluated. It was found that most of the PAHs in the surface sediment are attributable to non-point sources. Please refer to the response to Comment No. 8.

48. *Page 1-28 - In the third paragraph, please clarify whether recreational use that is anticipated is more restrictive than commercial/industrial use.*

Response: The frequency used in the risk calculations will be stated. The “restrictiveness” may be in question depending on how it is measured.

49. *Page 1-30, Section 1.11 – If there is no contamination of sediments from on-site sources, eliminate all discussion of eco-risk from sediment contamination.*

Response: Please refer to the response to Comment no. 8.

50. *Page 1-31, §1.11 - This section provides a brief discussion of the ERA performed by SAIC in 2000. It is stated on page 1-31 that evaluations of possible changes in sediment conditions in intertidal and offshore areas of the project area were not possible at this time. There is no explanation as to why additional evaluations were performed for subtidal sediments and not for intertidal or offshore sediments. Additional information should be provided to explain why additional evaluations in these areas were not possible.*

Response: To clarify, additional sampling of the subtidal sediment has not been conducted other than those described in that section because no need for any other sampling has been identified. Therefore, improvement of the sediment condition in the offshore areas that has been observed in the intertidal areas is cannot be identified (since there is no new data, no comparisons can be made with old data).

SECTION 2

51. *Page 2-2 - In section 2.1.2, #1 remove “or discharge limits” from the definition of chemical-specific ARARs.*

Response: The text is correct as stated.

52. *Page 2-3 - In section 2.1.4.1 in the first sentence remove "or discharge limits."*

Response: The text is correct as stated.

53. *Page 2-3, §2.1.4.1 - In the first sentence of the second paragraph under Soil, please correct the reference to the RI regulation cited: it was last amended February 2004. Make this correction throughout the FS.*

Response: The requested revision will be made.

54. *Page 2-3, §2.1.4.1 - At the end of the soil subsection, to be consistent with the discussions for all the other media, please add a sentence stating that the Navy has calculated site-specific risk based criteria for soil based on slope factors and reference doses in accordance with EPA risk guidance. In the first paragraph, at the end of the second sentence add: "(including setting risk-based cleanup levels)."*

Response: The requested revision will be made.

55. *Page 2-4, 2nd Para – Federal Clean Water Act AWQCs were not used to develop sediment cleanup standards?*

Response: PRGs were calculated using, in part, ambient water quality criteria. The cited statement is intended to say that there are no federal or state standards for sediment. This will be clarified and the use of AWQC will be included.

56. *Page 2-4, 3rd Para – Federal risk-based TSCA rags are not used to develop risk levels for PCBs in shellfish.*

Response: Concur.

57. *Page 2-4, 4th Para – Text is unclear as to what the groundwater standard is (i.e., drinking water standard utilizing MCLs or non-drinking water standard using state GB standards). Add discussion of potential vapor risk and, if risk present, any standards.*

Response: The text is correct as written. EPA requests we use MCLs as ARARs – please refer to the response to comment 6 above. Risk findings and vapor intrusion findings (and lack thereof) are presented in Section 1.10.3.

58. *Page 2-6, 3rd Para - It states: The Supplemental Risk Evaluation confirmed site soil as a medium of concern, considering a possible future use of the site as industrial/commercial." However, what about recreational use?*

Response: The FS addresses future use as industrial/commercial, refer to the third paragraph of Page 1-1.

59. *Page 2-6, 4th Para – Paragraph is not consistent with previous sections of the FS that imply that sediment contamination is not site-related. Edit for consistency.*

Response: The passage cited describes how the previous evaluations were conducted and what they found. The text is therefore correct as stated.

60. *Page 2-6, 5th Para – Paragraph is not consistent with previous sections of the FS that imply that shellfish contamination is not site-related.*
- Response: The passage cited describes how the previous evaluations were conducted and what they found. The text is therefore correct as stated.
61. *Page 2-7, 1st Para - The area is subject to federal drinking water standards not State GB standards (unless more stringent than federal MCLs). No explanation why vapor pathway is considered incomplete.*
- Response: Please refer to the response to comments 57 and 45d.
62. *Page 2-8, 4th Para - Federal Clean Water Act AWQC was not used to develop sediment clean-up standards.*
- Response: Please refer to comment 55 and the associated response.
63. *Page 2-8, Last Para – Delete this paragraph because FDA levels have nothing to do with human health risk under the subsistence fishing scenario.*
- Response: The text is correct as written.
64. *Page 2-9 - First section "Groundwater," no discussion of potential vapor issues.*
- Response: Please refer to response to comment 45d. A summary of the vapor intrusion evaluation will be provided in this section.
65. *Page 2-9, Last paragraph – No discussion of PRGs for recreational use of the site.*
- Response: Recreational PRGs were not calculated specifically, because industrial PRGs and residential PRGs were both calculated. This will be clarified.
66. *Page 2-10, 2nd Para – Please present rationale that industrial/commercial PRGs are protective for recreational users of the property.*
- Response: The FS was revised to address future use of the property as described on Page 1-1 of the report. Residential-based PRGs were calculated at the request of the EPA even though there is no plan for residential use of the property. Calculation of recreational based PRGs are not necessary.
67. *Page 2-10, 4th Para – Text is unclear as to whether there is any site-related contamination of sediment on which to base the need for PRGs.*
- Response: Please refer to the response to comment 8.
68. *Page 2-11, 2nd Para – Text is unclear as to whether there is any site-related contamination of shellfish on which to base the need for PRGs.*
- Response: Please refer to the response to comment 8.
69. *Page 2-12, 3rd Para - The area is subject to federal drinking water standards not State standards (unless more stringent than federal MCLs), however there is no explanation why no PRGs for soil vapor.*

Response: Please refer to the response to comment 64. A summary of the vapor intrusion evaluation will be provided in this section.

70. *Page 2-12, Section 2.2.3 – Text needs clarification on whether COCs in sediments or shellfish are site-related.*

Response: Please refer to the response to comment 8.

71. *Page 2-13 to -14, §2.2.3 – This section explains the derivation of ecological risk-based PRGs. It was determined in the ERA that ecological risks are likely present primarily due to concentrations of PAHs, and to a lesser extent, metals in sediment. It is also stated that metals are unlikely to be toxic based on SEM-AVS data for cadmium, copper, lead, nickel, silver and zinc. However, it is not clear in the text on pages 2-13 and 2-14 if these were the only six metals to be detected in OFFTA sediment samples. If metals other than these six were detected and analyzed, they should be discussed in the report. If these six metals were the only metals detected in OFFTA sediment samples it should be clearly stated in the text.*

Response: Additional description of the PRG development will be provided in this section. Refer also to the resolution to comment 8, above.

72. *Page 2-15, Section 2.2.4 – Please clarify if federal Clean Water Act AWQCs were used to develop sediment cleanup standards. Also clarify if TSCA used as a risk-based standard for PCBs in contaminated media.*

Response: Concur. This will be clarified.

73. *Page 2-16, 3rd Para, 2nd Sentence – PCB risk-based standards set by TSCA regulations not EPA guidance.*

Response: TSCA will be referenced here, though the EPA guidance on Remedial Actions under Superfund (which is stated) probably includes TSCA by reference.

74. *Page 2-18, Section 2.2.6 – In the second sentence it is unclear that industrial/commercial standards include recreational use.*

Response: The recreational and industrial exposures will be clarified.

75. *Page 2-19 - In the last paragraph, please provide rationale why would pesticides are not considered site related contaminants.*

Response: This is a summary statement taken from the RI and the ERA. This will be clarified.

76. *Page 2-20 - In the last paragraph, federal MCLs would appear to be the controlling ARAR, not the State remediation regs.*

Response: It is our understanding that because the site is in a GB aquifer, the GB criteria need to be met. MCLs do not need to be met by the remedial action because the groundwater is not a drinking water supply.

77. *Page 2-21, Section 2.3.3 – unclear any sediment COCs are from on-site sources.*

Response: Please refer to the resolution to comment no. 8 above.

78. Page 2-26, Section 2.4.2 – The reason for no risk from vapor needs to be presented more clearly.

Response: This will be clarified.

79. Page 2-27, Section 2.4.3 – Please clarify if there are any site-specific COCs in sediment.

Response: Please refer to the resolution to comment no. 8 above.

80. Page 2-29, 3rd Bullet – Please explain how the distance of 12 feet from a building can't be excavated was determined.

Response: This will be clarified.

81. a) Page 2-30, Section 2.5.3 – This section more clarity. As commented on throughout the text, it is unclear site-related COCs are present in the sediments. Establishing a basis for action is important to the CERCLA process. If site-related COCs are present, the text needs to clarify where they are located (in relation to most current site conditions which would include the revetment wall) and what volume remains after the revetment wall reconstruction.

Response: Please refer to the resolution to comment no. 8 above. The revetment design is just being completed as of July 2008, and the sediment volume that is anticipated to remain after construction is still uncertain: All changes to the design will impact the amount of existing sediment remaining. It should suffice for the purpose of this FS that some sediments will remain.

b) The last sentence of the first paragraph states: "Area and volume estimates for the subtidal sediments are not calculated, for reasons described below." but no explanation is included later in the text.

Response: Concur. The area and volume of subtidal sediments is not calculated because they do not exceed PRGs.

SECTION 3:

82. Page 3-2, Section 3.1.1 - Change the second sentence to: "This option does not provide for monitoring or placing access restrictions on contaminated media; however it does include conducting statutorily required reviews of the protectiveness of the remedy at least every five years. Examination of this option is retained throughout the FS process, as required by the NCP."

Response: This revision will be included.

83. Page 3-2, Section 3.2.2.1 – Change the second sentence to: "Under this scenario, no removal or treatment of the contaminated soil would occur, however the alternative does include conducting statutorily required reviews of the protectiveness of the remedy at least every five years."

Response: This revision will be included.

84. Page 3-5, Section 3.2.2.2, 2nd Para - Change the first sentence: "Land use controls are institutional controls place restrictions on the use of property based on the presence of a risk to human health or the environment. On non-federal property these restrictions are commonly recorded against ~~that are typically placed on property deeds~~. On federal property, such as the Naval Station, the restrictions may be placed on the base's property management instruction. These ~~deed~~ restrictions are used to limit future activities or uses of a site to prevent human contact with contaminated soil or groundwater and to protect components of the remedy (i.e. monitoring wells, the shoreline revetment, vapor mitigation devices). Land use controls commonly used to reduce exposure to contaminated media include prohibitions on installing water supply wells, restrictions on types of development allowed (e.g., no residential use), ~~disturbing components of the remedy~~, and limitations on certain types of construction (e.g., excavation, buildings with basements)."

Response: This revision will be included.

85. Page 3-5, Section 3.2.2.2, 3rd Para - "~~The State of Rhode Island requires Environmental Land Usage Restrictions (ELURs) in most cases where contaminants are left in place at concentrations greater than those protective against direct exposure associated with residential land usage. When an ELUR is established, the decision document (ROD) describes the types of pollutants, location of pollutants, and what activities and uses are prohibited.~~ Any land use controls would be implemented in accordance with the Department of Defense Guidance on Land Use Controls Associated with Environmental Restoration Activities for Active Installations, dated January 17, 2001. ~~However,~~ Any time that the Navy retains the property, the "activity" (in this case Naval Station Newport Public Works Dept.) enforces any land use control necessary, ~~an ELUR is not required, and RIDEM has no jurisdiction.~~"

Response: The Navy concurs with the approach provided. Discussions with RIDEM should be held on this topic. The land use instructions will be issued by NAVSTA, as discussed at previous RPM meetings. Annual inspections of sites where restrictions are provided will be conducted.

86. Page 3-6 - In the second paragraph change the fifth sentence to: "If the land is sold and released from Navy jurisdiction, the ~~ELUR is written into~~ land use restriction that was incorporated into the base instruction is written into the deed for the new property ~~title~~ and ~~deed~~ recorded against the title. The format of the land use restriction shall meet local or state recording standards (in Rhode Island the regulatory standards for institutional controls are termed Environmental Land Usage Restrictions (ELURs))."

Response: This revision will be included.

87. Page 3-6, 3rd Para – Change to: "In cases where land use controls, including base instructions or ELURs, are placed to address contamination at a site, the ~~responsible party~~ Navy must submit an annual report to the regulatory parties documenting that all of the restrictions are being met. The Navy shall also take immediate action to correct any violations identified. This report must be submitted every year and the obligation to enforce the restrictions shall remain as long as ~~the restrictions~~ as long as levels of contamination exceeding CERCLA risk levels remain on the property. ~~The RIDEM Office of Waste Management has stated that they will periodically inspect the site to ensure that the provisions of the land use controls are being met (RIDEM 4/02).~~"

Response: Please refer to the response to comment 85.

88. *Page 3-6, 2nd Bullet – Change to: “Land use controls for soil on the active base, in the form of base instructions can be easily implemented by the Navy. Before any property transfer were to occur from Navy control, the Navy would establish and record land use restrictions (in the form of an ELUR) against any deed created for the transferred property that will run with the land. This can be readily implemented. Monitoring and enforcement of land use restriction would also be readily implemented by the Navy. ~~would be implemented by the property owners. If property owners are not willing to place the desired restrictions on the property deeds, legal action by state or local authorities would be necessary to implement the land use controls. In Rhode Island, land use controls are voluntarily placed on the property by the owner.~~”*

Response: This revision will be included.

89. *Page 3-6, 3rd Bullet – Change to: “and ~~no~~ limited O&M costs would be incurred monitoring and enforcing the land use controls.”*

Response: This revision will be included.

90. *Page 3-8, Section 3.2.2.3 - Add discussion of maintaining the revetment constructed through the 2007 CERCLA removal action as a permanent cover over shoreline contaminated soils.*

Response: Concur. Additional discussion on the role of the revetment as a component of a permeable cover will be added.

91. *Page 3-12, 2nd Bullet – In the last sentence do the soils also contain elevated levels of PCBs (above 1 ppm)?*

Response: PCBs greater than 1 ppm have not been detected in soil on site.

92. *Page 3-12, Last Para – Change the last sentence to: “any ~~a~~ RCRA facility for off-site management of Superfund hazardous substances if the facility has significant ~~RCRA~~ environmental violations”*

Response: The requested change will be made.

93. *Page 3-28, Section 3.3.2.2 – Mention should be made for natural attenuation of groundwater contaminants.*

Response: Attenuation parameters have not been measured at the site. Whereas it is likely that attenuation will take place, it is not intended to be a primary element of the alternative. This will be clarified in the section cited.

94. *Page 3-28, Section 3.3.2.2, 2nd Para – Change to: “Institutional controls would be established in the form of land use controls to restrict activities within the current Naval base through the establishment of a base instruction. To address the future use of land in the event that a property is sold or transferred, the Navy will create and record deed restrictions that will meet local and state requirements to run with the land. These restrictions may limit future activities such as placement of new wells, establish requirements for installation of vapor mitigation measures in any structures on the Site, or restriction of construction that would allow ready access to the groundwater for any reason (for example,*

potable water supply). Restrictions would also prevent the disturbance to any component of the remedy (monitoring wells). Institutional controls would be monitored and enforced by the Navy for as long as contaminants are present that pose a risk above CERCLA risk levels."

Response: Unless the property is to be conveyed, no one other than the Navy can encumber the deed of the federal property to restrict land uses. The Navy can utilize the base instruction (Response to Comment 85) and provide internal inspection, reporting, and mitigation, if necessary.

95. *Page 3-29 - In the first paragraph add to the end of the first sentence: "and exposure to vapor".*

Response: The requested revision will be made.

96. *Page 3-29, 1st Bullet - Change "Institutional controls ~~could~~ will be implemented at the active base through base instructions created and enforced by the ~~property owners~~ Navy. ~~If property owners are not willing to place the desired restrictions on the property deeds, legal action by state or local authorities would be necessary to implement the institutional controls.~~ Before any property transfer were to occur from Navy control, the Navy would establish and record land use restrictions (in the form of an ELUR) against any deed created for the transferred property that will run with the land. This can be readily implemented. Monitoring and enforcement of land use restriction would also be readily implemented by the Navy.*

Response: Please refer to the response to comment 94

97. *Page 3-29, 2nd Bullet - Change to: "and ~~no~~ limited O&M costs would be incurred monitoring and enforcing the land use controls."*

Response: The requested revision will be made.

98. *Page 3-30, Section 3.3.2.3 – For Containment, O & M of the revetment constructed as part of the 2007 CERCLA removal action needs to be evaluated in this section.*

Response: The requested revision will be made.

99. *Page 3-46, §3.3.3 - In the last sentence in this section, the text states that the infiltration gallery has been retained for consideration. Please discuss how the use of an infiltration gallery would impact the groundwater flushing calculations presented in Appendix K. Please indicate if the use of an infiltration gallery would achieve an increased flushing rate and significantly reduce the time to achieve cleanup. Note that this last sentence is not a complete sentence; please correct it.*

Response: The infiltration gallery will be considered.

100. *Page 3-48, Section 3.4.4.2 – There should be an evaluation of "Monitored Natural Recovery" included as a Limited Action (would need to meet EPA standards for MNR)?*

Response: Please refer to the response to comment 93.

101. *Page 3-48 - In the fourth paragraph change: 'Institutional controls would be ~~implemented~~ established in the form of land use controls to restrict activities within the current Naval base through the establishment of a base instruction. To address the future use of land in the event that a property is sold or transferred, the Navy will create and record deed restrictions that will meet local and state requirements to run with the land. These restrictions may limit future activities such as disturbance of the shoreline revetment constructed as part of the 2007 CERCLA removal action and to restrict future use of the site that may result in uncontrolled exposure of human receptors to the intertidal sediment. The intertidal areas below the mean high tide line [is that the accurate border to state tidal land?] and subtidal areas are property of the State of Rhode Island, so any efforts to restrict access or activities must be coordinated with the state. Institutional controls would be monitored and enforced by the Navy for as long as contaminants are present that pose a risk above CERCLA risk levels.'*

Response: The requested revision will be made.

102. *Page 8-48 - In the second bullet: The effectiveness of such restrictions would also depend on adequate enforcement by the ~~landowner~~ Navy (above the mean high tide line), in coordination with the State of Rhode Island (for areas below the mean high tide line) ~~of the shoreline~~.*

Response: The requested revision will be made.

103. *Page 3-48, 3rd Bullet - "Land use controls may be implemented by the ~~property owners~~ Navy for areas above the mean high tide line or by state and local authorities in areas below the mean high tide line. The Navy currently has a no swimming rule for the NAVSTA Newport shoreline. ~~If property owners are not willing to place the desired restrictions on the property deeds, legal action by state or local authorities would be necessary to implement the land use controls. In Rhode Island, land use controls are voluntarily placed on the property by the owner.~~ Before any property transfer were to occur from Navy control, the Navy would establish and record land use restrictions (in the form of an ELUR) against any deed created for the transferred property that will run with the land. This can be readily implemented. Monitoring and enforcement of land use restriction would also be readily implemented by the Navy.*

Response: The requested revision will be made.

104. *Page 3-49, 1st Bullet - The capital and O&M costs for administrative actions, monitoring compliance with the restrictions and enforcement, and 5-year reviews would be relatively low.*

Response: The requested revision will be made.

105. *Page 3-50; Section 3.4.2.3 – Containment needs to be retained to address O & M of the revetment constructed as part of the 2007 CERCLA removal action. The second paragraph is not consistent with the Action Memo for the 2007 removal action or text elsewhere in this FS. If the revetment is to be constructed, the second paragraph should be removed.*

Response: The statement is made in regards to containment of the intertidal sediment. (This section is the section on sediment, not soil). The revetment was redesigned to

contain the soil from erosion, which was the original intent. The revetment is not designed to retain or remediate sediment. Thus the passage is correct and while this will be clarified, it should remain: The revetment is constructed for the purposes of retaining soil.

106. *Page 3-63, Section 3.4.3 – All of the RPOs need to address that contaminated sediment is to be left under the revetment (requiring long-term O & M of the revetment).*

Response: O&M of the revetment will be included as needed.

107. *Page 3-64 - In the third paragraph: Limited Action would only be protective if Monitored Natural Recovery is included that shows how long it will take for contaminated sediments to no longer pose a risk to human health or the environment.*

Response: Correct. However, natural attenuation parameters have not been measured at the site, and no projection models have been conducted in this regard. Whereas it is likely that attenuation will take place, it is not intended to be a primary element of the alternative. This will be clarified in the section cited.

SECTION 4

108. *Page 4-1, 2nd Para – In the last sentence change: “all costs associated with constructing the Revetment are not included in this report because those costs are already accommodated in the previous decision document. However, the cost to establish land use restrictions to prevent disturbance of the Revetment and long-term O & M are included in this report, since they are remedial, rather than removal actions, under CERCLA.*

Response: The requested change will be made.

109. *a) Page 4-3, 8th Para – a) At the end of the second sentence add: “A residential scenario was not considered since the future land use for the site is anticipated to be industrial/commercial (therefore all alternatives except the No Action Alternative require land use restrictions to prevent residential use of the land).*

Response: The requested revision will be made.

b) In the third sentence: Please list the contaminants which exceeded residential standards (PCBs?) and would be the basis for the ICs.

Response: Residential PRG exceedances are provided in Table 2-17. The listed constituents can be presented in the text.

110. *a) Page 4-5, Section 4.2.2 – a) 5th Bullet: Please revise this bullet to be consistent with status of revetment wall and soil removal. Add at the end of the text: “Long-term O & M of the revetment.*

Response: The requested revision will be made.

b) 6th Bullet: Change “Post-remediation groundwater monitoring to assess the protectiveness of the soil remedy (addressed under Section 5 of this report)”

- Response: The requested revision will be made.
- c) 7th Bullet: Change "Land use controls limiting the use of ~~groundwater and soil~~ at the site for industrial/commercial/recreational purposes. Long-term monitoring of compliance and O & M of the cover.*
- Response: The requested revision will be made.
111. *Page 4-5, Section 4.2.3 – Same comments on the bullets as for Section 4.2.2.*
- Response: Refer to the responses to comment 110.
112. *Page 4-7, Section 4.2.4 – Same comments on the bullets as for Section 4.2.2.*
- Response: Refer to the responses to comment 110.
113. *Page 4-12, 3rd Para, 3rd Sentence - Change: "were used by the ~~EPA~~ Navy to develop the proposed remedy"*
- Response: The requested revision will be made.
114. *Page 4-12, §4.3 - In the last bullet under Cost please change 3.9 percent to 3.0 percent to be consistent with the calculations actually made using the January 2007 Appendix C to the OMB bulletin.*
- Response: The error will be corrected. The costs are actually developed using 3% as described in Appendix I.
115. *Page 4-16, 4th Para – Add a new fourth and fifth sentence: "If the new revetment caps contaminated soils, institutional controls will be established to prevent disturbance of the revetment. Long-term O & M of the revetment is being incorporated into this alternative.*
- Response: The requested revision will be made. Note cost for monitoring is included in the groundwater alternative costing. This will be clarified.
116. *Page 4-17, 2nd Para – Add a new second sentence: "There will be a least yearly monitoring for compliance with land use restrictions at the Site."*
- Response: The requested revision will be made.
117. *Page 4-17, 6th Para – In the second sentence: "consistent with industrial/commercial/~~recreational~~ land use."*
- Response: Comment is noted. The requested revision will be made if recreational use is intended.
118. *Page 4-18, 2nd Para, Last sentence - Change: "applicable ~~local~~, state, and federal regulations"*
- Response: The text is correct as stated.
119. *Page 4-19, 4th Para – Need to include O & M of the revetment, which was constructed to prevent migration of contaminated soils.*
- Response: The requested revision will be made.

120. Page 4-19 - Add a new fifth paragraph: "Institutional controls in the form of a base instruction while the property is controlled by the Navy and deed restriction if and when the Navy was ever to transfer control of the property are easily implemented. Monitoring of compliance with institutional controls and enforcement of any violations is also implementable."
- Response: The requested revision will be made.
121. Page 4-19, Cost Table for Alternative 2 – Since leaving waste in place requires monitoring and institutional controls will require yearly compliance monitoring (and possible enforcement) the table value of only \$2,800 for 30 years of O & M and monitoring appears low. The alternative also needs to include O & M for the revetment, since it was constructed to prevent migration of contaminated soils off of the site (and may have contaminated soils underneath it).
- Response: The O&M and LTM for the soil alternative 2 is limited to the annual report to RIDEM describing the presence of the use restriction – 20 hours annually. The cost of \$2,800 presented is an annual cost. Appendix I explains that the groundwater monitoring cost and the five year review costs are included in the groundwater alternative costs. This will be clarified in the text section but the costs are correct as stated, unless additional costs are needed for O&M of the revetment. The need for O&M of the revetment will be considered and included if necessary.
122. Page 4-20, Last Para – Add a new fourth and fifth sentence: "If the new revetment caps contaminated soils, institutional controls will be established to prevent disturbance of the revetment. Long-term O & M of the revetment is being incorporated into this alternative.
- Response: The requested revision will be made. Note that cost for monitoring is included in the groundwater alternative costing. This will be clarified.
123. Page 4-21, 1st Para – Add a new second sentence: "There will be a least yearly monitoring for compliance with land use restrictions at the Site."
- Response: The requested revision will be made.
124. Page 4-21, 3rd Para - In the second sentence: "under an industrial/commercial/recreational exposure scenario."
- Response: Comment is noted. The requested revision will be made if recreational use is intended.
125. Page 4-21, 5th Para – Change: "cleaned to industrial/commercial/recreational levels. Restrictions on the contaminated soil would limit future activities at the property.
- Response: Comment is noted. The requested revision will be made if recreational use is intended.
126. Page 4-21 - Add a new sixth paragraph: "Institutional controls in the form of a base instruction while the property is controlled by the Navy and deed restriction if and when the Navy was ever to transfer control of the property are to be established. At least yearly monitoring of compliance with institutional controls and enforcement of any violations will also be implemented."

Response: The requested revision will be made.

127. *Page 4-22, 7th Para – Need to include O & M of the revetment, which was constructed to prevent migration of contaminated soils.*

Response: The requested revision will be made.

128. *Page 4-22 - Add a new last paragraph: "Institutional controls in the form of a base instruction while the property is controlled by the Navy and deed restriction if and when the Navy was ever to transfer control of the property are easily implemented. Monitoring of compliance with institutional controls and enforcement of any violations is also implementable."*

Response: The requested revision will be made.

129. *Page 4-23, Cost Table for Alternative 3 – Since leaving waste in place requires monitoring and institutional controls will require yearly compliance monitoring (and possible enforcement) the table value of only \$2,800 for 30 years of O & M and monitoring appears low. The alternative also needs to include O & M for the revetment, since it was constructed to prevent migration of contaminated soils off of the site (and may have contaminated soils underneath it).*

Response: The O&M and LTM for the soil alternative 3 is limited to the annual report to RIDEM describing the presence of the use restriction – 20 hours annually. The cost of \$2,800 presented is an annual cost. Appendix I explains that the groundwater monitoring cost and the five year review costs are included in the groundwater alternative costs. This will be clarified in the text section but the costs are correct as stated, unless additional costs are needed for O&M of the revetment. The need for O&M of the revetment will be considered and included if necessary.

130. *Page 4-23, Last Para – Add a new fourth and fifth sentence: "If the new revetment caps contaminated soils, institutional controls will be established to prevent disturbance of the revetment. Long-term O & M of the revetment is being incorporated into this alternative."*

Response: The requested revision will be made. Note cost for monitoring is included in the groundwater alternative costing. This will be clarified.

131. *Page 4-24, §4.4.4 - In the last sentence of the first paragraph under Compliance with ARARs delete the word both.*

Response: Comment noted. This statement may change depending on other revisions.

132. *Page 4-24, 2nd Para – Add a second sentence: "There will be a least yearly monitoring for compliance with land use restrictions at the Site."*

Response: The requested revision will be made.

133. *Page 4-24 - Add a new third paragraph: "Institutional controls in the form of a base instruction while the property is controlled by the Navy and deed restriction if and when the Navy was ever to transfer control of the property are to be established. At least yearly monitoring of compliance with institutional controls and enforcement of any violations will also be implemented."*

Response: The requested revision will be made.

134. *Page 4-24, 4th Para, 2nd Sentence - "an industrial/commercial/recreational exposure scenario..." Last sentence isn't clear regard the threat from leaching of contaminants. If the soil cover won't address exceedances of leaching standards the remedy isn't protective.*

Response: The comment is noted. Leaching standards are not exceeded.

135. *Page 4-24, 7th Para – Change the end of the paragraph to: "Alternative 4 would only comply with the RIDEM requirements for ~~both~~ industrial direct contact, but not for leachability. Therefore, the alternative is not ARAR compliant."*

Response: The comment is noted. Leaching standards are not exceeded.

136. *Page 4-25, 1st Para – Change to: "monitoring, long-term O &M of the cover and revetment, and use of controls..."*

Response: The requested revision will be made.

137. *Page 4-25, 2nd Para – Change the first sentence to: "The soil cover would be effective in preventing exposure to contaminated soils, but would be ineffective in preventing soil contamination from leaching into groundwater."*

Response: This revision can be included, but will be clarified to state that no leaching standards are exceeded. This would be the purpose of the monitoring conducted under the groundwater alternative.

138. *Page 4-25, 4th Para – Edit last sentence and add "for soil" after RAOs."*

Response: The requested revision will be made.

139. *Page 4-25, 5th Para – Remove the paragraph, since no permits required for an on-site remedy.*

Response: Work will be conducted within 100 feet of the shoreline. Thus some permits may be required. The paragraph should remain as a reminder.

140. *Page 4-25, 6th Para – Remove the second sentence (O & M of the equipment shouldn't be done on-site) and replace it with: "This alternative also includes long-term O & M of the revetment wall."*

Response: The text will be revised to include mention of O&M of the revetment.

141. *Page 4-26, Cost Table for Alternative 4 – Since leaving waste in place requires monitoring and institutional controls will require yearly compliance monitoring (and possible enforcement) the table value of only \$16,000 for 30 years of O & M and monitoring appears low. The alternative also needs to include O & M for the revetment, since it was constructed to prevent migration of contaminated soils off of the site (and may have contaminated soils underneath it).*

Response: Please refer to the cost basis provided in Appendix I. The cost for O&M of the revetment will be considered, but may be nominal. The text will be clarified that O&M of the revetment is necessary.

142. *Page 4-27, §4.5 - In the discussion under Compliance with ARARs, it is not quite correct to state that treatment steps and excavation and removal would satisfy the chemical-specific ARARs. These measures would only satisfy the ARARs if combined with restrictions limiting site use to industrial/commercial. Please edit the text to acknowledge this.*

Response: The requested revision will be made.

143. *Page 4-27, 1st Para, Last Sentence – The No Action Alternative needs to be evaluated, along with the other alternatives (that’s why it’s required under CERCLA).*

Response: The requested revision will be made.

144. *a) Page 4-27 - Second paragraph needs to be rewritten because Alternative 4 is not protective.*

Response: Please refer to the response to comments 134 and 135. Additional discussion may be warranted.

Discuss that under Alternatives 2-4 the shoreline revetment would be maintained (it will be present under Alternative 1, but won’t be maintained under CERCLA). Its ability to protect against erosion is proportional with how much contaminated soil each alternative will leave on site.

Response: The passage will be revised to explain that the revetment would be maintained by the property owner but O&M will not be required under CERCLA. The last statement in the comment is not clear. The ability of the revetment to retain soil is not dependent on the amount of soil behind it and under it, but its competence and design.

145. *Page 4-27, 3rd Para – Replace the last sentence: “Alternative 4 will not meet chemical-specific Rhode Island Remediation Regulations standards for leachability, although it will meet contact standards.*

Response: Please refer to the response to comments 134 and 135 above.

146. *Page 4-27, 5th – Change the last sentence: “Alternatives 2, and 3, and 4 would meet all identified ARARs.”*

Response: Please refer to the response to comments 134 and 135 above.

147. *a) Page 4-27, 6th Para – The long-term effectiveness and permanence section needs to be revised to reflect that Alternative 4 is neither an effective nor permanent remedy (leaves soils exceeding leaching standards in place). In this section also need to discuss how the long-term O & M the revetment and ICs to prevent its disturbance will maintain the long-term effectiveness and permanence of each alternative.*

Response: Please clarify how the reviewer determined that soils exceed leachability standards. The Concentrations in the groundwater do not indicate leaching above standards.

b) Clarify the meaning of the second sentence. Should it read: “There would be some risk that a portion of the contaminated material exceeding PRGs would not be excavated during the implementation of alternatives 2 and 3, but proper

monitoring confirmation sampling of surface soils will ensure that there is no direct contact risk, long-term monitoring will ensure that no contaminated soils become exposed, and institutional controls will ensure that deeper contaminated soils are not disturbed ~~should reduce or eliminate this risk.~~

Response: The point to be made is that one will never guarantee that all soils exceeding PRGs have been removed. This will be clarified.

148. *Page 4-28, §4.5 - In the discussion under Short-Term Effectiveness please edit the text to acknowledge that Alternative 4 also involves a significant amount of truck traffic to import backfill soil to the site.*

Response: Both Alternatives 3 and 4 require significant truck traffic, though Alternative 3 would require approximately three times as much as Alternative 4. This will be clarified.

149. *Page 4-28, 2nd Para – Revise: “All ~~three~~ four alternatives would require 5-year reviews and Alternative 2 – 4 would also include land use controls to monitor the effectiveness of the remediation because contamination would be left on site in excess of unrestricted use PRGs Alternative 2 would require adequate controls and reliable methods for residual management treatment residuals, while Alternatives 3 and 4 would not require such controls because no residuals would be generated during remediation on site.”*

Response: The requested revision will be made.

150. *Page 4-28, 3^d Para – Simplify to: “Only alternative 2 reduced the toxicity, mobility, or volume of contamination through treatment.*

Response: The requested revision will be made.

151. *Page 4-29, 5th Para – Add new last sentence: “Alternatives 2 – 4 all include long-term O & M of the shoreline revetment and the establishment of institutional controls to prevent it disturbance. These measures are readily implementable.*

Response: The requested revision will be made.

152. *Page 4-29 - Add a new second paragraph: “Institutional controls In the form of a base instruction while the property is controlled by the Navy and deed restriction if and when the Navy was ever to transfer control of the property are easily implemented. Monitoring of compliance with institutional controls and enforcement of any violations is also implementable.”*

Response: The requested revision will be made.

153. *a) Page 4-29, Cost Table – As mentioned previously, since leaving waste in place requires long-term monitoring and institutional controls will require yearly compliance monitoring (and possible enforcement) the table value of only \$2,800 for 30 years of O & M and monitoring for alternatives 2 and 3 and \$16,000 for alternative 4 appears low. The alternative also needs to include O & M for the revetment, since it was constructed to prevent migration of contaminated soils off of the site (and may have contaminated soils underneath it).*

Response: The points will be considered, with the assumptions already made in the FS for other alternatives. The required O&M of the revetment will be clarified.

b) Also there should be an asterisk by the five-year review cost for alternative 1 (since it needs to be included in the groundwater cost table).

Response: The requested revision will be made.

SECTION 5:

154. *Page 5-1, Section 5.0 – This section needs to identify any risks from vapor that may be present and what measures will be included in each of the alternatives to address vapor risks.*

Response: Risk from groundwater and vapor intrusion are addressed in Appendix C, Section 3.3. The findings that there are no risks from vapor intrusion will be stated in the introductory portion of Section 5.0

155. *Page 5-1 - Remove the third paragraph. Federal MCLs are the standard for cleanup, not state standards (RI hasn't fully adopted federal standards, therefore "federal standards are to be used for CERCLA remedies") therefore evaluation of alternatives should remain. This information can be presented later on when presenting a proposed remedy.*

Response: Refer to the response to Comment 6 above. Setting the cleanup standard for groundwater to MCLs when there is no groundwater use existing or planned seems overly conservative. This change would require significant revision to the document, requiring the development of aggressive cleanup alternatives to achieve an objective that does not need to be met for any reason. Additional discussion is needed on this subject.

156. *Page 5-1, 4th Para - Replace the term "potable water" with "federal MCLs."*

Response: The PRGs were developed for Potable water, based on the risk assessment conducted. The text is correct as written, regardless of the outcome of the discussion on comment no. 155 above. The text will not be revised.

157. *a) Page 5-1, 6th Para – Need to also evaluate "natural attenuation" if contaminated groundwater is to be left in place without treatment.*

Response: Attenuation parameters have not been measured at the site. Whereas it is likely that attenuation will take place, it is not intended to be a primary element of the alternative. This will be clarified in the section cited.

b) Change the second sentence to: "The purpose of each remedial alternative is to achieve groundwater cleanup standards, prevent migration of contaminated groundwater, and control contact with the contaminated media."

Response: This revision will be made.

158. *Page 5-2, 1st Paragraph – Alternative 2 needs to be changed to "Natural Attenuation, with Use Restrictions and Long-Term Monitoring [monitoring alone is not protective since it doesn't achieve cleanup standards]."*

Response: The text is correct as presented.

159. *Page 5-2, 2nd Para – Change the second sentence to: “PRGs were calculated based on ~~use of the groundwater as a drinking water source, though it is an implausible scenario due to the salinity of the water, the presence of a city water supply, and the classification of the groundwater as a GB aquifer achieving federal water quality standards.~~”*
- Response: PRGs are calculated as described in the text. The comment and other comments to this section appear to request revision of the risk based PRGs to MCLs. Such a change is not recommended.
160. *Page 5-2, Section 5.2.2 – Change alternative name from “Limited Action” to “Natural Attenuation with Long-term Monitoring and Use Controls.”*
- Response: Attenuation parameters have not been measured at the site. Whereas it is likely that attenuation will take place, it is not intended to be a primary element of the alternative. Making such a change would be misleading because we do not have an attenuation time frame expected. The section title is correct as stated.
161. *Page 5-2, Last paragraph – Change the third sentence to: “Groundwater monitoring would provide information on the ~~continuing quality~~ Natural Attenuation of the groundwater to ~~assure that the aquifer is flushing and not further degraded~~ document reduction of groundwater contaminant levels over time to achieve groundwater cleanup standards.”*
- Response: Attenuation parameters have not been measured at the site. Whereas it is likely that attenuation will take place, it is not intended to be a primary element of the alternative. This will be clarified in the section cited.
162. *Page 5-3, 3rd Bullet – add at the end: “to document Natural Attenuation.”*
- Response: The document will be revised to note that any attenuation evident will be noted. However, be advised that natural attenuation is not a primary element of the alternative.
163. *Page 5-3, 2nd Para – In the second sentence insert “, commercial, and recreational” after “industrial.”*
- Response: This revision will be considered and included if appropriate based on the resolution of other comments above.
164. *a) Page 5-3, 3rd Para – Change the second sentence to: “Monitoring of the approximately 20 wells on the OFFTA site would occur ~~for 30 years (on a yearly basis for years 1-5 and every five years thereafter)~~ until groundwater cleanup standards are achieved through Natural Attenuation.”*
- Response: Please refer to the response to comments 157 and 160.
- b) Add at the end of the paragraph: “Note also, that monitoring is also required to assess the protectiveness of any soil remedy that leaves waste in place. There also will be, at a minimum, year monitoring for compliance with land use restrictions.”*
- Response: This revision will be made.

165. *Page 5-4, §5.2.3 - Alternative 3 for groundwater is not protective unless it also includes land use controls to prevent the use of groundwater until the cleanup goals for groundwater have been achieved. Please edit the scope of this alternative and its description throughout the FS to include the appropriate restrictions.*

Response: This revision will be considered and included if appropriate.

166. *Page 5-4, 2nd Para – Change the last sentence to: “and discharged to the local POTW under a National Pollutant Discharge Elimination System (NPDES) discharge permit after achieving federal Clean Water Act pretreatment standards.”*

Response: The text is correct as written.

167. *Page 5-4, 3^d Para – Change to: “Monitoring would involve periodic inspection of collection and treatment systems, monitoring the progress of remediation by sampling and analysis of groundwater (~~quarterly for years 1-5 and annually for years 6-30~~), and monitoring the effluent from the system to track the efficiency of treatment. Note also, that groundwater monitoring is also required to assess the protectiveness of any soil remedy that leaves waste in place. There also will be, at a minimum, yearly monitoring for compliance with land use restrictions.”*

Response: The assumptions of the frequency of monitoring shall remain unless the reviewer has a specific objection and basis for revision. The requested insertion will be made, as appropriate for soil.

168. *Page 5-6, 1st Para – Replace “limited action” with “natural attenuation.”*

Response: Please refer to the response to comments 157 and 160.

169. *Page 5-6, Last Para – In the last sentence (that runs on to p. 5-7) change: “While the no action alternatives require no implementation activities, ~~except for conducting five year reviews, limited action~~ natural attenuation alternatives will be evaluated for the protection ~~they~~ it offers during monitoring of reductions in contaminant levels, implementation of institutional controls, and the establishment and maintenance of access restrictions, ~~and long-term monitoring.~~”*

Response: Please refer to the response to comments 157 and 160.

170. *Page 5-9, 3rd Para – In the second sentence replace “natural flushing” with “natural attenuation.”*

Response: Please refer to the response to comments 157 and 160. This section will be revised to state “natural flushing or attenuation”

171. *Page 5-9, 5th Para – In the second sentence change: “~~state and~~ federal regulations.”*

Response: The Navy concurs with the approach provided. Discussions with RIDEM should be held on this topic.

172. *Page 5-11, Cost Table footnote – Change to “soil, ~~and~~ groundwater, ~~and~~ sediment...”*

Response: The table is correct as presented.

173. Page 5-11, Section 5.5.2 – Change the alternative name throughout the section from “limited action” to “natural attenuation.”

Response: Please refer to the response to comments 157 and 160.

174. Page 5-11 - Second paragraph of Section 5.5.2, change to: *“As long as the property is controlled by the Navy groundwater use restrictions would be implemented ~~by the Navy~~ in Alternative 2 through a Base Instruction, that will establish the ~~as an~~ LUC. The restrictions would not allow the installation of wells for any consumptive use purpose, including for household use, drinking water supply, irrigation, or industrial use. The restriction would also apply to any consumptive use from the existing wells at the site, and describe any necessary protection measures for workers involved in future site development activities that may come into contact with groundwater. [insert discussion of vapor risks, if any] If the Navy were ever to transfer ownership of the site, the land use restrictions will be incorporated into deed restrictions that will apply to future owners of the site. The Navy ~~would~~ will submit an annual report to RIDEM and EPA documenting that all of the restrictions were being met. This report would be submitted every year as long as the restrictions remained on the property, and the Office of Waste Management ~~may~~ will periodically inspect the site to ensure that the provisions of the use restrictions were being met. Note also, that groundwater monitoring is also required to assess the protectiveness of any soil remedy that leaves waste in place.”*

Response: The requested revisions will be made, though wording may be altered slightly. There is no risk from vapors.

175. Page 5-11 - Third paragraph of Section 5.5.2: *is a “natural flushing model” a form of “natural attenuation model”? Did the analysis that was conducted meet EPA natural attenuation guidance standards? Do the long clean-up times for arsenic and lead meet EPA natural attenuation standards? If not this alternative is not protective.*

Response: The model is presented in Appendix K of the FS report. It is not a natural attenuation model. The flushing model was conducted to show how “contaminants” which presumably are leaching out of soil (but not exceeding leachability standards) would reduce over time, if water was allowed to flush through the soil matrix. Refer to the responses to comments 157 and 160.

176. Page 5-12, 4th Para – Replace “until conditions allow” with “until cleanup standards are met.”

Response: This revision will be made if cleanup standards are agreed to.

177. Page 5-12, 7th Para – Replace “natural flushing” with “natural attenuation.”

Response: The text is correct as presented. Refer to the response to Comment 175.

178. Page 5-13, 1st Para – Change to *“This alternative meets chemical-specific ARARs because natural attenuation will achieve federal groundwater standards over time [if the attenuation time is too long to meet EPA Natural Attenuation guidance standards, then the alternative will not meet ARARs]. In the interim, through use restrictions, the alternative prevents exposure to groundwater*

exceeding PRGs that were derived from federal ~~and state~~ water quality standards.”

Response: The text is correct as presented. Please refer to the responses to Comments 157, 160 and 175.

179. Page 5-13, 4th Para – Change to: “This alternative would rely on *natural attenuation to achieve groundwater stands* and use restrictions to limit access to the impacted groundwater and thereby reduce human risk associated with its use. Restrictions on groundwater use would require long-term enforcement by ~~the state and~~ the Navy, whether the Navy retained ownership or transferred ownership to another party, to ensure their protectiveness. The yearly reporting requirements to *EPA and RIDEM* would help confirm that the restrictions were being met.”

Response: For natural attenuation, please refer to the responses to Comments 157, 160 and 175. The revisions regarding the transfer of ownership can be made, though RIDEM may object.

180. Page 5-14, 3rd Para – Change to: “Implementation of this alternative would ~~involve monitoring the natural attenuation process to confirm that is occurring within a time frame that meets EPA guidance standards.~~ In addition, the alternative would include implementing groundwater use restrictions and completing a long-term monitoring program and 5-year reviews. Limited manpower is necessary for implementation of groundwater use restrictions, which would consist of a Base Instruction while the Site was under Navy control or deed restrictions which the Navy would be required to establish if the property were ever transferred. Consistent enforcement of the use restrictions by the Navy would be required, as would annual reports to *EPA and RIDEM*.”

Response: For natural attenuation, please refer to the responses to Comments 157, 160 and 175. The revisions regarding the transfer of ownership can be made.

181. Page 5-15, Cost Table – Monitoring costs may be yearly if required either to evaluate Natural Attenuation or to monitor potential releases from the soil remediation alternative.

Response: The frequency of monitoring will depend on the monitoring objectives, and will be revised appropriately after other issues are addressed.

182. Page 5-15, 1st Para – Replace the last sentence with: “Discharge would be to the local POTW under ~~a National Pollutant Discharge Elimination System (NPDES) discharge permit~~ federal Clean Water Act pretreatment standards.”

Response: The text is correct as stated.

183. Page 5-16, 2nd Para – Third sentence from the end, change to: “Discharge would be to the local POTW under ~~a National Pollutant Discharge Elimination System (NPDES) discharge permit~~ federal Clean Water Act pretreatment standards.”

Response: The text is correct as stated.

184. Page 5-16, 3rd Para – Add at the end: “Note also, that groundwater monitoring is also required to assess the protectiveness of any soil remedy that leaves waste in place.”

- Response: The requested revision will be made.
185. *Page 5-17, 5th Para – Change “(water quality standards)” to “(including federal MCLs).”*
- Response: The text is correct as stated. MCLs will be included by reference if other issues are addressed in that manner.
186. *Page 5-18, 1st Para – Add to the end of the second sentence: “to a POTW.”*
- Response: The requested revision will be made.
187. *Page 5-19, 1st Para – In the second to last sentence, change: “Permits for installing the extraction wells; disposing sludge containing metals, spent carbon, and spent resins; and installing an off-site discharge line to the POTW might be required.”*
- Response: The requested revision will be made.
188. *Page 5-19, 4th Para – Remove the last sentence.*
- Response: The text is correct as stated.
189. *Page 5-19, Cost Table – Long-term Monitoring should occur at least yearly for a groundwater treatment remedy. Also need to include yearly IC compliance monitoring.*
- Response: The text is correct as stated.
190. *Page 5-20, §5.6 - The discussion in the first paragraph under Overall Protectiveness needs to be significantly revised because as written it misstates the facts. Both Alternatives 2 and 3 would achieve their protectiveness by restricting use of site groundwater until the remedies achieve the cleanup goal for unrestricted use. The text needs to acknowledge this. Also, the reference to no current exposure points in discussing the protectiveness of Alternative 2 is irrelevant, and the fact is LUCs are imperative for this alternative to be protective. Please correct the discussion under ARARs for the same reason.*
- Response: The basis for the protectiveness as a function of the LUCs will be clarified.
191. *Page 5-20, Section 5.6 – Need to carry the analysis of the no action alternative through each of the criterion.*
- Response: The requested revision will be made.
192. *Page 5-20, 3rd Para – Alternative 2 only protective if natural attenuation standards can be met.*
- Response: Please refer to the comment 190. The alternative is protective as long as the LUCs are in place.
193. *Page 5-20, 5th Para – In the second sentence remove: “, although Alternative 2 would be able to provide an adequate degree of protection at a reasonable cost.” There’s no cost-benefit analysis under this criterion.*

Response: Please refer to the response to comment 192.

194. *Page 5-20, 6th Para – In the first sentence remove: “and state”. These two alternative will only meet this criterion if the long-period needed to meet MCLs for metals is acceptable based on EPA guidance.*

Response: The text is correct as written.

195. *Page 5-21, §5.6 - Please edit the discussion under Short-Term Effectiveness to acknowledge that Alternative 2 would require more extensive sediment monitoring than Alternative 3 because groundwater is contained under Alternative 3, but contaminant migration is likely under Alternative 2.*

Response: Additional clarification will be provided regarding the two alternatives.

196. *Page 5-21, 3rd Para – Add at the end of the second sentence: “to a POTW.”*

Response: The requested revision will be made.

197. *Page 5-21, 4th Para – Change: “Alternative 2 would provide effectiveness achieve cleanup standards over time through natural attenuation and by preventing exposure to groundwater through use restrictions; ~~it would also provide some long-term reliability and effectiveness from natural flushing. Alternative 2 would provide long-term reliability and effectiveness in a cost-effective manner.~~”*

Response: Please refer to other comment responses regarding natural attenuation. This will be clarified though attenuation is not an objective of the alternative.

198. *Page 5-21, Cost Table – See previous comments regarding monitoring costs (both natural attenuation and groundwater treatment alternative should require yearly monitoring).*

Response: The frequency of monitoring will depend on the monitoring objectives, and will be revised appropriately after other issues are addressed.

SECTION 6:

199. *a) Page 6-1, §6.0 - In the discussion in the second paragraph, note that a determination related to actionable COCs will not be based only on the latest sampling round, therefore, please soften the language in this paragraph. Delete 3rd and 4th sentence.*

Response: Please refer to EPA comment 8, as well as others including 47 and 49. It appears that a consensus on how sediments are to be approached in this FS has not been reached. Until a resolution is reached, the sediments will remain included as stated, but revised per the responses to other comments in this summary.

b) In the third paragraph, note that review of the Action Memorandum indicates that all soil excavated during the removal action will be characterized and disposed of off site and clean fill will be imported for backfill. Please edit this paragraph accordingly.

- Response: The passage will be reviewed and revised to reflect actions conducted as of the completion of the removal action.
- c) In the fourth paragraph, it is not apparent, as the Navy states, that there are no actionable COCs for the subtidal sediment. This conflicts with the 2nd human health RAO for sediment which reflects a potential risk with ingesting shellfish that is exposed to contaminated subtidal sediments. Further discussion and explanation of this issue is warranted.*
- Response: The Navy's position is that there is enough uncertainty of the contaminants in the shellfish to consider them not actionable. These uncertainties are explained in the referenced sections of the FS report 2.3.3.2 and 2.3.3.3. Refer to the response to Comment 8 above.
200. *§6.2.2 – This section needs to incorporate the installation of the revetment wall as depicted in Figures 6-1A and 6-1B.*
- Response: The 90% design footprint completed in July 2008 will be considered and incorporated into the document as needed.
201. *Page 6-3, §6.2.2, 1st Para – Limited action needs to incorporate restrictions to protect humans from ingestion of shellfish exposed to COCs in sediments.*
- Response: Please refer to the response to comments 8 and 199. The Navy proposes to leave the text as stated.
202. *Page 6-3, §6.2.2, 3rd Para – It is not apparent that the access restrictions will address the 2nd human health RAO for sediment. Specifically, shellfishing ban as part of access restrictions needs to be explicitly incorporated into this paragraph.*
- Response: Please refer to the response to comments 8 and 199. The Navy proposes to leave the text as stated.
203. *Page 6-3, §6.2.2, 4th Para – Monitoring should include periodic testing to verify if shellfish are being impacted by COCs. Estimate and add additional costs to alternative cost.*
- Response: Please refer to the response to comments 8 and 199. For now, the Navy proposes to leave the text as stated. Monitoring of shellfish can be added to sediment monitoring if it is deemed necessary based on the final FS and the ROD.
204. *Page 6-4, §6.2.3 – No reference is made of either Figures 6-1A or 6-1B. Since no action has been assumed for subtidal sediments, access restrictions such as a shellfishing ban may be warranted to meet RAOs. In addition, a statement should be made on reconstruction of the revetment wall that may be damaged in the process of excavating other contaminated sediments as well as operation and maintenance of the revetment wall.*
- Response: Reference to the figures will be incorporated as appropriate. Shellfish PRGs are not considered actionable as described in Section 2.3.3.2. Please refer to the response to comment 199 above.
205. *Page 6-5, §6.2.3 – It is not apparent that the access restrictions will address the 2nd human health RAO for sediment. Specifically, shellfishing ban as part of access restrictions needs to be explicitly incorporated into these bullets.*

Response: Reference to the figures will be incorporated as appropriate. Shellfish PRGs are not considered actionable as described in Section 2.3.3.2. Please refer to the response to comment 199 above.

206. *Page 6-6, §6.2.3 - In the first full paragraph, please edit the first sentence to clarify the intent; the sentence seems to imply the sediment is not hazardous but contains hazardous constituents that make it unsuitable for RCRA D landfill disposal. Please also state the basis for the statement.*

Response: The statement is intended to impart the understanding that even though current data suggest the excavated material can all be considered RCRA D waste, there is a possibility that some will not be classified that way it can be stabilized using a simple lime treatment. The basis for the statement is the evaluation of the existing sediment analytical data. Refer to page 1-19 of the FS report.

207. *Page 6-13, §6.5.2 - Please correct the second sentence in the fourth paragraph under Overall Protectiveness to clarify the intent. Please edit the third sentence to read "... destruction by avoiding excavation"*

Response: The requested revision will be made.

208. *Page 6-20, §6.6 - In the second paragraph under Overall Protectiveness, the text needs to acknowledge that Alternative 2 would only be protective if the land use restrictions are observed and adequately enforced.*

Response: The requested revision will be made.

209. *Figure F-1 shows a 500 foot x 900 foot rectangle for the OFFTA site rather than 300 foot x 900 foot. Please review and edit.*

Response: Uncertain what this is referencing. There is no Figure F-1 in the document.

210. *Table 1-1 – As commented on text, edit table to include vapor risks per resolution of this issue.*

Response: A line will be added to the table showing no risk from vapor intrusion.

211. *Table 1-3 - The summary of cancer risks and noncancer risks presented in this table for the construction worker scenario should be compared to values presented in the Supplemental Risk Evaluation (Appendix C). The values presented in Table 9.2CTE do not agree with those presented in this table. Please compare and correct as appropriate.*

Response: The values will be checked for consistency and revised as appropriate.

212. *a) Table 2-1 - Page 1 - EPA Region IX Risk-Based Concentrations – remove if used only for screening, not needed if the actual risk levels determined using cancer slope factors or other risk measures (this guidance isn't usually cited).*

Response: The Table will be revised as requested.

b) Clean Water Act, Section 304 – Remove if sediment contamination not from on-site sources.

Response: See Response to Comment 8.

c) Approaches for Addressing Dioxins in Soil at CERCLA and RCRA Sites – Remove if dioxin not a contaminant of concern at the site. If dioxin was a COC, was this TBC used to develop a clean-up level for dioxin?

Response: Previously EPA requested evaluation of dioxin-like. Since the evaluation was conducted, the citation should remain if only to avoid having to put it back in later.

d) Add the following federal TBCs:

<i>Reference Dose (RfD)</i>	<i>To Be Considered</i>	<i>Guidance used to compute human health hazard resulting from exposure to non-carcinogens in site media.</i>	<i>Will be used to calculate potential non-carcinogenic hazards caused by exposure to contaminants.</i>
<i>Guidelines for Carcinogen Risk Assessment EPA/630/P-03/001F (March 2005)</i>	<i>To Be Considered</i>	<i>Guidance for assessing cancer risk.</i>	<i>Will be used to calculate potential carcinogenic risks caused by exposure to contaminants.</i>
<i>Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens EPA/630/R-03/003F (March 2005)</i>	<i>To Be Considered</i>	<i>Guidance of assessing cancer risks to children.</i>	<i>Will be used to calculate potential carcinogenic risks to children caused by exposure to contaminants.</i>

Response: These items can be included in Table 2-1. However, the "will be" will be revised to "were"

<i>Safe Drinking Water Act (42 U.S.C. §300f et seq.); National primary drinking water regulations (40 C.F.R. Part 141, Subpart B and G)</i>	<i>Relevant and Appropriate</i>	<i>Establishes maximum contaminant levels (MCLs) for common organic and inorganic contaminants applicable to public drinking water supplies. Used as relevant and appropriate cleanup standards for aquifers and surface water bodies that are potential drinking water sources.</i>	<i>Under federal standards, groundwater within the Site is considered a potential drinking water source and therefore groundwater must achieve these standards.</i>
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<p><i>Safe Drinking Water Act (42 U.S.C. §300f et seq.); National primary drinking water regulations (40 C.F.R. 141, Subpart F)</i></p>	<p><i>Relevant and Appropriate for non-zero MCLGs; MCLGs set at zero are To Be Considered.</i></p>	<p><i>Establishes maximum contaminant level goals (MCLGs) for public water supplies. MCLGs are health goals for drinking water sources. These unenforceable health goals are available for a number of organic and inorganic compounds.</i></p>	<p><i>Under federal standards, groundwater within the Site is considered a potential drinking water source and therefore groundwater must achieve these standards.</i></p>
<p><i>OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance) EPA530-D-02-004 (November 2002)</i></p>	<p><i>To Be Considered</i></p>	<p><i>Guidance for assessing and mitigating vapor intrusion risk.</i></p>	<p><i>Assessment and mitigation of potential vapor intrusion risks will be conducted in accordance with this guidance.</i></p>
<p><i>Health Advisories (EPA Office of Drinking Water)</i></p>	<p><i>To Be Considered</i></p>	<p><i>Health Advisories are estimates of risk due to consumption of contaminated drinking water; they consider non-carcinogenic effects only. To be considered for contaminants in groundwater that may be used for drinking water where the standard is more conservative than either federal or state statutory or regulatory standards. The Health Advisory standard for manganese is 0.3 ppm.</i></p>	<p><i>Health advisories will be used to evaluate the non-carcinogenic risk resulting from exposure to certain compounds (e.g., manganese). The source control remedy will be designed to ultimately reduce contaminant levels in groundwater used for drinking water to levels that do not exceed advisory levels. Groundwater use restrictions will be maintained until these standards are achieved.</i></p>

Response: Regarding the first two, these items need discussion in regards to the response to Comments no. 6 and 155,

Regarding the third, there is no risk from vapor intrusion and using the logic that the Region IX PRGs are not TBCs (EPA comment 212a), then this guidance is also not a TBC.

The fourth is uncertain, but the commenter's objective is apparent in comment no. 238 below: presumably if this is an ARAR then the health advisory for manganese will be exceeded. The EPA should consider if a groundwater remedy is really necessary for manganese. It is recommended that this revision not be made.

213. Table 2-1: Page 2 - ~~State of Rhode Island~~ Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations).

Status should be changed to "Applicable."

Requirement Synopsis should be changed to: "These regulations set remediation standards for contaminated media ~~at non-NPL sites in Rhode Island. These standards may also be determined to be relevant and appropriate for NPL sites are applicable to a CERCLA remedy when they are more stringent than federal standards. Establishes criteria for groundwater and both direct contact and leachability of contaminants in soil.~~"

Consideration should be changed to: "The Remediation Regulations are used in the establishment of PRGs for soil ~~direct contact and leachability to be used in the remedial action. Also used to establish PRGs for groundwater, if they are more stringent than federal MCLs.~~"

Response: Given that the role of the RIDEM remediation regulations is under consideration, the requested revisions will be evaluated after those issues are resolved.

214. Table 2-1: Page 2 – Water Pollution Control – Remove if sediment contamination in no on-site source of sediment contamination.

Response: Refer to the response to comment No. 8. Because PRGs are developed for sediment, this should remain.

215. Table 2-1: Page 2 – RI Hazardous Waste Management Regulations and Air Quality Regulations – move to action-specific ARARs.

Response: Navy requests this comment be forwarded to RIDEM.

216. Table 2-1: Page 2 – RI Oil Contaminated Soil Policy – Remove, since petroleum not regulated under CERCLA.

Response: Navy concurs with this approach, but requests the comment be forwarded to RIDEM.

217. Table 2-2: Page 1 - Floodplain Management (~~Executive Order 11988-40 CFR 6.302(b); and Statement of procedures on Floodplain Management and Wetlands Protection (40 CFR 6, Appendix A)~~)

Requirement Synopsis change to: "This regulation codifies standards established under Executive Order 11988. This alternative includes work to be performed in or near a 100-year floodplain. This ARAR standard requires action to avoid the long- and short-term impacts associated with the occupancy and modifications related to floodplain development, wherever there is a reasonable practicable alternative. Promotes the preservation and restoration of floodplains so that their natural and beneficial value can be realized."

Consideration change to: "The expected impacts to floodplain resources of each alternative, including O & M of the shoreline revetment, will be evaluated, ~~in terms of the intent of this provision, and~~ considered during the preferred

alternative selection process. Adverse impacts ~~should~~ will be mitigated ~~where feasible or necessary as required.~~ Comments sought through FS, PRAP and ROD submittals.

Response: The requested revisions will be made, and footnoted to present the source as USEPA 2008.

218. Table 2-2: Page 1 – add:

<p>Resource Conservation and Recovery Act (RCRA)(42 U.S.C. §6901 et seq.), Subtitle C, Floodplains - (40 C.F.R. 264.18(b))</p>	<p>Relevant and Appropriate for wastes left in place; Applicable for hazardous wastes facilities</p>	<p>RI is delegated to administer the federal RCRA statute through its state regulations. A facility, located in a 100 year floodplain must be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a 100 year flood.</p>	<p>Some of the contaminated soils within the 100-year flood zone wastes may be classified as hazardous waste. Remediation of these soils, including O & M of the shoreline revetment, will eliminate the risk of washout.</p>
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Response: This is a matter under discussion for Site 19, Derecktor FS. It is not clear how the EPA is determining that some soils may be classified as hazardous waste. This requires further discussion. If hazardous wastes are present at the site, the alternatives would need to be revised. Until hazardous wastes are confirmed to be present, the text should remain as stated.

219. Table 2-2: Page 1 – Rivers and Harbors Act – Remove if no sediment component of the remedy.

Response: Refer to Comment no. 8 and others regarding sediments at the site. The text is correct as presented.

220. Table 2-2: Page 1 – Clean Water Act, Sec. 404 – change Requirement Synopsis to: "Under this requirement, no activity that adversely affects a wetland shall be permitted if a practicable alternative with lesser effects is available. If activity takes place, impacts must be minimized to the maximum extent. Controls discharges of dredged or fill material to protect aquatic ecosystems."

Consideration - change to: "Alternatives may involve discharge of dredged material and/or excavation ~~of marine sediments~~ during O & M of the shoreline revetment. Filling or discharge of dredged material will only occur where there is no other practicable alternative and any adverse impacts to aquatic ecosystems will be mitigated."

Response: The text is correct as presented. Minor changes to the tables such as these can be considered but are unnecessary.

221. Table 2-2: Page 1 – Fish and Wildlife Coordination Act – Consideration – remove reference to endangered species if no sediment component of the remedy (sea turtles not likely affected by O & M of the shoreline revetment).

Response: Refer to Comment no. 8 and others regarding sediments at the site. The text is correct as presented.

222. ~~Table 2-2: Page 1 - Executive Order 11990 RE: Protection of Wetlands (40.CFR Part 6.302(a); Appendix A)~~

Requirement Synopsis – change to: “This regulation codifies standards established under Executive Order 11990. Under this requirement, no activity that adversely affects a wetland shall be permitted if a practicable alternative with lesser effects is available. If activity takes place, impacts must be minimized to the maximum extent.”

Consideration – change to: “Since there is no practicable alternative to taking remedial actions within wetlands (in particular O & M of the shoreline revetment), then measures will be taken to minimize impacts, including potential restoration. Any remedial alternative selected will be the least damaging practicable alternative to addressing site contamination and protecting wetland resources.”

Response: The text is correct as presented. Minor changes to the tables such as these can be considered but are unnecessary.

223. ~~Table 2-2: Page 2 – Remove both the federal and state Endangered Species Acts if no sediment component of the remedy (O&M of the revetment no likely to affect sea turtles).~~

Response: Refer to Comment no. 8 and others regarding sediments at the site. The text is correct as presented.

224. ~~Table 2-2: Page 2 – National Historic Preservation Act and RI Historic Protection Act– remove if only historic resources in the off-shore sediment areas. Retain if any of the fire-fighting training structures or other base infrastructure in the remediation area qualifies as potentially historic.~~

Response: Historic structures (sunken ships) may be present under sediments in the area. The text is correct as presented.

225. ~~Table 2-2: Page 2 – add:~~

<p><i>Rules and Regulations for Hazardous Waste Management (CRIR 12-030-003) – Floodplains: Treatment and Storage (Rules 8.5 and 9.2) and Land Disposal (Rule 10.01)</i></p>	<p><i>Relevant and Appropriate for wastes left in place; Applicable for hazardous wastes facilities</i></p>	<p><i>RI is delegated to administer the federal RCRA statute through its state regulations. The standards of 40 CFR 264.18(b) are incorporated by reference. A facility, located in a 100 year floodplain must be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a 100 year flood.</i></p>	<p><i>Some of the contaminated soils within the 100-year flood zone wastes may be classified as hazardous waste. Remediation of these soils, including O & M of the shoreline revetment, will eliminate the risk of washout.</i></p>
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Response: This is a matter under discussion for Site 19, Derecktor FS. It is not clear how the EPA is determining that some soils may be classified as hazardous waste. This requires further discussion. If hazardous wastes are present at the site, the alternatives would need to be revised. Until hazardous wastes are confirmed to be present, the text should remain as stated.

226. Table 2-3: Page 1 – add:

<p><i>Resource Conservation and Recovery Act (RCRA)(42 U.S.C. §6901 et seq.), Subtitle C- (40 C.F.R. Parts 260-262 and 264)</i></p>	<p><i>Relevant and Appropriate for wastes left in place; Applicable for hazardous wastes generated pursuant to an alternative.</i></p>	<p><i>Federal standards used to identify, manage, and dispose of hazardous waste. Rhode Island has been delegated the authority to administer these RCRA standards through its state hazardous waste management regulations. These provisions have been adopted by the State.</i></p>	<p><i>Waste generated as part of excavation and other remedial activities will be characterized as hazardous or non-hazardous. If determined to be hazardous waste, then it will be stored, transported, and disposed of in accordance with these standards.</i></p>
<p><i>Resource Conservation and Recovery Act (RCRA)(42 U.S.C. §6901 et seq.), Subtitle C – Air Emission Standards for Process Vents (40 CFR Part 264, Subpart AA)</i></p>	<p><i>Relevant and Appropriate</i></p>	<p><i>Standards for process vents that treat RCRA waste that have total organic concentrations of 10 ppm or greater. These provisions have not been adopted by the State.</i></p>	<p><i>Although organic concentrations are not over the regulatory threshold, process vents for treatment alternatives will still meet these substantive requirements.</i></p>
<p><i>Resource Conservation and Recovery Act (RCRA)(42 U.S.C. §6901 et seq.), Subtitle C – Air Emissions Standards for Equipment Leaks (40 CFR Part 264, Subpart BB)</i></p>	<p><i>Relevant and Appropriate</i></p>	<p><i>Air emissions standards for equipment that contains or contacts RCRA waste with organic concentrations of at 10% by weight. These provisions have not been adopted by the State.</i></p>	<p><i>Although organic concentrations are not over the regulatory threshold, process vents for treatment alternatives will still meet these substantive requirements.</i></p>

Response: It is requested that these changes be discussed with RIDEM since they describe state acceptance. Regarding the first, it is not determined that hazardous waste is present at the site. The Navy does not object to the second and third though it seems excessive detail for the FS.

227. Table 2-3: Page 1 – Clean Water Act, Sec 402 citation to: “Clean Water Act, (33 U.S.C. § 1251 et seq.); National Pollution Discharge Elimination System (NPDES) (40 C.F.R. §§ 122-125, 131)

Consideration – change to: “Alternatives ~~may involve substantial activities in Narragansett Bay, including dewatering sediment activities that may disturb sediments~~ may involve shoreline excavation activities and O & M of the shoreline revetment that will be manage so as to not discharge contaminants into adjacent waters. Discharge of any contaminated groundwater during soil excavation ~~in either a POTW or into Narragansett Bay~~ will meet applicable standards. Standards also to be used to develop monitoring criteria for surface waters.”

Response: The requested revision will be considered in coordination with other revisions to the ARARs and adopted if appropriate.

228. Table 2-3: Page 1 add:

Clean Water Act (33 U.S.C. § 1251 et seq.); General Pretreatment Regulations for Existing and New Sources of Pollution (40 C.F.R. § 403)	Applicable	Standards for direct discharge of waste water into a Publicly Owned Treatment Works (POTW).	These standards will apply if water from the remedial action, such as from dewatering, treatment or other processing, is discharged to a POTW.
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Response: The requested revision will be considered in coordination with other revisions to the ARARs and adopted if appropriate.

229. Table 2-3: Page 1 – Clean Air Act – Consideration – In the first sentence remove “and sediments.”

Response: The requested revision will be considered in coordination with other revisions to the ARARs and adopted if appropriate.

230. Table 2-3: Page 1 – RI Hazardous Waste Management – need to list each applicable subsection separately:

Hazardous Waste Management Act (RIGL 23-19.1 et seq.); Rules and Regulations for Hazardous Waste Management (CRIR 12-030-003)	Relevant and Appropriate for wastes left in place; Applicable for hazardous wastes generated pursuant to an alternative.	State standards used to identify, manage, and dispose of hazardous waste. Rhode Island has been delegated the authority to administer the federal RCRA standards through its state hazardous waste management regulations. These provisions have been adopted by the State.	Waste generated as part of excavation and other remedial activities will be characterized as hazardous or non-hazardous. If determined to be hazardous waste, then it will be stored, transported, and disposed of in accordance with these standards.
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<i>Rules and Regulations for Hazardous Waste Management (CRIR 12-030-003) – Generators (Rule 5)</i>	<i>Applicable</i>	<i>Rules all generators of hazardous waste, including identification, storage, and handling. They incorporate, by reference, the federal RCRA requirements.</i>	<i>Requirements apply to hazardous wastes identified and generated at the Site.</i>
<i>Rules and Regulations for Hazardous Waste Management (CRIR 12-030-003) – Treatment, Storage and Disposal Facilities (Rule 7)</i>	<i>Applicable</i>	<i>Establishes permitting requirements for hazardous waste treatment, storage, and disposal facilities</i>	<i>Remedial actions involving treatment, storage or disposal of hazardous waste will meet these requirements.</i>
<i>Rules and Regulations for Hazardous Waste Management (CRIR 12-030-003) – General Facility Requirements (Rule 8)</i>	<i>Relevant and Appropriate for Waste Left in Place; Applicable for Treatment and Storage Facilities</i>	<i>Contains requirements for landfill closure, groundwater monitoring, general waste analysis, security procedures, inspections, safety, and training for permit applications for currently operating and future facilities.</i>	<i>Relevant and appropriate landfill standards apply to closure and monitoring of any wastes left in place. Applicable standards apply to any treatment or storage facilities used for the remedial action.</i>
<i>Rules and Regulations for Hazardous Waste Management (CRIR 12-030-003) – Operational Requirements for Treatment and Disposal Facilities (Rule 9)</i>	<i>Applicable</i>	<i>Contains operational requirements for treatment storage and disposal facilities, including proper management and conditions for tanks, groundwater monitoring, inspections, training, preparedness and prevention, and contingency planning and emergency procedures.</i>	<i>Substantive portions of this section will be met.</i>
<i>Rules and Regulations for Hazardous Waste Management (CRIR 12-030-003) – Land Disposal Facilities (Rule 10)</i>	<i>Relevant and Appropriate</i>	<i>Standards for land disposal facilities, including waste piles and landfills.</i>	<i>Relevant and appropriate standard will be applied to alternatives that leave waste in place. In particular, closure and post-closure requirements.</i>
<i>Rules and Regulations for Hazardous Waste Management (CRIR 12-030-003) – Incinerators (Rule 11)</i>	<i>Relevant and Appropriate</i>	<i>Standards for the design, operation, and maintenance of hazardous waste incinerators.</i>	<i>Alternatives that include thermal treatment of hazardous waste will meet the substantive requirements of these standards.</i>

Response: The requested revision will be considered in coordination with other revisions to the ARARs and adopted if appropriate.

231. Page 2-3: Page 1 – Remediation Regulations – remove (chemical-specific standards)

Response: The requested revision will be considered in coordination with other revisions to the ARARs and adopted if appropriate.

232. Page 2-3: Page 2 – Water Pollution – change to:

Water Quality Regulations (CRIR 12-190-001)	Relevant and Appropriate	These regulations to establish water quality standards for the state's surface waters. These standards are intended to restore, preserve and enhance the physical, chemical and biological integrity of the waters of the State, to maintain existing water uses	Alternatives may involve shoreline excavation activities and O & M of the shoreline revetment that will be managed so as to not discharge contaminants into adjacent waters. Standards also to be used to develop monitoring criteria for surface waters.
Regulations for the RI Pollutant Discharge Elimination System	Relevant and Appropriate	Contains discharge limitations, monitoring requirements, and best management practices. Substantive requirements under NPDES are written such that state and federal ambient water quality criteria (AWQC) are met. Permits are required for off-site discharges	Discharge of any contaminated groundwater during soil excavation or treated groundwater into Narragansett Bay will meet applicable standards.
Pretreatment Regulations, RIGL 46-12, 42-17.1, 42-45	Applicable	Rhode Island standards for discharge to POTWs.	Use if remedial action entails discharge to a POTW.

Response: The requested revision will be considered in coordination with other revisions to the ARARs and adopted if appropriate.

233. Table 2-3: Page 2 – for the four Clean Air Act citations change the format of the Requirements to: "Clean Air Act (RIGL 23-23 et seq.) - Emissions Detrimental to Persons or Property (CRIR 12-31-07)

Add a fourth CAA citation:

Clean Air Act (RIGL 23-23); Visible Emissions (CRIR 12-31-01)	Applicable	No air contaminant emissions are allowed for more than 3 minutes in any one hour which are greater than or equal to 20% capacity.	Air emissions from remedial actions will meet these emission levels.
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Response: The requested revision will be considered in coordination with other revisions to the ARARs and adopted if appropriate.

234. *Table 2-3: Page 2 – remove the last citation since it's the same as the third (fugitive dust standards).*

Response: The requested revision will be considered in coordination with other revisions to the ARARs and adopted if appropriate.

235. *Tables 2-6, 2-7, and 2-10: remove tables since no on-site source for sediment contamination.*

Response: Please refer to the response to comment no. 8. Revisions will be made as needed in accordance with the resolution to this comment.

236. *Table 2-8: Should groundwater vapor risks be included in the Table.*

Response: A line describing lack of risk from vapor intrusion will be included.

237. *Table 2-9: Remove the sediment standards.*

Response: Please refer to the response to comment no. 8. Revisions will be made as needed in accordance with the resolution to this comment.

238. *Table 2-11: EPA health advisory on manganese sets a risk level of 300, which is exceeded in the table.*

Response: The health advisory is not a cleanup criteria, and will not be cited in this table.

239. *Tables 2-14, 2-15, and 2-16: Remove the sediment summaries.*

Response: Please refer to the response to comment no. 8. Revisions will be made as needed in accordance with the resolution to this comment.

240. *Table 2-16: Unclear what the "Recommended Actionable" column means. If the soil exceeds residential standards and the groundwater exceeds federal MCLs an action is required (at a minimum, institutional controls).*

Response: Those which have a high level of uncertainty or do not have a complete exposure pathway are not considered actionable. This will be clarified in a footnote and the accompanying text will be referenced.

241. *Table 2-18a and 2-18b: Change the title to: "GROUNDWATER ANALYTICAL RESULTS EXCEEDING FEDERAL MCL PRGS FOR POTABLE WATER"*

Response: This will not be revised until Comment no. 6 is resolved.

242. *Table 2-19 and 2-20: Remove since no on-site source of sediment contamination.*
- Response: Please refer to the response to comment no. 8. Revisions will be made as needed in accordance with the resolution to this comment.
243. *Table 3-2: Containment does not meet the RAO for soil since it doesn't effect leachability exceedances.*
- Response: Leachability criteria are not exceeded.
244. *Tables 3-3 and 3-4: "Limited Action" needs to be changed to "Natural Attenuation."*
- Response: Please refer to the responses to comments 157, 160 and 175.
245. *Tables 3-5 and 3-6: Remove, since the tables pertain to sediment contaminated from sources other than the Site.*
- Response: Please refer to the response to comment no. 8. Revisions will be made as needed in accordance with the resolution to this comment.
246. *Table 4-1: Alternative 2, [change this for all three alternatives] thirteenth bullet – change to: "~~Construction~~ Long-term O & M of a the new revetment..."*
- Fifteenth bullet - [change this for all three alternatives] - "Land use controls limiting the use of groundwater and soil, requiring vapor mitigation measures for buildings, and preventing disturbance of components of the remedy; at least yearly compliance monitoring of the controls at the site"*
- Response: Revisions will be considered and included as appropriate. Navy concurs with O&M of the revetment. There are no risks from vapor intrusion, and this will be clarified.
247. *Table 4-2: Alternative 4 – Change to "No" for the following categories, since the cover doesn't address soil leachability: Compliance with Chemical-Specific ARARs, Does the Alternative Provide Adequate Remedial Controls,*
- Response: The passage will be revised as needed based on the resolutions to other comments regarding leachability.
248. *Table 4-2: Page 2 – O & M costs need to be increased to take into account long-term O & M of the shoreline revetment and yearly monitoring of compliance with ICs.*
- Response: The cost associated with these items will be considered and included if necessary.
249. *Table 4-3: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-1 (chemical-specific), above, that are relevant to the No Action soil alternative. The Action to be Taken need to address how each standard will be applied to the No Action alternative.*
- Response: The revisions will be considered in accordance with resolutions to comments on table 2-1 above.

250. *Table 4-6: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-1 (chemical-specific), above, that are relevant to the removal, treatment, and backfill soil alternative. The Action to be Taken need to address how each standard will be applied to the removal, treatment, and backfill alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-1 above.
251. *Table 4-7: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-2 (location-specific), above, that are relevant to the removal, treatment, and backfill soil alternative. The Action to be Taken need to address how each standard will be applied to the removal, treatment, and backfill alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-2 above.
252. *Table 4-8: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-3 (action-specific), above, that are relevant to the removal, treatment, and backfill soil alternative. The Action to be Taken need to address how each standard will be applied to the removal, treatment, and backfill alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-3 above.
253. *Table 4-9: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-1 (chemical-specific), above, that are relevant to the removal and disposal alternative. The Action to be Taken need to address how each standard will be applied to the removal and disposal alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-1 above.
254. *Table 4-10: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-2 (location-specific), above, that are relevant to the removal and disposal soil alternative. The Action to be Taken need to address how each standard will be applied to the removal and disposal alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-2 above.
255. *Table 4-11: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-3 (action-specific), above, that are relevant to the removal and disposal soil alternative. The Action to be Taken need to address how each standard will be applied to the removal and disposal alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-3 above.
256. *Table 4-12: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-1 (chemical-specific), above, that are relevant to the soil cover alternative. The Action to be Taken need to address how each standard will be applied to the soil cover alternative.*

- Response The revisions will be considered in accordance with resolutions to comments on Table 2-1 above.
257. *Table 4-13: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-2 (location-specific), above, that are relevant to the soil cover soil alternative. The Action to be Taken need to address how each standard will be applied to the soil cover alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-2 above.
258. *Table 4-14: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-3 (action-specific), above, that are relevant to the soil cover soil alternative. The Action to be Taken need to address how each standard will be applied to the soil cover alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-3 above.
259. *a) Table 4-15: Alternative 4 – Change to “No” for the following categories, since the cover doesn’t address soil leachability: Compliance with Chemical-Specific ARARs, Does the Alternative Provide Adequate Remedial Controls*
- Response: The passage will be revised as needed based on the resolutions to other comments regarding leachability.
- b) O & M costs need to be increased to take into account long-term O & M of the shoreline revetment and yearly monitoring of compliance with ICs.*
- Response: The cost associated with these items will be considered and included if necessary.
260. *a) Table 5-1: Change Alternative 2 to “Natural Attenuation.”*
- Response: Please refer to the responses to Comments 157, 160 and 175.
- b) For Alternative 3 add: “• Groundwater use restrictions” and “• Long-term monitoring of use restrictions”*
- Response: The requested revision will be made.
261. *a) Table 5-2: Change Alternative 2 to “Natural Attenuation.”*
- Response: Please refer to the responses to Comments 157, 160 and 175.
- b) Page 2 - Monitoring should be revised so that it is yearly for alternatives 2 and 3.*
- Response: The table is correct as presented.
- c) For 5-year review costs it should be noted that all five-year review costs for the whole site have been included in the cost estimate.*
- Response: The requested revision will be made as a footnote to the table.

262. *Table 5-3: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-1 (chemical-specific), above, that are relevant to the No Action groundwater alternative. The Action to be Taken need to address how each standard will be applied to the No Action alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-1 above.
263. *Table 5-6: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-1 (chemical-specific), above, that are relevant to the Natural Attenuation groundwater alternative (change title of Table). The Action to be Taken need to address how each standard will be applied to the Natural Attenuation alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-1 above.
264. *Table 5-7: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-2 (location-specific), above, that are relevant to the Natural Attenuation groundwater alternative (change title of Table). The Action to be Taken need to address how each standard will be applied to the Natural Attenuation alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-2 above.
265. *Table 5-8: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-3 (action-specific), above, that are relevant to the Natural Attenuation groundwater alternative (change title of Table). The Action to be Taken need to address how each standard will be applied to the Natural Attenuation alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-3 above.
266. *Table 5-9: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-1 (chemical-specific), above, that are relevant to the extraction and treatment groundwater alternative. The Action to be Taken need to address how each standard will be applied to the extraction and treatment alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-1 above.
267. *Table 5-10: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-2 (location-specific), above, that are relevant to the extraction and treatment groundwater alternative. The Action to be Taken need to address how each standard will be applied to the extraction and treatment alternative.*
- Response The revisions will be considered in accordance with resolutions to comments on Table 2-2 above.
268. *Table 5-11: Need to adopt all of the changes and added ARARs and TBCs cited for Table 2-3 (action-specific), above, that are relevant to the extraction and treatment groundwater alternative. The Action to be Taken need to address how each standard will be applied to the extraction and treatment alternative.*

Response The revisions will be considered in accordance with resolutions to comments on Table 2-3 above.

269. a) Table 5-12: Change title of Alternative 2 to "Natural Attenuation"

Response: Please refer to the responses to Comments 157, 160 and 175.

b) Page 1 - For Alternative 2, Action-specific ARARs change: "~~MCLs will be used to compare against data collected during Groundwater monitoring to assess natural attenuation will meet hazardous waste monitoring standards.~~"

Response: The passage will be clarified, to state "Groundwater monitoring to assure conditions are acceptable."

c) Page 1 - For Alternative 3, Need for Long-term Management: "Yes, use restrictions and groundwater monitoring"

Response: The requested revision will be made.

d) Page 3 - Yearly monitoring likely required for both Alternatives 2 and 3.

Response: This will be clarified.

e) Page 3 – Note that 5-year review costs for all media on site.

Response: The requested revision will be made.

f) Remove all of the Chapter 6 tables, since no on-site source of sediment contamination.

Response: Refer to resolution to the response to comment 8 and others on sediment applicability.

270. a) Appendix A2: The discussion in third paragraph on page A2-3 is trying to make a point about the low concentration of arsenic in groundwater compared to sediment concluding that the arsenic in sediment is not likely coming from the groundwater. This point cannot be definitively supported because partitioning of chemicals between sediment and water is a dynamic process. To conclude that arsenic in groundwater is not migrating to sediment is questionable considering equilibrium fluctuations. Please revise or delete this discussion.

Response: The comment is noted. The text is correct as presented. Indications are that arsenic is present in sediment as a function of the soil that makes up the sediment, and not a function of the groundwater.

b) In the fourth paragraph, the concentration of lead is stated as being 7,820 mg/kg. The correct maximum lead concentration was 8250 mg/kg. Please correct.

Response: The requested change will be made.

271. Appendix C, 2-5: EPA has issued a revised version of Pro-UCL that should be utilized in calculation of 95% UCLs. Pro-UCL Version 4.0 is available for download on the EPA website.

Response: Comment noted. The document was completed in November 2007 and the evaluations used the appropriate approach at the time of evaluation. An update would require revision to the entire document, which is unnecessary.

272. *a) Appendix I: Alternative 2 Capital Cost Calculation sheet, p. 2: There are no transportation and disposal costs to omit for this alternative. Rather, the direct costs to be excluded from the indirect cost calculations should include line items 5.1, 5.2, 5.4, and 5.5. Please review and correct the costs.*

Response: The indirect cost calculations will be checked and revised if necessary.

b) Also, there is some discrepancy between the stated treatment rate of 327 tons per day versus the rate obtained by dividing the quantity treated (88,547 tons) by the number of days used in the cost calculations (189), which results in a treatment rate of 468 tons per day. Please review and clarify or correct as appropriate.

Response: The treatment rates will be checked and revised if necessary.

273. *Appendix J: The capital cost calculation sheet is missing from this appendix. Please include it.*

Response: The large capital cost spreadsheet was not deemed necessary for the limited actions that are presented for groundwater. Such a breakdown is generally only used for construction actions. This approach is also used for the limited alternatives for soil and sediment.

274. *a) Appendix K: On the second page in the third full paragraph, please check the Kd value used for arsenic. It appears this should be 2.76 rather than 0.276.*

Response: The value will be checked and revised if necessary.

b) Regarding the radius of influence calculated and the extraction well spacing, please clarify why wells spaced 112.5 feet apart are not significantly overlapping when the radius of influence is 201 feet.

Response: Some overlap is anticipated, but necessary to assure capture of the passing groundwater. If the matrix was homogeneous, such overlap could be reduced.

ATTACHMENT B

RESPONSES TO COMMENTS FROM RIDEM REVISED DRAFT FEASIBILITY STUDY (DECEMBER 2007), OLD FIRE FIGHTING TRAINING AREA NAVAL STATION NEWPORT, NEWPORT RHODE ISLAND COMMENTS DATED June 30, 2008

General Comment:

The Rhode Island Department of Environmental Management, Office of Waste Management (RIDEM) has reviewed the Draft Feasibility Study for the Old Fire Fighter Training Area. Since this Feasibility Study was submitted the Navy has initiated a removal action at this site. This action, to date, has changed site conditions, as certain hot spots have been removed, new hot spots have been discovered, and in general additional information has been obtained concerning the nature and extent of contamination. Further changes are expected as certain areas have yet to be investigated and/or remediated. The above has obvious ramifications with respect to the Feasibility Study as conditions upon which the Feasibility Study was based are no longer relevant and areas which were designated for remediation have changed. Accordingly, the information presented in the submitted version of the draft Feasibility Study is based upon an assessment of the site, which is no longer applicable.

The Navy has requested that the Office of Waste Management submit comments on the current version of the Draft Feasibility Study. RIDEM would prefer that the Navy submit modified tables and figures for this document prior to soliciting comments from the regulatory agencies, however, in the spirit of cooperation, RIDEM has elected to acquiesce to the Navy's request. Please be advised as considerable changes will be required for this draft version of the Feasibility Study the Office of Waste Management will consider the next submitted version of this report to be draft. Accordingly, any comments submitted on this next version will be considered as comments on a draft document under the Federal Facilities Agreement.

In regards to the on going investigation/ removal action, the Office of Waste Management requests that the Navy complete the remaining investigations and/or removal actions.

Response:

The Navy is attempting to keep the project moving ahead by conducting removal actions and the FS concurrently. Admittedly, this may cause some level of confusion, but it has been determined that the removal actions will support the eventual remedial actions.

RIDEM was briefed during the Tiger Team review of the project in April 2006. As you are aware, the approach that the Navy decided to follow was to conduct hot spot removal actions, construct the revetment and revise the FS to address future use of the property. Because low concentrations of contaminants are known to exist throughout the site that exceed risk based PRGs and the RIDEM direct exposure criteria, a remedial action is required. This information was all presented to RIDEM during the Tiger Team Review.

Following the hot spot removal action the most significant changes to the site that would influence the remedial action selection would be the reduction in overall contamination at the site. It is our understanding that these are the changed conditions that the comment cites, However, regardless of the removals that have been conducted, the overall condition of the site (low concentrations of contaminants exist throughout the site that exceed risk based PRGs and the RIDEM direct exposure criteria), a remedial action is even still required (exceedances shown on Figures 2-1 and 2-2 of the FS report still apply).

Therefore, the FS will need less change than is perceived, unless other comments provided by the USEPA presented in Attachment A are agreed to. RIDEM should read those comments carefully and engage USEPA in a useful discussion on the inclusion of sediments in the FS, the role of state groundwater criteria, and other issues that have been raised.

**1. General Comment
Whole Document**

Please be advised that a number of the comments below will require modifications to other sections of the report in addition to the section cited in the comment (as an illustration, a modification to the cost estimate will have to be reflected in all sections that include this cost estimate). Please make the appropriate corrections, as needed, throughout the report.

Response: The document will be revised pertinent to all the comments agreed to, including those in Attachment A. RIDEM is requested to review those comments and consider the implications of the changes that will appear in the next revision.

**2. Section 1.10.4, Selection of Chemicals of Concern
Page 1-26.**

The report must note that the site exceeds RIDEM standards for recreational areas.

Response: A passage will be included in Section 1.10.4 that states that RIDEM considers recreational exposures to be equivalent to residential exposures. Risk from recreational use of the site is included in the original Remedial Investigation (TtNUS 2001).

**3. Section 2.1.4.1, Chemical Specific Applicable or Relevant and Appropriate Requirements.
Page 2-3, Whole Section**

Please note in the appropriate table that the following RIDEM Regulations are ARARs

State of Rhode Island Oil Pollution Control Regulations.
Addresses releases of oil to the waters of the State.

State of Rhode Island Underground Storage Tank Regulations 2007
Addresses both operation of, and releases from, underground storage tanks that held petroleum products and hazardous materials.

State of Rhode Island Above Ground Storage Tank Regulations.
Addresses both operation of, and releases from, above ground storage tanks.

State of Rhode Island Solid Waste Regulations 2004
Addresses disposal of construction debris and solid waste and associated remediation/monitoring.

State of Rhode Island Groundwater Regulations 2005
Establishes numerical and narrative standards for the protection of groundwater and discharges to surface water, establishes technical requirements for the installation of groundwater monitoring wells

State of Rhode Island Rules and Regulations for Hazardous Materials Management 2007

Requirements for transportation and disposal of waste from the site (includes hazardous waste and special waste in the soil and/or sediments). Requirements for storage of hazardous waste adjacent to the bay. Requirements for waste left in place, landfill closure and monitoring

State of Rhode Island Underground Injection Control (UIC) Program 2004

Addresses the investigation, remediation of UICs.

State of Rhode Island Water Quality Regulations 2006

Addresses illicit releases from storm water discharges on the site

Response: RIDEM is requested to review the request with USEPA who also has requested revisions to the ARARs tables as shown in their comments. In particular, the remediation regulations are included but RIDEM Groundwater regulations would not be accepted by EPA as ARARs based on their comments. Because the regulatory agencies are at odds with these requests, the Navy is inclined to stand on the existing interpretations of these laws and regulations as described in the FS report.

4. Section 2.1.4.3, Action Specific Applicable or Relevant and Appropriate Requirements. Page 2-5, Whole Section

Please note in the appropriate table that the following RIDEM Regulations are applicable

State of Rhode Island Water Quality Regulations 2006

Addresses dredging and construction of revetments in the marine environment. Regulates point and non-point discharges.

State of Rhode Island Rules and Regulations for Dredging and Management of Dredged Material 2003

Establishes requirements for dredging and handling/disposal of dredge spoils.

State of Rhode Island Underground Injection Control Program 2004

Addresses the operation of UICs.

Response: RIDEM is requested to review the request with USEPA who also has requested revisions to the ARARs tables as shown in their comments. In particular, the remediation regulations are included but RIDEM Groundwater regulations would not be accepted by EPA as ARARs based on their comments. Because the regulatory agencies are at odds with these requests, the Navy is inclined to stand on the existing interpretations of these laws and regulations as described in the FS report.

5. Section 2.1.4.1, Chemical Specific Applicable or Relevant and Appropriate Requirements. Sediments Page 2-4,

The report notes that there are no federal standards regarding sediments at the site. The report should state that the RIDEM Site Remediation Regulations as amended 2004 are applicable to the sediments.

Response: The comment is noted. Further explanation from the reviewer is needed as to how RIDEM wishes these regulations applied. The FS provides for risk based calculation of cleanup goals, which is standard process under CERCLA, and allowed under RIDEM regulations.

**6. Section 2.2.1, Identification of Media of Concern
Page 2-6, 4 th Paragraph**

As previously stated in past correspondence, RIDEM does not concur with the assessment for the subsistence fisherman. The exposure scenario identified for the subsistence fisherman is equivalent to normal shellfish consumption. Please include a statement documenting the State's position.

Response: The comment is noted. A statement about RIDEM opinion on shellfish ingestion rates will be included.

**7. Section 2.2.1, Identification of Media of Concern
Page 2-7, 1 st Paragraph**

The report states that the salinity of the groundwater at the site makes it unsuitable for consumption. As commented on the RI report this is not the case as values are within the normal parameters for potable water. Therefore, please remove this statement from the report.

Response: The comment is noted. The text is correct as written.

**8. Section 2.2.2, Derivation of Human Health Risk PRGs
Sediment PRGs Based upon Recreational Site Use Shell fish Consumption
Page 2-11,**

As previously stated in past correspondence, RIDEM does not concur with the assessment for the recreational site use. Please include a statement documenting the State's position.

Response: The comment is noted. A statement about RIDEM opinion on recreational use rates will be considered.

**9. Section 2.2.3, Derivation of Ecological Risk Based PRGs
Page 2-14,**

As previously stated in past correspondence, RIDEM does not concur with the assessment for the Ecological Risk Assessment. Please include a statement documenting the State's position.

Response: The comment is noted. A statement about RIDEM opinion on the ecological risk assessment will be included.

**10. Section 2.6, Proposed PRGs
Page 2-18, Table 2-14**

The primary contaminant at the site is TPH. The proposed PRGs in Table 14 do not include TPH in any of the media. As the limited number of VOCs and SVOCs tested at the site cannot be substituted for TPH, please modify the table to include TPH for soil, sediment and groundwater.

Response: EPA requests that TPH not be included because TPH is not addressed under CERCLA (refer to EPA comment No. 30). The Navy has historically addressed TPH as an acilary contaminant during removal actions conducted, and removed it as necessary. The remedial actions that are evaluated in the FS would address risk from TPH as well as the CERCLA contaminants. So in this manner TPH will be addressed, though it is not described in the document.

**11. Section 2.6, Proposed PRGs
Page 2-18, Table 2-15**

The selected PRGs do not include RIDEM Remediation Regulations as amended in 2004 residential standards as actionable. Please be advised that assuming that the regulatory agencies accepted a remedial action which incorporated an environmental land use restriction being placed on the site the residential criteria are still actionable. That is, exceedance of residential criteria requires an action, specifically the placement of an ELUR. Therefore, please modify Table 2-15 to stipulate that the residential criteria are actionable. In addition, the table must include TPH as an actionable requirement.

Response: In regards to the residential use, it is agreed that an ELUR will be placed in NAVSTA Newport's Basewide Instruction for Land Use in order to prevent future residential use of the property. This language will be included in the document. Regarding TPH, please refer to the response to comment 10 above.

**12. Section 2.3.2, Groundwater,
Page 2-20.**

This section lists the proposed PRGs for groundwater. During the removal action free product was observed on the groundwater. Therefore the PRGs should include free product and TPH. In addition, as contamination was observed in areas where wells were not present the PRGs should be modified to include any analytes that were detected in the groundwater during the removal action.

Response: Please refer to the response to comment 10 above. PRGs are comprehensive of contaminants detected and it is not appropriate to revise them unless new information is developed.

**13. Section 2.3.3, Sediment,
Page 2-21.**

This section of the report should note that free product was observed in the sediment adjacent to the discharge pipes from the oil water separators. In addition, as TPH is the main contaminant of concern at the site, TPH should be included as a PRG for sediment. At other sites in lieu of a site specific PRG a value of 500 ppm has been employed.

Response: Please refer to the response to comment 10 above.

**14. Section 2.3.3.1, Sediment COC for Ecological Risk,
Page 2-21, 2nd Paragraph.**

This section of the reports implies that the observed sediment contamination may not be site related. During the most recent removal action two discharge pipes from the oil water separators were found on the beach. The discharge pipes still contained an oily material; further, the sediments in the immediate vicinity of the discharge pipes emitted free product when disturbed. The report should also note that free product, which required the use of absorbent pads for removal was found in the soils adjacent to the

beach and adjacent to the storm water out fall pipe. The report should note the above in this and other appropriate sections and at a minimum state that the contamination observed in the sediment is from site related sources and possibly off site sources.

Response: Regarding TPH, please refer to the response to comment 10 above. Regarding sediment PAHs and TPH, the text is correct as presented.

**15. Section 2.4.3, Remedial Action Objectives for Soil
Page 2-25**

The report must state that the remedial objectives for the soil, independent of actions taken elsewhere for soil, will include the removal of all contaminated soil beneath, and in the immediate vicinity to the revetment. This is necessary as it will not be possible to remove these soils once the revetment is installed.

Response: The excavation of soil below the revetment would be an excavation of soil below the water table. As thoroughly discussed at the Tiger Team review in April 2006, the excavation of soil below the water table will not be conducted. This determination was made due to the lack of exposure, and because cleanup goals, whether they are risk based PRGs or RIDEM DEC's, are not applicable to these deep soils. Only exceedances of UCLs would merit the removal of soil below the water table. Current information is that none exceed these values, now that the hot spot removal action has been completed.

**16. Section 2.4.1, Remedial Action Objections for Soil
Section 2.4.2, Remedial Action Objections for Groundwater
Section 2.4.2, Remedial Action Objections for Sediment
Page 2-25-27**

Free product has been found in the various media at the site. Please include remediation of free product as a groundwater, soil and sediment objective.

Response: Please refer to the response to comment 10 above. Free product is addressed in Appendix A of the report.

**17. Section 2.4.1, Remedial Action Objections for Soil
Section 2.4.2, Remedial Action Objections for Groundwater
Section 2.4.2, Remedial Action Objections for Sediment
Page 2-25-27**

The remedial objective must include the removal of the discharge pipes from the oil water separator on the beach and on the land

Response: The drain collection and discharge piping to and from the oil water separators, as well as the separators themselves with associated soil and debris have all been removed as part of the hot spot removal action.

**18. Section 2.4.1, Remedial Action Objections for Soil
Section 2.4.2, Remedial Action Objections for Groundwater
Page 2-25-27**

The remedial objectives must include the removal of any underground storage tanks and associated piping.

Response: There are no known underground storage tanks present. Remaining piping that has been found has been evaluated and found to contain no oil within.

**19. Section 2.4.1, Remedial Action Objections for Soil
Section 2.4.2, Remedial Action Objections for Groundwater
Page 2-25-27**

The remedial objectives must include the removal of any construction debris, which is contaminated with oil or other products.

Response: The ground material of the site includes a large quantity of construction rubble, concrete brick and stone. It would be inappropriate to remove this material as a remedial objective, the remedial objectives are to address the risk to the receptors. The RAOs presented in the document address this risk whether the contaminants posing risk are a result of construction debris or just with the soil.

**20. Section 2.4.2, Remedial Action Objections for Groundwater
Page 2-26. 4 th Paragraph**

The report states that contaminants in the soil are not migrating to groundwater. Since the removal action was initiated this was found not to be the case as measurable free product was observed. Please remove this statement and note that contaminants at the site are being mobilized by groundwater.

Response: The ability to generate a free product through excavation of soil at the site is clearly described on page 1-12 and in appendix A. During the removal action, sheens were generated by breaking up the soil matrix in a similar fashion as has been found in the past. However, after pumping the standing water out of the excavation, the sheens did not return, further demonstrating that the petroleum is confined within the soil matrix. The text is therefore correct as written.

**21. Section 2.4.2, Remedial Action Objections for Groundwater
Page 2-26. 4 th Paragraph**

The report notes that the RAO for groundwater were developed using Site Remediation requirements. Please be advised that RAO must also meet the requirements of the Groundwater Regulations (numerical standards such as MCLs as well as, narrative standards, non degradation, impacts to surface waters, etc) the Water Quality Regulations, the Underground Storage Tank Regulations and the Oil Pollution Control Regulations. Please include a statement indicating that the RAO must meet the above regulations.

Response: Please refer to the responses to other comments in this response summary.

**22. Section 2.4.2, Remedial Action Objections for Groundwater
Page 2-26. 4 th Paragraph**

The report notes that the GB groundwater objective for lead is not exceeded. The State's GB groundwater numerical standards are designed to address volatilization into structures. These standards are not designed to be protective of other human health exposure scenarios or discharges to sensitive environments. These cases require the development of site-specific cleanup standards. In the report the Navy notes that MCLs would be used for human receptors of onsite groundwater. In lieu of developing site-specific groundwater Eco Risk PRGs the Navy may elect to use GA standards as default standards for this exposure route. In regards to TPH, the Navy may elect to use 2.5 ppm, which is the approximate solubility limit for most forms of TPH

Response: With regards to TPH, please refer to the response to comment no. 10 above. Regarding risks from vapors generated by contaminated groundwater and soils, this has been addressed in the Supplemental Risk report, Appendix C of the FS. There is no risk through vapor intrusion. The point about the GB criteria for lead is correct, there is none published by RIDEM, and therefore the statement will be struck. A PRG has been developed for lead in groundwater.

**23. Section 2.4.3, Remedial Action Objectives for Sediments
Page 2-27**

The report must state that the remedial objectives for the sediment, independent of actions taken elsewhere for the sediments, will include the removal of all contaminated sediments beneath and in the immediate vicinity to the revetment. This is necessary as it will not be possible to remove these sediments once the revetment is installed.

Response: Please refer to the response to comment 15, above.

**24. Section 3.2.2.2, Limited Action, Land Use Control/Deed Restrictions
Page 3-6.**

"However, anytime the Navy retains control of the property (in this case the Navel Station Newport Public Works Department) enforces any and use control necessary, an ELUR is not required and RIDEM has no jurisdiction."

Please be advised that the State of Rhode Island Site Remediation Regulations does not release or relinquish enforcement powers for land use restrictions to any entities whether they are private or public. All land use restrictions are enforceable and come under the jurisdiction of the Rhode Island Department of Environmental Management. Please remove the above sentence and any other similar citation throughout the report and clearly state that RIDEM has the authority to monitor and enforce land use restrictions.

Response: The land use instructions will be issued by NAVSTA, as discussed at previous RPM meetings. As these restrictions are developed the Navy and EPA will work with RIDEM on the detail. Annual inspections of sites where restrictions are provided will be conducted.

**25. Section 3.2.2.6, Treatment
Page 3-15.**

In situ oxidation has been used to treat a variety of petroleum-contaminated sites. Please include an evaluation of insitu oxidation.

Response: Chemical oxidation is retained for evaluation in Table 3-3 and evaluated on page 3-39.

**26. Section 3.2.2.6, Treatment, Aerobic Biodegradation
Page 3-25.**

a) The report has evaluated exsitu biodegradation using a process, which entails pumping the groundwater and then treating the groundwater in bioreactors. These bioreactor pump and treat processes are limited by a number of factors including the concentration of the contaminants in the groundwater. Further, it does not address contaminants, which may be in the unsaturated zone.

Response: In situ treatment is screened in Table 3-3 and discussed in the text as required. No groundwater alternative will address the unsaturated zone, consideration of technologies for soils is presented on Table 3-1.

b) In lieu of exsitu biodegradation involving pump and treat please evaluate in situ biodegradation. This approach, which is commonly applied at petroleum-contaminated sites, includes a variety of processes, which range from simple injection of air and nutrients to bio venting.

Response: In situ bioremediation is screened in Table 3-3 and discussed in the text as required.

**27. Section 3.2.2.6, Treatment, Aerobic Biodegradation
Page 3-25.**

Please evaluate exsitu biodegradation of excavated soils. In this process contaminated soils are excavated and then treated by a variety of biodegradation process, such as windrows, phytoremediation, etc. The Navy contains significant land holdings at Tank Farm 5, which is ideally suited to these processes (if the land in Tank Farms-4 is not exceeded they can also be used for this process).

Response: Biological remediation options for soil are presented on Tables 3-1 and 3-3.

**28. Section 3.2.2.6, Treatment, Aerobic Biodegradation
Page 3-25.**

Please include an evaluation of phytoremediation, specifically the use of trees to treat petroleum and metal contamination in the saturated and unsaturated zone.

Response: Biological remediation options, including phytoremediation are presented on Tables 3-1 and 3-3.

**29. Section 3.4.4.2, Limited Action, Intentional Controls
Page 3-48.**

"The intertidal and subtidal area are the property of the State of Rhode Island, so any actions to restrict access or activities must be coordinated with the State."

Please be advised that a responsible party is not able to place land use control on property that they do not own. Approval of the property owner must be obtained for the land use control. Therefore please modify the above as follows:

The intertidal and subtidal area are the property of the State of Rhode Island, so any restrictions on the property must be approved by the State. Further, reporting requirements and/or actions to restrict access or activities must be approved by, and coordinated with, the State.

Response: This will require additional discussion at a later time. While the Navy does not disagree with the statements above, the restriction of access to a shoreline is generally the job of the upland land owner. In the strictest sense, the comment is correct that the State is the landowner of land under water, but therefore placement of the land use restriction would be the State's obligation, and it might not be the obligation of the Navy to provide one for the State's approval. Details on the ELUR can be addressed in the ROD stage.

30. Section 3.4.4.2, Limited Action, Long Term Monitoring

Page 3-49.

The report notes that long term monitoring will be required at the site to document that conditions have not changed. The concentration of contaminants in the sediment represent an unacceptable risk. If the limited action option is selected, long term monitoring would be required to demonstrate that natural attenuation is decreasing contaminant concentration. Therefore, please modify the report to state that the monitoring would be designed to ascertain whether natural attenuation is occurring.

Response: Natural attenuation is a technical term that has not been demonstrated and is not going to be relied upon for sediment remediation. The monitoring is intended to assure that the sediment conditions are not degrading. This will be clarified.

**31. Section 4.2.4, Soil Alternative 4, Soil Covers and LUCs
Page 4-6.**

Please be advised that at all locations a soil cap must meet the requirements set forth in the Site Remediation Regulations as amended in 2004 (minimum of two feet of clean soil, combination of soil and concrete/asphalt, etc). Please modify the report accordingly.

Response: The cap proposed includes geotextile and a two-foot layer of soil materials. This conceptual design is intended to meet the RIDEM objectives. Please advise if there is a shortcoming.

**32. Section 4.2.4, Soil Alternative 4, Soil Covers and LUCs
Page 4-6.**

A soil cap will not address leachability issues, therefore the report must evaluate a geomembrane cap at the site.

Response: Groundwater data collected does not indicate a leachability problem from soil at the site.

**33. Section 4.2.4, Soil Alternative 4, Soil Covers and LUCs
Page 4-6.**

The report notes that a parking lot may be installed on a portion of the site. The report must state that CRMC approval must be obtained for the installation of the parking lot.

Response: The comment is noted. The parking lot is a separate item from this project and is only described here as a point of interest. If the parking lot is not constructed for any reason, the remedial action alternatives would not change. This will be clarified in the document.

**34. Section 4.2.4, Soil Alternative 4, Soil Covers and LUCs
Page 4-6.**

The proposal to create a parking lot on the site will result in additional storm water discharge into the contaminated sediments and the eel grass bed. The report must include an evaluation of this impact.

Response: The comment is noted. Refer to the response to comment 33 above. Because the parking lot is not a part of the remedial action, it does not need to be evaluated in this report. The CRMC determination for that project (separate from the remedial action for the site) will evaluate acceptability of the parking lot.

**35. Section 4.4.2, Soil Alternative 2, Removal, Ex Situ Treatment, Backfill
Page 4-15.**

Please evaluate solvent extraction and soil washing employing the treatment facility at Tank Farm # 5.

Response: The treatment facility at Tank Farm 5 is not available in the time frame of the expected project. Package (trailer mounted) treatment systems would be brought to the site if this technology is selected for remedial action.

**36. Section 4.4.2, Soil Alternative 2, Removal, ExSitu Treatment, Backfill
Page 4-15.**

Please evaluate the use of Tank Farm # 5 or the other tanks farms for the biodegradation of the excavated soils, (windrows, phytoremediation, etc). This alternative should be evaluated using processes that either entails backfilling with treated soils from the site, or backfilling with off site fill and use of the treated soils elsewhere on the base, such as the tank farms.

Response: The technologies cited are evaluated without regard for space required.

**37. Section 4.4.2, Soil Alternative 2, Removal, ExSitu Treatment, Backfill
Page 4-15.**

Please evaluate, as a possible alternative, insitu phytoremediation of soils at the site.

Response: This technology is screened out on the last page of Table 3-1.

**38. Section 4.4.3, Soil Alternative 3, Removal, Disposal and LUC
Page 4-19.**

For all removal options please evaluate, including cost, removal to 500 ppm, 1000 ppm and 2500 ppm TPH. At a number of sites removal actions are coupled with other remedial techniques. Therefore, please evaluate limited removal in conjunction with other remedial actions such as oxidation, biodegradation, phytoremediation, etc.

Response: Remedial technologies available are screened in Tables 3-1 and 3-3 accordingly. The text considers coupling technologies together if they are considered effective.

**39. Section 4.4.3, Soil Alternative 3, Removal, Disposal and LUC
Page 4-19.**

As a cost saving measure, please evaluate disposal of contaminated soils in one of the tanks in Tank Farms 1-3.

Response: Landfilling contaminated soil from this site at another site has not been evaluated. If the State is serious about allowing such an action to take place, it should be posed to the EPA and discussed at another time.

**40. Section 4.4.3, Soil Alternative 3, Removal, Disposal and LUC
Page 4-19.**

As a cost saving measure, please evaluate use of the soil in a petroleum batching facility.

Response: This is essentially an immobilization technology. This is evaluated on Table 3-1.

**41. Section 4.4.3, Soil Alternative 3, Removal, Disposal and LUC
Page 4-19.**

In regards to off site disposal, the report must evaluate the amount of soil, which can be sent to a landfill as daily cover in lieu of waste, as this would greatly reduce disposal costs.

Response: Soil Alternative 3 is costed to include disposal of most soil as non-hazardous, and though it is not explicitly stated, includes disposal as daily cover if available. The actual disposal would be conducted as inexpensively as possible. This will be clarified.

**42. Section 4.4.3, Soil Alternative 3, Removal, Disposal and LUC
Page 4.19.**

Old Fire Fighter Training Area is primarily contaminated with TPH, (certain areas also contain lead). The estimated volume of soil requiring removal at the Old Fire Fighter Training Area is approximately 62,000 cubic yards. The estimate cost for this option is approximately eighteen million dollars. Melville North Landfill contain metals, such as lead which exceeded TCLP, asbestos, PCBs, TPH, SVOCs, radioactive waste, etc. The approximate volume of contaminated soil, which required removal at the Melville North Landfill, was 100,000 cubic yards. The approximate cost to remove and dispose of this soil, including dredging of nearby sediments, was approximately eight million dollars. Both site were similar in regards to proximity to water and depth of contamination. Please evaluate the cost estimates to ascertain the reason for the discrepancies in the cost of the projects.

Response: Comments on cost should be made given an understanding of the complications at the site, which are described in Appendix I. A large portion of the cost for excavation at this site is interruption and replacement of utilities in Taylor drive, and road and parking lot removal and replacement. Another portion is contingency which allows for unforeseen circumstances encountered that may never come about. Please review Appendix I carefully. No revision is appropriate.

**43. Section 4.4.4, Soil Alternative 4, Soil Cover and LUCs
Page 4.23.**

Please modify the cost to include yearly inspection and reporting requirements for the ELURs, as well as yearly inspections by RIDEM. Also groundwater-monitoring costs must be biannual for a period of thirty years.

Response: Costs for ELUR will be considered and incorporated. Biannual monitoring is a matter for discussion under the LTM work plan after the ROD is completed.

**44. Section 4.4.4, Soil Alternative 4, Soil Cover and LUCs
Page 4.23.**

Please include an evaluation and the cost for the installation of a geomembrane cap over the site.

Response: Please refer to the response to comments 31 and 32.

**45. Section 4.4.4, Soil Alternative 4, Soil Cover and LUCs
Page 4.26.**

A total O&M cost of \$16,000 dollars for monitoring and maintaining a cap and a revetment over a thirty-year period appears low. Please review the cost estimates.

Response: O&M of the revetment is not included and will be added.

46. **Section 4.5, Comparative Analysis of Soil Alternatives, Page 4.27.**

The report should note that monitoring would be required for alternatives which leave waste in place.

Response: This requested revision will be made.

47. **Section 4.5, Comparative Analysis of Soil Alternatives, Overall Protection of Human Health and the Environment Compliance with Applicable or Relevant and Appropriate Requirements Page 4.27.**

These sections of the report contain a typographical error in that it notes Alternative 4 will meet ARARs and provide overall protection of human health and the environment. Please remove this statement and state that this alternative will not meet RIDEM Site Remediation Chemical Specific ARARs, (leaching) and accordingly not provide protection of human health and the environment

Response: Please refer to the response to Comment 31, above.

48. **Section 5.2.2, Groundwater Alternative 2, Limited Action Page 5-2.**

The report assumes that groundwater monitoring would be annually for years 1-5 and then every five years for years 5-30. Please be advised that biannual monitoring would be required for a period of thirty years. Please revise the report accordingly.

Response: Biannual monitoring is a matter for discussion under the LTM work plan after the ROD is completed.

49. **Section 5.2.2, Groundwater Alternative 2, Limited Action Page 5-2.**

The report must note that monitoring for natural attenuation will also be required at a minimum, yearly. This will include monitoring of break down products and other indices that natural attenuation is occurring. The cost of this monitoring must also be evaluated in the report.

Response: Natural Attenuation is not an element in the alternatives in the FS. This can be included in the monitoring program at the LTM work plan stage. This will be clarified in the revised document.

50. **Section 5.2.3, Groundwater Alternative 3, Extraction and ExSitu Treatment Page 5-3.**

Please evaluate use of the existing treatment building in Tank Farm # 5 for batch treatment of groundwater from the site. Also please consider use of this system for exsitu treatment of excavated soils.

Response: Tank Farm 5 is not expected to be available for treatment of water.

**51. Section 5.2.3, Groundwater Alternative 3, Extraction and ExSitu Treatment
Page 5-3.**

Please evaluate the use of phytoremediation for groundwater at the site.

Response: Phytoremediation is presented in Table 3-3.

**52. Section 5.2.3, Groundwater Alternative 3, Extraction and ExSitu Treatment
Page 5-3.**

Please include an evaluation of both biological and chemical insitu treatment.

Response: These technologies are evaluated in Table 3-3

**53. Section 5.5.2, Groundwater Alternative 2 Limited Action
Page 5-11, 3 rd Paragraph**

This section of the report states that based upon a flushing model certain organic contaminants will be reduced in the groundwater. The report must also state whether this process will affect the metal contaminants found at the site. In addition, as the groundwater discharges to the bay the report must note that groundwater will continue to contaminate the adjacent sediments.

Response: The flushing model is presented in Appendix K. Removal of metals through flushing is anticipated to be 676 years.

**54. Section 5.5.2, Groundwater Alternative 2 Limited Action
Page 5-15.**

Please revise the cost table to state that groundwater monitoring will be biannually for a period of thirty years (solid waste is present at the site).

Response: The term for monitoring will be reviewed and revised as needed. Frequency should be determined at the LTM work plan stage, after the ROD.

**55. Section 5.6, Comparative Analysis of Groundwater Alternatives.
Page 5-21.**

The report should note that compared to active remediation, limited action would require increased sediment and groundwater monitoring as waste is left in place

Response: The need for monitoring will be reviewed and clarified if needed. However, the magnitude of the effort should be determined at the LTM work plan stage, after the ROD.

**56. Section 5.6, Comparative Analysis of Groundwater Alternatives, Short Term Effectiveness.
Page 5-21.**

Please remove the statement that Alternative 2, (restrictions) has a higher degree of short-term effectiveness than Alternative 3 (treatment). As no one would be drinking

water that is undergoing active treatment both alternatives have the same degree of short-term effectiveness.

Response: This statement is based simply on the understanding that restriction would remove exposure to the contaminated media immediately. Treatment would require the treatment train to be effective which would not be immediate. The text is correct as presented.

**57. Section 6.2.2, Sediment Alternative 2, Limited Action
Page 6-3.**

The report should stipulate that there would be a ban on the collection of both shellfish and lobster from both the intertidal and subtidal area.

Response: RIDEM has previously objected to institution of a shellfishing ban at NAVSTA. The Navy does not believe that for this site, a ban is needed based on the risks calculated for shellfish ingestion. Additional discussions are warranted on this subject.

**58. Section 6.2.2, Sediment Alternative 2, Limited Action
Page 6-3.**

The report should include a provision for the collection of tissue samples as part of the monitoring requirements

Response: Details of the monitoring program can be determined through the process to develop a work plan for LTM, and based on the language in the ROD. No revisions to the plan at this point are recommended.

**59. Section 6.2.2, Sediment Alternative 2, Limited Action
Page 6-4, Paragraph 1.**

The report states that monitoring for ecological risk would continue, as a single round is not sufficient to demonstrate that the contaminants no longer pose a risk. Accordingly, in addition to the monitoring stations proposed for human health risk, areas, which previously exceeded ecological risk, must also be monitored.

Response: Details of the monitoring program can be determined through the process to develop a work plan for LTM, and based on the language in the ROD. No revisions to the plan at this point are recommended.

**60. Section 6.2.2, Sediment Alternative 2, Limited Action
Page 6-4, Paragraph 1.**

Please be advised that both the intertidal and subtidal areas would have to undergo monitoring under the Limited Action scenario. The report should be modified to include monitoring of both areas.

Response: Details of the monitoring program can be determined through the process to develop a work plan for LTM, and based on the language in the ROD. No revisions to the plan at this point are recommended.

**61. Section 6.2.2, Sediment Alternative 2, Limited Action
Page 6-4, Paragraph 2.**

It has been noted that as the beach environment at the site is dynamic sediments may have been moved, scoured or buried. Accordingly, the report must state that the monitoring program will take the appropriate action to address this problem (as an illustration, if contaminant sediments are being buried the monitoring will also include collecting samples at the known depth of contamination).

Response: Details of the monitoring program can be determined through the process to develop a work plan for LTM, and based on the language in the ROD. No revisions to the plan at this point are recommended.

**62. Section 6.2.2, Sediment Alternative 2, Limited Action
Page 6-4, Paragraph 2.**

The report notes that monitoring would be reduced from annually to once every five years if there were not a significant change in contaminant concentration. Monitoring is typically reduced when there is a decreased in contaminant concentration. Therefore, please modify this section to state that monitoring will be reduced if there is a clear and consistent trend of decreasing concentrations of contaminants.

Response: The text is correct as written.

**63. Section 6.5.3, Sediment Alternative 3, Removal and Disposal
Page 6-15.**

This section includes an estimate for the cost to dredge the site. The Navy plans to install a new revetment along the shoreline. As part of this installation process the Navy will be installing a Portadam. Dredging while this Portadam is installed will greatly reduce the cost of the dredging operation. Therefore, it is recommended that the location the Portadam be adjusted such that all of the areas, which need to be dredged, are enclosed in the Portadam (intertidal and if possible subtidal) the report must estimate the cost to dredge while the Portadam system is installed. Finally, as the Portadam will be installed for the installation of the revetment, the cost associated with the Portadam must not be included in the estimate cost to dredge.

Response: The projects may operate concurrently, and this would save money. However, it is due to lack of agreement on how to address sediment overall, it is unlikely that it can be arranged in that manner, and thus the costs are provided separately.

**64. Section 6.5.3, Sediment Alternative 3, Removal and Disposal
Page 6-15.**

The report indicated that dredge spoils would be sent to a landfill. Please include a cost estimate for sending the spoils to the CAD cell.

Response: CAD Cell disposal is not anticipated to be available to the Navy for this material. Please refer to the response to comments to the Revised Draft Final FS for The Former Robert E. Derektor Shipyard. Costs for CAD cell disposal are provided in that document if the RIDEM is truly interested in the subject.

**65. Section 6.5.3, Sediment Alternative 3, Removal and Disposal
Page 6-15.**

The report proposes dewatering on site. Similar to what was performed at McAllister Point Landfill, please include a cost estimate for dewatering using the system at Tank Farm # 5.

Response: Tank farm 5 is not anticipated to be available for the duration of this project. In addition, moving the material over the road to that location for staging and then re-handling would be cost prohibitive.

**66. Section 6.5.3, Sediment Alternative 3, Removal and Disposal
Page 6-15.**

The report proposes dewatering onsite. Similar to what was performed at the Melville North Landfill, please include a cost for dewatering using onsite infiltration ponds.

Response: The volume expected would not require infiltration ponds, but can be conducted on platforms or temporary containers at the site.

**67. Section 6.5.3, Sediment Alternative 3, Removal and Disposal
Page 6-15.**

The estimate cost to dredge 800 cubic yards is \$1,043,325. This is approximately \$1300 per cubic yard. Accounting for contingencies and factors inherent in Feasibility Study (plus/minus error range) this estimated cost still exceeds the cost for dredging performed by the military at other sites, such as Melville North Landfill, McAllister Point Landfill, Allen Harbor Landfill, etc. Please review the cost estimate.

Response: Dredging, backfill, transportation, and disposal costs (with dewatering and treatment of water) along with management costs, work plans, completion reports, review cycles needed, is actually \$521,499. The present worth cost of \$1,043,325 includes potential contingency costs (unforeseen complications), as well as thirty years of monitoring sediment. The reviewer is directed at Appendix L for the breakdowns of cost items.

68. Tables 2-1-2-3, 4-3-6-12, ARARs.

Please add the following RIDEM Regulations as ARARs for soils, groundwater and sediments at the site:

Chemical Specific

Requirement: State of Rhode Island Oil Pollution Control Regulations

*Citation: Chapters 46-12,42-17.1 and 42.35 of the General Laws of Rhode Island
Status Applicable*

Synopsis of Requirement Addresses releases of oil into the waters of the State.

Action to be Taken to Attain ARAR Remedial efforts will be designed to insure that releases to waters of the State have been addressed.

Requirement: State of Rhode Island Underground Storage Tank Regulations

*Citation: Rules and Regulations for Underground Storage Facilities Used for
Petroleum Products and Hazardous Materials DEM-OWR-UST-08-07
Status Applicable*

*Synopsis of Requirement Addresses investigation and remediation of underground
storage tanks.*

*Action to be Taken to Attain ARAR Remedial efforts will be designed to insure USTs
and associated piping /structures are no longer present and releases from the USTs
and associated structures comply with regulations.*

Requirement: State of Rhode Island Solid Waste Regulations

*Citation: Solid Waste Regulations Number 1 General Requirements DEM-OWR-SW-
04-01 as amended 1997, 2001, and 2004*

Solid Waste Regulations Number 2 Solid Waste Landfills, effective date 1997

Status Applicable

Synopsis of Requirement Addresses disposal of construction debris and solid waste and associated remediation and monitoring.

Action to be Taken to Attain ARAR Remedial efforts must comply with remedial and monitoring requirements of the regulations.

Requirement: State of Rhode Island Site Remediation Regulations

Citation: Rules and Regulations for Investigation and Remediation of Hazardous Materials Releases DEM-DSR-01-03, as amended 1996, 2004

Status Applicable

Synopsis of Requirement Addresses investigation and remediation of hazardous materials into the environment. Establishes standards for soil (direct contact and leachability), groundwater and sediments.

Action to be Taken to Attain ARAR Remedial efforts must comply with investigation, remediation and monitoring requirements of the regulations.

(Note the tables incorrectly state that the regs are for non-NPL sites. Please remove this statement from the table).

Requirement: State of Rhode Island Rules and Regulations for Hazardous Materials Management

Citation: Rules and Regulations for Hazardous Materials Management DEM-OWM-HW-01-07 as amended, 1984, 1986, 1987, 1988, 1992, 2001, 2002, 2005, 2007

Status Relevant and Appropriate

Synopsis of Requirement Requirements for transportation and disposal of waste from the site (includes hazardous waste and special waste in the soil and/or sediments). Requirements for storage of hazardous waste adjacent to the bay. Requirements for waste left in place, landfill closure and monitoring

Action to be Taken to Attain ARAR Remedial efforts must comply with waste transportation and disposal requirements of the regulations. Remedial action must ensure that hazardous waste in the soil does not migrate into the environment. Requirements for waste left in place, landfill closure and monitoring

Requirement: State of Rhode Island General Permit for Storm Water Discharge from Small Municipal Separate Storm Sewers and Industrial Activities of Eligible Facilities Operated by Regulated Small MS4s RID040000

Citation: General Permit for Storm Water Discharge from Small Municipal Separate Storm Sewers and Industrial Activities of Eligible Facilities Operated by Regulated Small MS4s 2003

Status Relevant and Appropriate

Synopsis of Requirement Requirements operation of storm water discharges at the site.

Action to be Taken to Attain ARAR Remedial efforts must insure that there are no illicit discharges of contaminated groundwater into storm water at the site.

Requirement: State of Rhode Island Discharge Elimination Permit Industrial Activity RID050000

Citation: General Permit for Storm Water Discharge from Industrial Activities

Status Relevant and Appropriate

Synopsis of Requirement Requirements operation of storm water discharges at the site.

Action to be Taken to Attain ARAR Remedial efforts must insure that there are no illicit discharges of contaminated groundwater into storm water at the site.

Requirement: State of Rhode Island Discharge Elimination Permit Industrial Activity

Citation: General Permit for Storm Water Discharge from Industrial Activities RID050000

Status Relevant and Appropriate

Synopsis of Requirement Requirements operation of storm water discharges at the site.

Action to be Taken to Attain ARAR Remedial efforts must insure that there are no illicit discharges of contaminated groundwater into storm water at the site.

Requirement: State of Rhode Island Discharge Elimination Permit Storm Water Discharge Associated with Construction Activity

Citation: General Permit for Storm Water Discharge from construction activities. September 2003

Status Relevant and Appropriate

Synopsis of Requirement Requirements for storm water discharge during construction activities.

Action to be Taken to Attain ARAR As necessary, construction activities storm water discharge must meet these requirements.

Requirement: State of Rhode Island Water Quality Regulations

Citation: State of Rhode Island Water Quality Regulations, 2006 In accordance with Chapters 42-35,46-12, 42-17-1 of the Rhode Island General Laws

Status Applicable

Synopsis of Requirement Establishes numerical and narrative standards the remedial effort must obtain. Establishes requirements for any discharge from a treatment facility on the site

Action to be Taken to Attain ARAR Remedial efforts must meet the requirements of the regulations; any discharge from a treatment system must meet the requirements of the regulations.

Location Specific

Requirement: State of Rhode Island Water Quality Regulations

Citation: State of Rhode Island Water Quality Regulations 2006 In accordance with Chapters 42-35,46-12, 42-17-1 of the Rhode Island General Laws

Status Applicable

Synopsis of Requirement Addresses all activities on the coast, including, but not limited to dredging and construction of revetments.

Action to be Taken to Attain ARAR Remedial efforts with respect to dredging and revetment construction must comply with requirements of the regulations.

Requirement: State of Rhode Island Water Quality Regulations, Rules and Regulations for Groundwater Quality

Citation: Water Quality Regulations, Rules and Regulations for Groundwater Quality 2005

Status Applicable

Synopsis of Requirement Establishes numerical and narrative standards for groundwater quality, surface water impacts, as well as, technical requirements for monitoring wells.

Action to be Taken to Attain ARAR Remedial investigation, actions and monitoring must comply with requirements of the regulations

Requirement: State of Rhode Island Coastal Resources Management Council Regulations

Citation: Coastal Resources Management Council Regulations

Status Applicable

Synopsis of Requirement Applies to all actions taken in the coastal zone..

Action to be Taken to Attain ARAR CRMC approval is required for all actions taken in the coastal zone (includes land sediments and water).

Action Specific

Requirement: State of Rhode Island Rules and Regulations for Dredging and Management of Dredge Materials

Citation Rules and Regulations for Dredging and Management of Dredge Materials DEM-OWR-DR-02-03

Status Applicable

Synopsis of Requirement Addresses dredging activities and disposal of dredge spoils.

Action to be Taken to Attain ARAR Dredging must comply with the requirements of the regulations.

Requirement: State of Rhode Island Underground Injection Control Program

Citation State of Rhode Island Underground Injection Control Program 2004

Status Applicable

Synopsis of Requirement Addresses the investigation, remediation and operation of UICs.

Action to be Taken to Attain ARAR Any UICs at the site must be investigated and remediated in accordance with the requirements of the regulations. Any remedial activity involving operation of UICs must comply with the requirements of the regulations.

Requirement: State of Rhode Island Water Quality Regulations

Citation: State of Rhode Island Water Quality Regulations 2006 In accordance with Chapters 42-35,46-12, 42-17-1 of the Rhode Island General Laws

Status Applicable

Synopsis of Requirement Deals with point discharges from any treatment system and non-point discharges from groundwater.

Action to be Taken to Attain ARAR Remedial efforts must comply with requirements of the regulations

Response: RIDEM and USEPA need to meet and resolve the ARARs that are applicable to the site. Appropriate revisions will be made when that effort is completed.

69. **Tables 2-6, 2-7, 2-9, 2-10, 2-14, 2-15, 2-16, 2-19, 2-20**

These tables contain PRGs for contaminants in the sediments, which are site related. As TPH is also a site related contaminant, and as a site specific PRG for TPH has not been developed, please employ a value of 500 ppm for TPH in the sediment.

Response: Please refer to the response to comment 10 above.