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U S NAVY RESPONSE TO U S EPA REGION I COMMENTS ON DRAFT PROPOSED
REMEDIAL ACTION PLAN SITE 17 OPERABLE UNIT 6 (OU 6) BUILDING 32 GOULD ISLAND
NS NEWPORT RI
1/27/2014
TETRA TECH

**NAVY RESPONSES TO COMMENTS FROM U.S. EPA
DRAFT PRAP
SITE 17 – GOULD ISLAND
NAVAL STATION NEWPORT, RHODE ISLAND
COMMENTS DATED May 20, 2013 (EPA)**

The U.S. Navy (Navy) is pleased to provide the US Environmental Protection Agency (U.S. EPA) with responses to the May 20, 2013 comments on the Draft Proposed Remedial Action Plan (PRAP) for Site 17, Building 32 at Gould Island, which is part of Naval Station (NAVSTA) Newport in Newport, Rhode Island. Comments are presented first (*italics font*), followed by the Navy's responses.

Please note that additional revisions to the PRAP will be made to in accordance with revisions made to the FS in accordance with responses to comments from EPA dated December 17 and December 18, 2013. In addition, the Navy will eliminate the PDI for sediment at the Northeast Shoreline, in accordance with agreements reached at the RPM meeting held on January 15, 2014.

1. *Please include "Operable unit 6" in the title of the Proposed Plan.*

Response: The requested information will be included.

2. *p. 1 In the right box, please insert the public meeting and hearing date where it is currently shown highlighted as "Month Day."*

Response: The requested information will be included: March 19, 2014.

3. *p. 2 In the first paragraph, change "hazardous materials have caused impact to the environment" to hazardous materials pose a risk to human health and the environment."*

Response: The requested change will be made.

4. *p. 2 In the first paragraph in the second column, end the sentence after "Site 17."*

Response: The requested change will be made.

5. *p. 5 Under History of Site Investigations, please mention the asbestos abatement and the RCRA enforcement action that resulted in removal of hazardous materials. In the 2002 summary, capitalize "Toxic Substances Control Act."*

Response: The RCRA removal of hazardous materials is identified as part of the 1992 entry. This will be called out as a separate item. The removal of asbestos is only known to occur as a part of the building demolition, and this event will be added as appropriate.

6. *p. 5, right column - Please change the first sentence below the box to "...evaluated during the RI were used in the human health risk assessment (HHRA) and the ecological risk assessment (ERA)..."*

Response: The requested change will be made.

7. *Please change the first sentence in Step 1 to "...at concentrations that exceeded federal or state risk-based screening levels, where applicable."*

Response: The requested change will be made.

8. *Under Summary of Risks, please add the following: "It is the Navy's current judgment that the Preferred Alternative identified in this Proposed Plan, or one of the other active measures considered in the Proposed Plan, is necessary to protect public health or welfare or the*



environment from actual or threatened releases of pollutants or contaminants from this site that may present an imminent and substantial endangerment to public health or welfare.”

Response: The requested change will be made.

9. *p. 7 In the Human Health Risk section, add a table that presents the outcome of the risk assessment for each receptor. Include a table for the summary of RME human health risks that require action and a table of cleanup goals for soil, groundwater, and sediment.*

Response: The requested change will be made.

10. *p. 7, left column Please add a bullet for the human health risk conclusions to include exposure to soil by current and future workers (PAHs and metals).*

Response: Risk from soil to construction workers (from soil or soil dust – Tables 9.5A&B RME, Appendix G1 of the RI) is equal to unity (1) so it will not be cited as a risk.

11. *p.7, right column - Replace the first sentence with: “The problem formulation step identifies the contaminants present, and the ecological receptors (animals) potentially exposed to those contaminants.”*

Response: The requested change will be made.

12. *In the text box, replace the second sentence with: “Hazard quotients are calculated by dividing the exposure of receptors to contaminants, through food or direct contact, with concentrations considered to pose little or no risk of adverse effects.”*

Response: The requested change will be made.

13. *p. 8, left column - Under the Baseline Ecological Risk Assessment, replace the second sentence with: “The toxicity testing involves laboratory exposure of amphipods (shrimp-like crustaceans) to sediment samples from different areas of the site and measurement of survival and reproduction rates.”*

Response: The requested change will be made.

14. *Bullets: Please check the proposed plan for consistent use of COC vs. COPC. Change the last bullet to: “Sediment – PCBs, PAHs, metals were identified as likely sources of toxicity. Cleanup goals were developed for PCBs and PAHs based on dose-responses in toxicity tests. An additional cleanup goal was calculated for a combination of chemicals based on their individual benchmarks (Effects Range Median or ERM values) and observed toxicity. This calculated value is called an ERM quotient.”*

Response: The suggested revisions will be made.

15. *p. 8, right column - Please insert bullets for the groundwater arsenic PRG and sediment chromium PRG and fix the period in the third bullet of the RAOs.*

Response: The PRGs will be summarized in a table instead of using bullets. The Chromium PRG for sediment will be included. While there is an arsenic PRG for groundwater, no groundwater exceeds it. This may create confusion, but will be included as it was in the PRAP for Tank Farms 4 and 5.

16. *Under Cleanup Objectives, please make the same general edits that EPA requested for the PRAP for Tank Farm 4, including the addition of tables to present the cleanup goals and their sources for the various media. Delete the bulleted lists at the top of the right-hand column.*

Response: The suggested revisions will be made.



17. *Change the second bullet of the Cleanup Objectives to: “Prevent exposure of recreational and subsistence fishermen to COCs in shellfish (mussels and clams) by reducing the exposure of those shellfish to the contaminants in sediment, until shellfish contamination no longer poses a human health risk.”*

Response: The suggested revision will be made.

18. *In the penultimate bullet, please change the objective to: “Prevent site use of groundwater until the groundwater cleanup goals have been achieved.”*

Response: The RAOs will be updated to reflect the new RAOs established in the FS in accordance with comments dated December 17 and December 18, 2013.

19. *In the last bullet, please change “beneficial reuse” to “beneficial use.”*

Response: This comment is in regards to the same RAO as above. See the response to comment 18.

20. *p. 9, left column Change the first sentence of the SO2 text “...remove soil exceeding leachability criteria, and establish and enforce land use controls to prevent residential and recreational use of the site.”*

Response: Removal of all soil exceeding LC may not be possible or advisable, given the proximity to the shoreline, and at this site where there is no downgradient receptor for groundwater. Having the balancing statement “where it appears to be affecting groundwater” is advisable to avoid future ROD revisions.

21. *Before the LUC sentences for SO2 and SO3, insert: “Long-term monitoring will document that soil contamination does not migrate into the groundwater or adjacent sediments.”*

Response: The suggested revisions will be made.

22. *Please add “and inspections” after LUCs for soil alternatives SO2 and SO3.*

Response: The suggested revisions will be made.

23. *p. 9, right column - Before the LUC sentence, insert: “Long-term monitoring will document that soil contamination does not migrate into the groundwater or adjacent sediments.”*

Response: The suggested revision will be made.

24. *Please add “and inspections” after LUCs for soil alternative SO4 and remove “soil” in the second sentence of SO4.*

Response: The suggested revisions will be made.

25. *Please add “LUCs and inspections” after MNA for groundwater alternative GW2.*

Response: The suggested revisions will be made.

26. *p. 10 Bioprecipitation should not be presented because it exacerbates the deviations from natural geochemical conditions, which are not reducing conditions. An oxidation alternative, such as aeration of groundwater, is a more appropriate technology to restore natural shallow groundwater conditions and remove dissolved manganese.*

Response: The alternatives presented in the FS will be presented in the PRAP.



27. p. 10, left column Please change the first sentence in the third paragraph to “If it is determined that natural attenuation of manganese is occurring at an acceptable rate, the Navy would...”

Response: The suggested revision will be made.

28. Please add “long-term monitoring, LUCs, and inspections” to groundwater alternative GW3 and correct typo “...subsurface chemical conditions are affected that...” in the last line.

Response: The suggested revisions will be made.

29. p. 10, right column Please add “...treatment technology, called a pilot study, would be conducted...” to the first paragraph. In the sixth paragraph change “four cleanup options” to “three cleanup options.”

Response: The suggested revisions will be made.

30. p. 11, left column Please describe LUCs in off-shore sediment alternative SD2.

Response: LUCs would include any activity that could disturb the integrity of the subaqueous cover (dredging, cableing, anchoring, or intrusive construction). This information will be added as requested.

31. p. 11 It is not apparent that covering contaminated areas (SD-2) at the Northeast Shoreline is a practical alternative owing to the location of the contaminated areas either within the eelgrass beds or near the intertidal zone. In addition, a cover option would require covering an area larger than the area of contamination to provide a stable cover, thus likely damaging more eelgrass than a removal remedy. Covering contaminated sediment in the intertidal zone would not produce a stable remedy because of wave action. The pre-design investigation should be a component of Alternative SD-2 but removal or monitored natural attenuation should be the SD-2 remedies of choice if the cleanup goals are exceeded at the Northeast Shoreline.

Response: The alternatives presented in the FS will be presented in the PRAP.

32. The description of SD-3 should describe what remedial measures will be taken if the sediment PRGs are exceeded in the Northeast Shoreline Area, but it is determined that it is more important to protect the eelgrass beds (MNR, LUCs, changing the PRGs, etc.) than remove the contamination. The PRAP could note that EPA and the Navy recognize the need to balance the benefits of contaminant removal against the potential loss of, or damage to, sensitive and valuable habitats such as eelgrass beds.

Response: The PRAP will be revised to eliminate the use of a pre-design investigation step at the Northeast Shoreline, in accordance with the agreements reached at the RPM meeting held January 15, 2014. Instead, monitoring (minimum of three rounds, one of which was conducted in 2009-2010) will be conducted to assure that sediment conditions in this sensitive area remain below PRGs and continue to improve.

33. p. 11 Under the Preferred Alternatives, please note that there will be LUC inspections and long-term monitoring of contaminated soil left in place.

Response: The suggested revisions will be made.

34. p. 12 left column In the third paragraph, insert “wetland/aquatic” before “habitats.” Unless the excavation or handling of the contaminated soil or the installation/maintenance of monitoring wells will take place in federal jurisdictional wetlands, the LEDPA finding should only apply to the sediment component of the remedy.

Response: The suggested revisions will be made.



35. *In the fourth paragraph, the TSCA finding needs to state that the removal and off-site disposal of PCB contaminated sediments will address both the ecological risk and human health risk. The finding also needs to state that the soil and debris remedies for PCBs are protective under TSCA standards (i.e., excavation and off-site disposal will address PCBs exceeding industrial risk standards and LUCs will prevent residential/recreational exposure).*

Response: The suggested revisions will be made.

36. *Table 1 Why is the SO2 “long-term effectiveness and permanence” criterion listed as “partially meets?”*

Response: This is listed as partially meets because subsurface soils >PRGs remain on site.

37. *Table 2 Why are GW2 and GW3, “Long-term Effectiveness and Permanence,” “Short-term Protection,” and “Implementability” criteria only listed as “partially meets?”*

Response: GW2 and GW3 only partially meets long term protection because it is uncertain as to whether the alternatives will be fully effective in the long term. They only partially meet short term protection goals because they take time to implement. GW3 only partially meets implementability because of difficulties managing an in – situ system at this remote location. The implementability of GW2 will be revised to “meets”.

38. *Table 3 Why is the SD2 “long-term effectiveness and permanence” criterion listed as “partially meets?” Why are the SD2 and SD3 “Short-term Protection” criteria listed as “partially meets?”*

Response: Under long term effectiveness, SD2 is listed as partially meets because sediment >PRGs remain on site. Under short term protection, SD2 and SD3 are listed as partially meets because there will be disturbance with some impacts to habitats and receptors under both alternatives.

39. *Glossary - Please change “Applicable Relevant and” to “Applicable or Relevant and”*

Response: The suggested revision will be made.



**NAVY RESPONSES TO COMMENTS FROM RIDEM
DRAFT PRAP
SITE 17 – GOULD ISLAND
NAVAL STATION NEWPORT, RHODE ISLAND
COMMENTS DATED June 14, 2013**

The U.S. Navy (Navy) is pleased to provide the Rhode Island Department of Environmental Management (RIDEM) with responses to the June 14, 2013 comments on the Draft Proposed Remedial Action Plan (PRAP) for Site 17, Building 32 at Gould Island, which is part of Naval Station (NAVSTA) Newport in Newport, Rhode Island. Comments are presented first (*italics font*), followed by the Navy's responses.

Please note that additional revisions to the PRAP will be made to in accordance with revisions made to the FS in accordance with responses to comments from EPA dated December 17 and December 18, 2013. In addition, the Navy will eliminate the PDI for sediment at the Northeast Shoreline, in accordance with agreements reached with EPA and RIDEM at the RPM meeting held on January 15, 2014.

General Comments:

1. *Please check the Proposed Plan (PRAP) for consistency with the Feasibility Study (FS), including the following:*

- *p. 6, 1st sentence of 2nd column, reference to Appendix A. Please note that Appendix A in the FS includes historical documents but does not include a complete list of chemicals of potential concern (COPCs).*

Response: The full set of chemical data is provided in Appendix A3. These chemicals detected constitute the list that RIDEM considers the COPCs.

- *p. 8, Cleanup Objectives. The chemicals of concern (COCs) for different media provided in the PRAP are inconsistent with those in the FS. For example, pesticides are not specified as COCs in sediment in the FS.*

Response: The comment is correct, the citation of pesticides in the PRAP is incorrect; pesticides are not COCs in sediment. This will be corrected.

Specific Comments:

1. ***p. 7, Step 1, Problem Formulation.***

Please revise the beginning of the first sentence below the bullets to read: "Similar to the HHRA, COPCs were identified by comparing..."

Response: The change will be made as suggested.

2. ***p. 7, text box on Ecological Risk.***

Ecological risk is not only defined by the Hazard Quotient. Please expand this text box to discuss the multiple lines of evidence used in the ecological risk assessment, including toxicity testing.

Response: Additional site-specific details of the toxicity testing conducted as part of the Phase 2 RI and BERA will be included in the cited section.

3. ***p. 9, Soil and Debris Alternative SO4.***



As discussed in RIDEM's evaluation of responses to comments on the Draft Final FS, the Navy may need to include the removal of debris contained in the five underground storage tanks (USTs) as part of this remedy if it is determined that these tanks were not closed out properly according to RIDEM's UST regulations and the debris contained in the tanks consists of material other than clean fill.

Response: On October 29, this matter was discussed between the Navy, the USEPA and RIDEM. It was determined at that time that the material used for backfill during the Building 44 tank closure was acceptable and would not require addressing under CERCLA.

4. p. 10, 2nd column, bottom of page.

Please change to "The following three cleanup options were evaluated for offshore sediment (SD):"

Response: The change will be made as suggested.

5. p. 11, Off-Shore Sediment Alternative SD2.

Due to the sensitive nature of the northeast shoreline area, a cover would not be practical due to potential damage of the eel grass beds. RIDEM suggests that based on the results of the PDI investigation, if PRGs exceedances are found, the Navy's should dredge the area according to Alternative 3 and restore the eel grass beds to the best extent possible, or continue with long-term monitoring as originally suggested.

Response: The PRAP will be revised to eliminate the use of a pre-design investigation step at the Northeast Shoreline, in accordance with the agreements reached at the RPM meeting held January 15, 2014. Instead, monitoring (minimum of three rounds, one of which was conducted in 2009-2010 will be conducted to assure that sediment conditions in this sensitive area remain below PRGs and continue to improve.

6. p. 15, Table 2.

Both Alternatives GW2 and GW3 would appear to be technically feasible (in particular, GW2). Please revise this table to indicate that these alternatives meet the criteria for Implementability.

Response: The technical feasibility (Implementability) for MNA will be revised to "Meets". The Implementability of the in situ treatment alternative will be more challenging due to the lack of water supply, electricity, shelter, and access to the work area. For these reasons, the Implementability measure for GW3 should be identified as "Partially Meets".

