UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
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BOSTON, MASSACHUSETTS 02109-3912

November 24, 2009

Winoma A. Johnson, P.E.
Remedial Project Manager
NAVFAC MIDLANT, Code OPNEEV
9742 Maryland Avenue, Bldg. Z-144
Norfolk, VA 23511-3095

Re: Draft Site Investigation for MRP Site 1 – Carr Point
NAVSTA, Newport, RI

Dear Ms. Johnson:

EPA has reviewed the "Draft Site Investigation for MRP Site 1 – Carr Point, NAVSTA, Newport, RI," dated October 2009, as prepared by Tetra Tech NUS, Inc., on behalf of the Navy. Enclosed are our comments on the Draft Report.

As discussed at the meeting on November 18, 2009, many of the comments can be addressed during the Remedial Investigation (RI). However, EPA is offering the comments at the Site Investigation stage to put the Navy on notice that it is our position that these concerns need to be addressed in the RI. EPA concurs with the Navy's general conclusion that there are potential human health and ecological risks due to releases at the Site and that further investigation is warranted. EPA concurs with the Navy's proposal to split up the site into two separate Areas of Contamination, one for the former skeet firing range activities and another for the former storage area activities. EPA understands that this bifurcation of the Site is necessary for the Navy due to the different funding mechanisms that will be used by the Navy to address the contamination at the site.

Please address the enclosed comments, as appropriate, and submit a Draft Final SI Report for EPA review and concurrence. EPA looks forward to working with the Navy and RIDEM as we move forward to the RI/FS stage for the Carr Point AOCs. If you have any questions, please contact me at (617) 918-1754 or at lombardo.ginny@epa.gov.

Sincerely,

Ginny Lombardo

Ginny Lombardo
Remedial Project Manager

Attachment

cc: Paul Kulpa, RI DEM
Cornelia Mueller, NAVSTA Newport
Stephen Parker, TtNUS
Chau Vu, EPA
Bart Hoskins, EPA
Todd Finlayson, Gannett Fleming
Ken Finkelstein, NOAA
Ken Munney, USF&W

EPA Comments on
Draft Site Investigation for
MRP Site 1 – Carr Point
NAVSTA, Newport, RI
October 2009

General Comments:

1. Throughout the draft SI, both in the text and in Figure 8-3, it is implied and/or stated that the screening process conducted indicates that there is a possible risk to human and/or ecological receptors from a compound. The screening process is only for identifying chemicals of potential concern to carry forward in the risk assessment of the RI. If detected levels exceed screening levels in a medium, that compound is screened in as of potential concern and a full risk assessment needs to be conducted for identified receptors. The results from the risk assessment would then be used to determine whether exposures to these compounds would or would be unlikely to pose risks to the receptors.

2. The characterization of lead shot needs to be enhanced as part of the RI. In sediment, the extent of lead shot is not fully delineated (not bounded by samples with little-to-no shot) up and down the beach or from the shore outward. Additionally, surface soil (from the shooting area to the beach) sampling should be considered for the RI to ensure that there is no lead shot that could be ingested by terrestrial birds. While most of the lead is thought to have traveled to the areas that were sampled, it is possible that lead pellets would have washed ashore, depending on the wave energy at the site.

3. There are elevated concentrations of COPCs in surface soil throughout the site and there are elevated concentrations in site groundwater. The potential for surface runoff or shallow groundwater discharge to near-shore areas should be investigated in the RI. Also, potential migration to Norman's Brook at the southern boundary of the site and the small wetland evident in aerial photographs at the northern end of the site should be investigated in the RI.

Specific Comments:

1. Page 1-6, Section 1.3.1: The figure referenced here should be Figure 8-1.

2. Section 3.3: Provide the rationale for the choice of the depth (0 to 2 ft) to which the sand layer was extended below the screens, as this was not consistent from well to well, so it appears that case-by-case determinations were made.

3. Page 3-16, Section 3.3.3: Sampling of groundwater 2 days after well development may not have allowed adequate time for the aquifer to return to ambient conditions. Groundwater will need to be re-sampled for the RI.

4. Page 4-2, Section 4.2.1: Was surface soil at the Former Firing Arcs analyzed for metals? Note that arsenic, lead, copper, zinc and antimony can also be released at the firing point, as

these metals can be contained in the bullet and casing. This will need to be evaluated in the RI.

5. Page 4-7, Section 4.2.1.4: This Section should be expanded to highlight all of the relevant COPCs. Metals, pesticides, SVOCs, and nitroglycerin should be discussed.

6. Page 4-11, Section 4.2.2.3: This Section indicates that "(n)o significant elevated concentrations of metals were found." Provide support for this statement. Section 4.2.2.2 indicates that metals exceeded PALs and residential RSLs.

7. Page 5-20, Section 5.3: The text states that the presence of "insoluble" lead pellets is not expected to result in surface water contamination. As noted in the text, there is some breakdown of the pellets and some dissolution of lead, as evidenced by elevated lead in sediment samples throughout the lead shot area. The sentence should refer to moderately soluble, rather than insoluble lead pellets.

8. Section 6.1.1: Explain why pesticides were not evaluated.

9. Page 6-2, Section 6.1.1: It is unclear why the MA DEP's relative absorption factor was considered for use to reduce toxicity from PAHs in some media when calculating risks from ingestion and dermal contact. Is this considered as an uncertainty for a possible overestimate of risk from PAHs at the site?

10. Section 6.2: There are no screening tables for human health risk as there are for ecological risk (Tables 7-4 through 7-6). Tables 4-1 through 4-4 only show detected compounds at each sampling location and some preliminary screening. The conclusions on which compounds need to be carried through the human health risk assessment should be drawn only after a proper risk screening.

11. Page 6-3, Section 6.2: Add information on metals to the Summary discussion.

12. Page 7-2, Section 7.2: In the site description, the third paragraph mentions the mowed area in the north and then discusses the vegetated area in the south. To distinguish the southern area from the mowed (vegetated with grass) area, please describe the vegetation there.

13. Page 7-5, Section 7.2.2.2: In the Assessment Endpoint and Measures of Effect table, the Measures of Effect for birds and mammals refer to average ingested dosed. This should state "maximum and average ingested doses."

14. Page 7-6. Section 7.3.2: The 2nd to last sentence states that only bioaccumulative chemicals were included in the food chain models. This is not accurate; all chemicals, appropriately, were carried through the food chain models, even those not considered bioaccumulative. Please delete the sentence.

15. Page 7-8, Section 7-4: The text assumes an organic carbon concentration of 1% and percent lipid in fish of 14.4% dry-weight. Please support these values.

16. Page 7-10, Section 7.5.1.1: Under Terrestrial Invertebrates, the text states that 8 pesticides were selected as COPCs. This should be 9, not 8. Please correct.

17. Page 7-10, Section 7.5.1.1: Under Terrestrial Plants, the text states that 8 pesticides were selected as COPC. This should be 10, not 8. Please correct.

18. Page 7-10, Section 7.5.1.1: Under Terrestrial Invertebrates and Terrestrial Plants, the bullets seem to include chemicals that were generally selected as COPCs and not just for the receptor group in question. For example, the first bullet on Page 7-11 states that 2 explosives were selected as COPCs. Only one, however, was selected as a COPC for terrestrial invertebrates. Please clarify.

19. Page 7-16, Section 7.6.2: The first paragraph ends with "The". Is there a sentence missing?

20. Section 7.6.3: Neither the raccoon nor the herring gull are strictly piscivorous. They are omnivorous and more likely to eat mollusks and other invertebrates than fish. In the Draft RI Work Plan, Navy should propose the species that will be considered for food chain modeling in the RI for EPA review and comment.

21. Page 7-17, Section 7.6.3.1: The last sentence on the page asserts the PAHs in soil are not likely bioavailable because they are likely bound by the skeet. This conjecture will need to be further supported in the RI.

22. Page 7-18, Section 7.6.3.1: Further support for consideration of the elimination of pesticides as a COPC should be provided in the RI. The Navy should support the assertions that they are not site related by comparisons to available background data for surface soil.

23. Page 7-19, Section 7.6.3.2: The evaluation of lead shot focuses on those samples that had greater than 10 shot pellets/ft^2. As suggested in EPA comments on the SI Work Plan, 10 pellets/ft^2 may not be the most appropriate benchmark and other values (e.g., 3 pellets/ft^2 used for the Army small arms range site) may need to be considered.

24. Page 8-5, Section 8.5: This Section should include a statement regarding lead, PAHs and metals along the shoreline.

25. Table 4-3: Risk-based groundwater screening levels are not presented in this table. The residential screening levels for tap water from ORNL need to be used for screening groundwater, in addition to other groundwater screening levels listed in the table.

26. Table 7-1: The footnote for Table 7-1 refers to MHSPE (2006). The references refer to MHSPE (2000). It is not clear that the values in Table 7-1 were taken from either of these documents. For example, the value for endrin in the MHSPE (2006) document is 0.04 ug/L, a groundwater concentration, not a soil concentration. Please clarify which MHSPE document was used.

27. Table 7-4: The maximum value for endrin aldehyde is listed as 0.63 ug/kg. From Table 4-1, however, sample CRP-SB04-0002 had a concentration of 1.7 ug/kg. Please correct the maximum value.

28. Table 7-4: The maximum value for gamma-BHC (Lindane) is listed as 5.3 ug/kg. From Table 4-1, however, sample CRP-SB04-0002 had a concentration of 12 ug/kg. Please correct the maximum value.

29. Figure 4-4: Please correct the directional arrow, which points more west than north.

30. Figure 8-3: This Figure is missing many of the potential risks identified in Section 6 and 7 (e.g., What about potential risks to human health from PAHs and propellants in the Firing Area? What about potential risks from metals in soil?). In addition, the figure indicates that PAHs and nitroglycerin are unlikely to pose human health risks. As pointed out in General Comment 1 above, it is not appropriate to draw risk conclusions until the risk assessment is completed in the RI.

31. References: Please provide reference for the regional screening levels, last updated in May 2009. See http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm.

32. Appendix F: Please add table numbers to the tables in Appendix F.

33. Appendix F: In the table entitled Dry Weight Derivation of Body, Weight, Food Intake, and Water Intake Factors for Terrestrial Food Chain Models, in the column entitled, Derivation Factors for Modeling there is a note that is not clear. For the meadow vole and northern bobwhite, 15% is used as the value for percent dry matter in plants. The notes, however, state: "(1) -0.30 = percent solids in grass to convert to a dry weight ingestion rate." Please change this to be consistent with the value that was used.

34. Appendix F: In the table entitled Dry Weight BAFs for Plants and Invertebrates, several of the plant and invertebrate BAFs are straight values (not regressions). Rather than listing the values as "Eco-SSL", please show the actual values.

35. Appendix F: In the table entitled Dry Weight BAFs for Plants and Invertebrates, the conservative sediment BSAF for Barium is listed as 0. Please change this to 1.0.

36. Appendix F: The source of the fish BAFs is written in the footnotes of the table entitled Dry Weight BSAFs for Fish and Invertebrates as U.S. EPA September 1997. The only 1997 EPA document cited in the references is the Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, which does not provide specific BSAFs. Please clarify the source of the fish BSAFs.

37. Appendix F: In the Table entitled Chemical Concentrations in Surface Soil and Tissue, please make sure that column headings and row headings (chemical) name are included on all pages.

38. Appendix F: In the table entitled Bobwhite Quail –Less Conservative Inputs, the calculated doses for incidental ingestion of organic chemicals in soil appear to be too high by a factor of 10. Please review.

39. Appendix F: In the tables showing uptake and risk based on less-conservative parameters for the raccoon and gull, the second column should be entitled Avg (or 95%UCL) Sed Conc., in order to indicate that some of the less conservative EPC were based on 95% UCLs, not averages.

40. Appendix F: In the tables showing uptake and risk based on less-conservative parameters for the raccoon and gull, please remove the second column entitled Max. Sed. Conc., as these values were not used in the calculations in these tables.

41. Appendix F: In the raccoon and herring gull food chain calculation tables, the fish tissue concentrations relative to the sediment concentrations are higher than they should be based on the listed BSAFs. Please review and correct accordingly.

42. Appendix F: Please clarify if the raccoon is assumed to eat fish or invertebrates. In the calculation tables in Appendix F, the dietary component is listed as fish, but the species description refers more to invertebrates as dietary items. The diet should be composed of invertebrates more than fish. This seems to be what was used on the food chain model calculations. Please confirm and adjust accordingly.