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LETTER AND THE U S EPA REGION III COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION AND FEASIBILITY STUDY WORK PLAN STUMP NECK ANNEX SITES UNEXPLODED ORDNANCE 4,5, 12 AND 21 (UXO 4, UXO 5, UXO 12, AND UXO 21) NSWC INDIAN HEAD MD
05/20/2015
U S EPA REGION III PHILADELPHIA PA

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Date: May 20, 2015

Joseph Rail, P.E.
NAVFAC Washington
Washington Navy Yard, Building 212
1314 Harwood Street, SE
Washington Navy Yard, DC 20374-5018

Re: Indian Head Naval Surface Warfare Center, Indian Head, MD
Stump Neck Annex – Sites UXO 4, UXO 5, UXO 12, and UXO 21
Remedial Investigation & Feasibility Study Work Plan

Dear Mr. Rail:

The U.S. Environmental Protection Agency (EPA) has reviewed the U.S. Navy's (Navy's) December 2013 draft *Remedial Investigation and Feasibility Study* (RI/FS) *Work Plan* for Stump Neck Annex Sites UXO 4, UXO 5, UXO 12, and UXO 21, located at the Indian Head Naval Surface Warfare Center NPL site. Based upon that review, EPA offers the following comments:

1. Page vi – The draft Work Plan states that if the concentrations of detected constituents exceed human health screening levels and are comparable to concentrations in measured wells in adjacent sites, then a 'No Further Action' will be recommended in the RI.
   a. Are the referenced wells at "adjacent" sites considered upgradient wells, or were these wells installed to monitor specific conditions at the "adjacent" sites? It is unclear as to the purpose of the "adjacent" wells. What are the parameters defining comparability?
   b. Comparison of on-site groundwater contaminants to "adjacent" well concentrations is not a sufficient rationale for excluding the groundwater contaminants from being evaluated under the HHRA. Suppose there is an upgradient release? Additionally, if the Navy's intent is to conduct a background comparison, then EPA prefers that the Navy utilize the groundwater background values established in Table A-8 of the October 2002 Background Soil Investigation for Indian Head and the Stump Neck Annex. Also, when performing an evaluation against background concentrations, the detected concentrations that exceed the human health screening levels are still carried forward into the RI. Excluding constituents based on a comparison to background prior to the HHRA is not an appropriate approach for characterizing the risks associated with the extent of contamination. At the end of the RI, if the risk drivers are associated

with background, the case can be made for no further action, but the public can be notified that risks remain at the site, although the risk is caused by natural conditions.

2. The Executive Summary states that "If the concentrations of detected constituents exceed human health and/or ecological screening levels and the detected constituents are comparable to concentrations measured in wells in adjacent sites, then the RI report will be prepared with a recommendation of 'No Further Action.' In Section 2.2 Basic IED Area (UXO) on Page 13 it states "Several inorganics were detected in soil samples at concentrations at least two times greater than in samples measured in background wells." It is unclear why surface soil samples would be directly compared to concentrations measured in background wells (i.e., groundwater samples). Background soil samples should be used in the process for evaluating soil sample results. Please clarify. This applies to all of the sites.

3. Page 10, 1st paragraph - The draft Work Plan mentions an Incendiary Demonstration Area at UXO 4, and the listing of possible chemical associated with UXO 4 include some constituents related to incendiaries. Would any further refinement/addition of incendiary-related contaminants be possible for UXO 4, i.e. such as polytetrafluoroethylene or other metal oxides and colorants? Also, is the gasoline listed in the possible contaminants list on page 10 related to napalm incendiaries?

4. The draft Work Plan appears to be limited to remedial investigation activities at this point and the title of the document should be modified accordingly.

5. Page 13 presents a summary of the conclusions from an ecological screening that occurred in the SI. It is stated that after the Step 3A refinement no chemicals were retained as COCs. The EPA BTAG has not received nor reviewed the screening ERA in the SI and, therefore, cannot support the conclusions at this time. A more detailed summary will be required to evaluate the conclusions. It should also be noted that as the SI is typically based on a limited dataset, ecological risk conclusions reached at this stage are subject to review and revision. This comment applies to all of the sites.

6. Conceptual site models and a migration exposure pathway analysis for all the sites are included in Appendices C and D. The conceptual models and description of migration routes, together with other elements of the site description, do not adequately support why sediment and surface water samples are not being collected from the wetland areas and stream at the sites. Samples in the wetlands should be collected as part of the evaluation of nature and extent of contamination as well as to address ERA concerns. The conceptual models for all of the sites, with the exception of UXO 21, show wetlands and/or streams within and/or directly adjacent to the source areas. Consideration of just the groundwater to surface water pathway (potential current migration pathway) is

insufficient for the investigation. Furthermore, evidence of no current erosion does not adequately address soil migration pathways, especially historical migration pathways.

7. Page 32, 2nd and 3rd paragraph – In addition to the adult and child resident receptors, the adult and child trespasser, construction worker, maintenance worker, and industrial worker should be added. In addition, the rationale for excluding the construction worker would seem to exclude any site use other than current use. Given that future use of the site is unknown, all potential receptors and pathways should be investigated.

8. Page 32, end of 3rd paragraph – Comparisons to background, detection frequency, and bioavailability are not considerations when selecting COPCs. An exceedance of the screening level is the primary criteria for identifying COPCs for inclusion in the HHRA.

9. Page 55, Section 4.6.2, Soil Sampling Procedures – Please clarify the purpose of the soil samples. According to the draft Work Plan, the groundwater samples will be collected to confirm previous SI results; however, the soil samples will be collected to determine if detonation of MEC has resulted in deposition of explosive compounds in site soil. This section of the document does not clarify if 'detonation of MEC' refers to past disposal or demilitarization actions or for past detonations associated with range activity/testing.

10. Page 58, Surface Soil Methodology – The approach for locating soil samples is vague and inadequate. A more robust soil sample collection plan, with sampling rationale, should be implemented. Please provide a clarified discussion of the soil sampling plan and locations for sampling.

11. Appendix A - Figures A-9 and A-12 – soil sample locations (purple dots) should be identified as SI Soil Samples in the Legend.

12. Appendix D does not mention soil samples, only groundwater, in the objectives paragraph (last paragraph of Executive Summary), as well as in each site worksheet.

13. Appendix D - Section 10A.5 Receptors – Provided future site use is unknown, future residents should be included as potential receptors. This comment is also relevant for the other UXO sites covered by the draft Work Plan. Additionally, the future resident scenario is considered similar to the "unrestricted" access scenario. If the RI/FS fails to evaluate the unrestricted use scenario, the Navy will not be able to determine if long-term monitoring is required for the contaminants found at the site, but will default to having restricted access. There is also a disconnect between the receptors identified in Section 3.5.2 and those provided in Appendix D.

14. Appendix D - Section 11A.5 Develop the Analytical Approach (Step 5) – under the decision rules for the MC soil investigation
    - #2 – The November 2014 RSLs are to be used; not the November 2012.
    - #3 – As previously stated, a comparison to background is not appropriate within the risk screening step.

15. Appendix D - SAP Worksheet #15 – Reference Limits and Evaluation Table – The Project Action Limits based on RSLs must be updated using the most recent RSL tables (November 2014) pertaining to a THQ of 0.1.

If you have any questions, please feel free to call me at (215) 814-3357,

Sincerely,

Robert Thomson, P.E., REM
Office of Federal Facility Remediation (3HS11)

Cc: Curtis DeTore (MDE - Baltimore)
Travis Wray (NSWC-IH)