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LETTER AND U S EPA REGION III COMMENTS TO DRAFT FINAL SITE INSPECTION
REPORT SITES 4 AND 9 AREA OF CONCERN 3 (AOC3) NWS YORKTOWN CHEATHAM
ANNEX WILLIAMSBURG VA
5/13/2011
U S EPA REGION III

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
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Date: May 13, 2011

Ms. Krista Parra
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9742 Maryland Avenue, Bldg N-26
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Subject: *Draft Site Inspection Report Site 4, Site 9, and Area of Concern 3*; Naval Weapons Station Yorktown Cheatham Annex; Williamsburg, Virginia; March 2011

Dear Ms. Parra:

The U.S. Environmental Protection Agency (EPA) has reviewed the above referenced document and would like to submit the following comments.

1. Executive Summary: The size (in terms of acreage) of each study area should be provided.
2. Page 4-15: For Site 9, an expanded SI and interim removal action are recommended. Per the report, following the removal action, confirmatory samples will be collected. In this regard, prior to initiating removal activities, clean-up goals should be provided to EPA for review.
3. Section 1.3.7 on page 1-8 states that the "southern bald eagle (listed on the federal threatened/ state endangered lists) is known to nest nearby at WPNSTA Yorktown." A similar statement appears on page 1-9. The bald eagle was delisted in 2007, and is no longer a federally listed species. This information should be updated.
4. Page 2-6 and 2-7, Sections 2.5 and 2.6: The first bullet indicates that two culverts under D Street could not be located and the original two surface water sample and two sediment sample locations were reduced to one. Because of the variability within sediment and the fact that these culverts existed at some time, the original two sample locations need to be collected and analyzed. Finally, Figure 2-8 does not show the single sample midway between the two culverts.
5. Section 2.8 describes the decontamination procedure for all sampling equipment. The procedure described on page 2-8 includes a methanol rinse to remove residual organic chemicals, but does not include a nitric acid rinse to remove residual inorganic chemicals. This issue should be discussed since omitting a nitric acid rinse can result in cross contamination among samples.

6. Table 2-4: The field parameter salinity is given in percent (PCT). Salinity is usually given in parts per thousand (ppt). Please indicate why the salinity data was listed as NA (not available/not analyzed).
7. Section 3.2.4 on page 3-13 states that when evaluating ecological risk to soil at Site 4, “the initial COPCs [chemicals of potential concern] were then evaluated using more realistic assumptions to select refined COPCs.” A similar approach was performed for terrestrial food chain receptors discussed on page 3-15. There are concerns about evaluating ecological risk using more realistic exposure assumptions as part of the SI since the assessment is based on a limited dataset. It is premature to refine exposure assumptions to less conservative levels and eliminate chemicals from further consideration at this point in the risk assessment process. Even when performing a less conservative analysis as part of a RI, it is inappropriate to eliminate chemicals from further consideration using means, as this underestimates risk from hotspots. This comment also applies to Site 9 discussed in Section 4 and AOC 3 discussed in Section 5.
8. Page 3-14, Section 3.2.4 (Ecological Risk Evaluation): There are a number of places where mean HQs are calculated for soil, subsurface soil, sediment, subsurface sediment, and surface water. In all of these cases, the maximum HQs are more relevant because invertebrates and plants have limited mobility and because of the limited dataset. This comment applies to Site 4, Site 9, and AOC3. This will likely increase the number of “refined COPCs” at each site/AOC.
9. Section 3.3 provides a release assessment decision analysis for Site 4. Step 3 on page 19 states that a RI is recommended to characterize the nature and extent of contamination within soil, groundwater, surface water, and sediment and to quantify the risk associated with all media. BTAG agrees with this recommendation, however, the full list of detected chemicals must be evaluated in the RI, not the refined list that was developed as part of the less conservative analysis. In addition, the RI will need to evaluate remedial alternatives to mitigate potential risk to ecological receptors and not just human health. This same comment also applies to AOC 3.
10. Table 3-7 (Site 4 Surface Soil): It is not clear why VOCs are not potentially attributable to a CERCLA release when Steps 2a and 2b are N/A and further investigation is required. In addition, VOCs in subsurface soil are listed as potentially attributable to a CERCLA release.
11. Table 3-7 (Site 4 Subsurface Soil): There appear to be inconsistencies in this table. Under pesticides, the concentrations of endosulfan II exceed background and ecological criteria; yet, the results are “acceptable Eco risk value.” Other pesticides with concentrations greater than background and Eco conclude “exceeds acceptable Eco risk value.” This inconsistency needs to be corrected. The same concern applies to selenium and zinc.
12. Figure 3-2: It is not clear why the conceptual site model cutview does not have potential impacts to Youth Pond and the York River as identified on Figure 3-1 CSM Plan View.

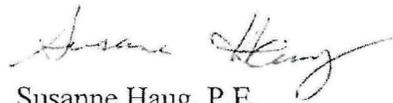
13. Page 4-3: The text identifies the 1995 BTAG screening level for Aroclor-1260 as 100 ppb ($\mu\text{g}/\text{kg}$). The Eco risk screening value listed on Figure 4-3 for Aroclor-1260 is 8,000 $\mu\text{g}/\text{kg}$ (ppb). This inconsistency needs to be corrected.
14. Page 4-15 (Step 3): The text for Step 3 needs to consistently identify all the COPC identified in Step 2b for ecological receptors.
15. Section 4.3 provides a release assessment decision analysis for Site 9. The section states that “due to the small size of the site and extent of contamination, an expanded SI and interim removal action is recommended to further characterize and mitigate copper in surface soil, and PAHs [polycyclic aromatic hydrocarbons], Aroclor-1260, and arsenic, chromium, mercury, and selenium in sediment.” BTAG agrees with this recommendation, however, an explanation should be provided stating when downgradient areas in Youth Pond and the York River will be investigated. Additional assessment of the migration pathway for runoff on the other side of the road from the site will be needed as it is unclear to where water in this ditch flows.
16. Table 4-6: There are some concentrations of chemicals (dieldrin, endosulfan II, and nickel in surface soil) exceeding both background and ecological values yet the conclusion is “acceptable Eco risk value.” This is inconsistent with the conclusion for endosulfan sulfate and copper where concentrations exceed background and ecological values and the conclusion is exceeds acceptable ecological risk value. The rest of this table, and all others, will need to be checked/corrected for inconsistencies.
17. Page 5-2, Section 5.2.3: The text states “...to determine the lateral and horizontal extent of waste.” This should be changed to vertical and horizontal extent of waste.
18. Page 5-7 (Pesticides/Polychlorinated Biphenyls): The text states “In subsurface sediment, Aroclor-1254 exceeded the adjusted residential RSL (1,100 $\mu\text{g}/\text{kg}$) in one subsurface sample...at a concentration of 8,900 $\mu\text{g}/\text{kg}$. This concentration also exceeds the previously identified ecological screening value of 59.8 $\mu\text{g}/\text{kg}$ for Aroclor-1254. This needs to be clarified in the text.
19. Section B.4 on page B-16 of Appendix B states that PAHs were highly elevated at two locations, one near the surface debris pile and the other adjacent to a building. The section further states that risks at the building location are likely to be minimal due to the small size of the impacted area and the low quality habitat present. The conclusion of a small size is not supported by the data shown in Figure 5-3. The closest downgradient sample is over 200 feet away. Therefore, the extent of this PAH hot spot is unknown. In addition, this area is potentially an ongoing source of PAHs to the upstream tributary and pond. The extent of this hot spot should be further characterized as part of the RI.
20. Section B.4 on page B-17 states that PCBs are not likely related to known Site 4 or AOC 3 source areas. This statement is misleading. PCBs are likely related to activities at Site

9, which is upgradient of the upstream pond. Contaminants found in the upstream pond could be from any of the three sites being investigated. This issue should be clarified.

21. Table B-3 presents the screening values used to screen freshwater sediment for potential ecological risk. Values from several different sources are presented. Region III BTAG has developed a list of screening values that should be used to screen freshwater sediment. These values are available at <http://www.epa.gov/reg3hwmd/risk/eco/btag/sbv/fwsed/screenbench.htm>. Other values can be used, per the BTAG FAQs, if one is not available from this list. This comment also applies to freshwater screening values shown in Table B-2.
22. Pages 3-5 and 3-6 state that PCE was detected in groundwater upgradient of the site. The PCE source must be found. This could be the leading edge of a larger plume.

If you have any questions, please call me at (215) 814-3394.

Sincerely,



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NPL/BRAC Federal Facilities Branch

Cc: Wade Smith (VaDEQ, Richmond)