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COMMONWEALTH of VIRGINIA

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November 6, 2000

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Attn.: Mr. Bob Schirmer, P.E.
Code 1822

RE: Draft Final Site Inspection Report
Site 4 and AOC 1
Naval Weapons Station Yorktown, Cheatham Annex Site
September 2000

Dear Mr. Schirmer:

Thank you for the opportunity to review and comment on the above referenced document. Our comments are listed below.

1. The RBC concentration for mercury in tables 4-7, 4-9, 4-11, 4-13, 4-15, and 4-19 is incorrect. The correct value is 7.8 mg/kg, not 7,821 mg/kg. This does not affect any of the analysis; however it should be corrected in the document.

2. Page 4-12, Top of the page – The argument that bis(2-ethylhexyl)phtalate and di-n-octylpthalate are laboratory artifacts is not supported by the trip and rinsate blank analyses. Please modify this section accordingly.

3. Page 4-15, last two sentences in the *surface water* section – Please provide copies of the field notes or laboratory notes describing the turbid appearance of the surface water samples in order to support these statements. If it is not possible to

provide support for the theory that sediment was entrained in the surface water samples, please remove these statements.

4. For AOC-1, use of ten times the tap water RBC value is not appropriate since Jones Pond is a drinking water supply. The appropriate screening values should be the tap water RBCs and the Virginia Water Quality Standards (VWQS) for drinking water supplies, using the lowest concentration where the two do not agree. Please modify all tables, calculations, and text accordingly.

5. A background study has not been performed at CAX. Neither has it been established that the background data for WPNSTA is acceptable for background comparisons at CAX. Until background concentrations have been established and agreed to by both EPA and VDEQ, please remove all reference to background concentrations in the document(s).

6. It is noted that the SVOC reporting limits for samples 4-HA03-02, 4HA04-01, 4-HA05-01, and 4HA06-01 is unusually high. Please describe the samples and provide an explanation as to why this occurred. It would also be helpful if a description of the samples (tar-like, black soil, tan soil, leaf mold, sandy, etc.) and their proximity to drums, concrete, tar piles, etc were provided. This would help to put the sample results in some perspective.

7. Page 5-7, second paragraph – This paragraph implies that Arochlor 1260 was kept as a COPC because it was detected at a concentration less than the residential RBC. I do not disagree that Arochlor 1260 should be kept as a COPC; however the reasoning would be that due to the small number of samples and low mobility of PCBs in highly organic soils (leaf mulch) the source may be a significant "hot spot" and not have been identified. PCBs should remain a COPC until data determining the nature and extent of contamination has confirmed its presence or lack thereof.

8. Section 5.4.3 – The 95% UCL does not appear to have been used, see section 5.7.2, in this report. It would not be appropriate to do as the samples collected are not representative of the same portion of the site, e.g., one groundwater well.

9. Sections 5.5.1 through 5.5.2.3 – A HI of anything over 1 is not within the acceptable range, and a total ILCR greater than 1 X 10-6 is only acceptable under specific well defined circumstances where thorough knowledge of the nature and extent of the contamination has been, identified and a high level of confidence exists as to the actual risk at the site. For this level of screening and sampling, the maximum allowable risk should be 1 X 10-6.

10. Sections 5.5.1.1, 5.5.2.1, 5.5.2.2 – Supporting documentation of background iron levels in soil *at this site* has not been provided in this document and therefore reference *suggesting* that the levels are within background should be deleted from this section.

11. Section 5.2.1 – Dermal absorption and particulate inhalation / ingestion pathways should be considered as complete pathways, though they are not included in the screening level risk assessment where concentrations are compared to RBCs. As more than a screening level risk assessment was performed, these pathways should be included. Also, the future construction worker scenario should be evaluated. This is not the same as the industrial worker scenario. At this point these changes do not appear to be necessary as the COPCs have been identified by screening the maximum concentrations against the RBCs; and even the less conservative risk analyses performed in the report indicate that unacceptable risks may be present at both sites and that additional work is indicated. Of course, these scenarios will need to be addressed during *the* RI level human health risk assessment.

12. Tables *5-6* through 5-10 do not appear to be relevant to the discussions in the text as the *95%* UCL values were not utilized in the calculation of risk nor for the screening processes.

13. The widespread presence of PAHs suggests that burning may have taken place. Is there any evidence, historically or otherwise that would suggest a source for the PAHs at Site 4?

14. Page 6-2 fourth bullet – Carcinogenic risks for each individual medium were not within acceptable ranges as they exceeded 1 X10-6.

15. A discussion of the sources of the PCB and arsenic contamination would also be appropriate to include in the conclusions section for Site 4.

16. Page 6-2 second bullet – Carcinogenic risks for each individual medium were not within acceptable ranges as they exceeded 1 X10-6.

17. Site 4 recommendations fail to address potential fish contamination in the pond and determination of the extent of PCB contamination surrounding the area.

18. The need to address the removal/burial of the debris in the vicinity of AOC1 exists, however, additional sampling needs to be performed in order to further classify risk and the extent of contamination at the site. Locations of potential contaminant

sources, drums, debris piles, etc, should be clearly marked so that they could be identified for future "hot spot" sampling should it be required. It is anticipated that additional surface and subsurface as well as groundwater sampling may be indicated at AOC1.

19. Additional surface water samples should be obtained to confirm or refute the assumptions made regarding presence of sediments in the surface water causing the high contaminant concentrations reported.

20. Sources for the low detected level of PCBs should be investigated.

If you have any questions or require clarification on any of the above comments, please contact me at the numbers below. I'm sorry that I will not be able to make it to next weeks RAB meeting. If any new issues arise, please let me know.

Very truly,

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