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DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1510 GILBERT ST
NORFOLK, VA 23511-2899

TELEPHONE NO

(757) 322-4587
IN REPLY REFER TO:
5090
18221:RMJ:cag

NOV 26 1999

Commonwealth of Virginia
Department of Environmental Quality
Attn: Mr. Devlin M. Harris
629 East Main Street
Richmond, Virginia 23219

Re: Final RI Report For Site 22, Camp Allen Salvage
Yard, Naval Station Norfolk, Norfolk, Virginia

Dear Mr. Harris:

One copy of the *Final Remedial Investigation/Risk Assessment Report for Camp Allen Salvage Yard, Naval Station Norfolk*, dated November 1999 have been forwarded to you under separate cover. Responses to VDEQ comments on the previous submittal are attached and have been incorporated into the current document.

It is the Navy's intention that this is a final document and no further revisions are necessary. If you disagree with this assessment, or if additional information is required, please contact the Remedial Project Manager, Mr. Randy Jackson, at (757) 322-4758.

Sincerely,

R. M. JACKSON, P.E.
Remedial Project Manager
Installation Restoration Section
(North)
Environmental Programs Branch
Environmental Division
By direction of the Commander

Enclosure

Re: Final RI Report For Site 22, Camp Allen Salvage
Yard, Naval Station Norfolk, Norfolk, Virginia

Copy to:

CNRMA Little Creek (Ms. Diane Bailey, Regional Engineer,
Code 930)

EPA Region III (Mr. Harry Harbold, 3HW50)

Administrative Record File (Naval Base, Norfolk)

Baker Environmental Inc., Virginia Beach Office

(Mr. Don Joiner)

**Remedial Investigation/Risk Assessment Report
For Camp Allen Salvage Yard
Naval Station Norfolk**

Summary of Response to Comments on Draft RI/RA

The Draft RI/RA Report for the Camp Allen Salvage Yard (CASV) was submitted for review on April 26, 1999. The following comments were the only comments received from either USEPA and VA DEQ. The Final RI/RA included revisions based on these comments.

The following comments on Section 7.0 of the Draft RI/RA were provided by Ms. Pat McMurray, VADEQ during a conference call on June 29, 1999. The comments and responses are summarized below:

1. Comment: Page 7-7, First Paragraph – It is stated that an evaluation of essential nutrients (i.e., calcium, magnesium, potassium, and sodium) will not be performed in the HHRA. This is not consistent with the Naval Base Norfolk Partnership Human Health Risk Assessment Consensus Agreement #6.A.5.

Response: The evaluation of essential nutrients was performed in accordance with Consensus Agreement #6.A.5.

2. Comment: Page 7-8, Second Paragraph – It is stated that “Residential COC screening values are presented and used as a secondary criterion for the selection of sediment COPCs (secondary to the more conservative sediment screening values, which are discussed in the next paragraph).”

Response: The statement was revised to explain that the value used for the selection of sediment COPCs is actually the Residential COC screening value multiplied by a factor of 10.

3. Comment: Page 7-9, Second Paragraph – Again it is stated that the essential nutrients will not be evaluated in this risk assessment.

Response: The evaluation of essential nutrients was performed in accordance with Consensus Agreement #6.A.5. Toxicity criteria were calculated based on RDA values obtained from the FDA.

4. Comment: Page 7-10, Second Full Paragraph – The reference (VSWCB, 1992) should be updated to reflect the most current version which was revised in December 1997.

Response: The reference was revised to reflect the most recent update.

5. Comment: Page 7-10, Third Paragraph – The final sentence contains a reference (USEPA, 1991b) which should be updated to reflect the revisions made in 1998.

Response: The reference was revised to reflect the most recent update.

6. Comment: Page 7-13, Fifth Paragraph – The statement was made that pesticides and PCBs were not detected in groundwater. There was concern that the detection limits were not able to pick up some concentrations of these compounds.

Response: The Uncertainties Section of the risk assessment addresses the precision and accuracy of the analytical methods used.

7. Comment: Page 7-16, Second Paragraph – The statement assumes a normal distribution. A W-test should be performed to determine if the data is in fact normally distributed.

Response: A W-test was included.

8. Comment: Page 7-18, First Paragraph – Concern was expressed over the evaluation of soil under asphalt or concrete with respect to the future plan of land use.

Response: It was agreed that any future remedy would likely require the removal of the asphalt and concrete along with the addition of topsoil. In order to conservatively address the material that currently exists under the asphalt and concrete, subsurface soil was evaluated under the Future Residential exposure scenario.

9. Comment: Page 7-22, Second Bullet – Exposure pathways are summarized for each potential receptor. Inhalation of volatiles via groundwater should be added as a potential pathway for Future Construction/Utility Workers.

Response: Volatiles in groundwater were not retained as COPCs and were therefore not evaluated through the inhalation pathway for Future Construction/Utility Workers.

10. Comment: Page 7-24, Second Full Paragraph (page 7-25 in the Final RI/RA) – The equation shown to calculate a 95% UCL assumes a normal distribution of the data. A W-test should be included to demonstrate the distribution of the data

Response: A W-test was included.

11. Comment: Page 7-24, First Bullet (page 7-25 in Final RI/RA) – Was the organic data that had been qualified with a “B” considered a nondetect in the calculation of mean concentrations?

Response: The data was reviewed and all “B” qualified organic data were considered nondetect.

12. Comment: Page 7-28, (page 7-29 in Final RI/RA) Second Equation – The equation listed for the calculation of the dermally absorbed dose through contact with Surface Water or Groundwater should be changed to the non-steady state equation.

Response: The equations used in calculation of the dermally absorbed dose associated with contact of surface water and groundwater were changed to include non-steady state equations. On August 19, 1999, an additional discussion as held with Pat McMurray regarding the non-steady-state equations presented in USEPA's Dermal Exposure Assessment Guidance (1992). Two concerns were discussed: 1) the overly-conservative dermal results that are usually derived from the use of the non-steady-state equations, and 2) the fact that the units do not work out properly when using those equations. On the latter point, Ms. McMurray and Pat Moroney of Baker worked through the equations and agreed that the units that should be derived, $\text{mg}/\text{cm}^2\text{-event}$, could not be obtained. Rather, the equations result in units of $\text{mg}/\text{cm}^2\text{-event}^{1/2}$. However, both agreed that the non-steady-state approach should be incorporated into the risk assessment and that the units problem will be addressed in the Uncertainties Section. Ms. McMurray stated that it was her understanding that USEPA's Dermal Guidance is currently undergoing revisions that may possibly result in a change to the non-steady-state equations.

13. Comment: Page 7-31 (page 7-32 in Final RI/RA), Bulleted Items – The values listed for different compound classes were not used to adjust toxicity. They should be removed from this section.

Response: The bulleted items on page 7-32 of the Final RI/RA should have been removed as they were not used to adjust toxicity.

14. Mr. Devlin Harris, VADEQ, provided the following comment during the October 5, 1999 Partnering Meeting: The summary of human health risks presented in the Draft FS for the CASY Northern Area (Baker, September, 1999), notes that the health risks from antimony and iron are not additive since these metals target different organs. Mr. Harris noted that this statement may not be accurate.

Response: The uncertainties analysis presented in Section 7.6.5 of the Final RI/RA has been revised to address the affects of antimony and iron.