03.01-05/16/94-01198

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

May 16, 1994

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

4WD-FFB

Ms. Linda Berry
Department of the Navy - Atlantic Division
Naval Facilities Engineering Command
Code 1823
Norfolk, Virginia 23511-6287

SUBJ: MCB Camp Lejeune - OU1
Draft Final Remedial Investigation Report
Draft Final Feasibility Study

Dear Ms. Berry:

The Environmental Protection Agency (EPA) has partially completed its review of the above listed documents. Comments are enclosed, with the exception of the Human Health comments on the Draft Final Feasibility Study.

If there are any questions or comments, please call me at (404) 347-3016 or voice mail (404) 347-3555, x-6459.

Sincerely,

Gena D. Townsend
Senior Project Manager

Enclosure

cc: Mr. Neal Paul, MCB Camp Lejeune
Mr. Patrick Watters, NCDEHNR

Comments
Draft Remedial Investigation

1. **Section 6.2.2.1, page 6-9, paragraphs 1 & 2.**
For elimination of chemicals from the COPC list, the criterion of "infrequent detection" is not satisfied when the frequency of detection is 1/9. 1/9 is greater than 5% detection rate, a guideline suggested in RAGS (EPA Risk Assessment Guidance for Superfund, 1989). Comparison of the maximum concentration with a screening value based on 10^{-6} risk/0.1 HQ in a residential scenario may allow some of these detected chemicals to be eliminated.

2. **Section 6.2.2.1, page 6-10, paragraph 6.**
Identification of soil samples from Site 78 as "biased" does not justify completely omitting them from considerations of potential risks. This reviewer did discuss this issue with the document preparer, but did not agree with completely ignoring this site area for the purposes of risk assessment. The analytical data from this site area must be evaluated somehow so that a decision can be made regarding remediation.

3. **Section 6.3.2.6, page 6-22.**
No justification is provided for the assumption that "ingestion of fish by....future fisher persons....is unlikely". Are fish of edible size present in the surface water? Please include this exposure scenario or add adequate rationale.

4. **Sections 6.3.4.7 (page 6-34), 6.3.4.8 (page 6-35); Table 6-26.**
Section 6.3.4.8 states that "surface water bodies associated with OU No. 1 are not sufficient in size to allow for swimming". However section 6.3.4.7 and Table 6-26 state assumptions based on swimming exposure. If the water in question is truly not swimmable, the assumption of ingestion of the water should be eliminated (or vastly reduced) from the scenario.

5. **Tables 6-12, 6-13.**
AWQC values appear to be for effects on saltwater organisms (although this is not explained in the table). It would be more logical to have AWQC values based on human health protection in this section of this document and to have any values based on aquatic organism protection in the ecological risk assessment section of this document.
The "C" in AWQC means criteria, not standards (footnote #2).

6. **Table 6-30, Toxicity Factors.**
Phenanthrene - use pyrene as a surrogate (RfD of 3E-2 mg/kg-d).

Cadmium - 5E-4 mg/kg-d (water RfD) should be used for evaluation of cadmium in water; 1E-3 mg/kg-d (dietary RfD) should be used for evaluation of cadmium in soil/sediment.

Manganese - 5E-3 mg/kg-d (water RfD) should be used for evaluation of manganese in water; 1.4E-1 mg/kg-d (dietary RfD) should be used for evaluation of manganese in soil/sediment.

7. **Appendix L.8.**
In the tables showing the data statistical summary for volatiles, the log-normal upper 95% confidence intervals are lower than the arithmetic means. This is inconsistent with the meaning of the upper confidence interval. Please address this discrepancy.

8. **Appendix M (no page numbers).**
On the spreadsheets for inhalation exposure and noncarcinogenic risks, the RfC must be converted to internal dose (mg/kg-d), since the exposure has been calculated as internal dose.

For calculation of all risks from dermal exposure, the toxicity values (RfDs, SFs) must first be converted to an absorbed dose value before the risk can determined (RAGS-Vol.I, Part A, Appendix A).

Draft Final Feasibility Study

1. There are seven areas on concern (AOC) listed in this document for soils, however, only four are discussed. Please explain this discrepancy.