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State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

DEHNR

August 6, 1996

Commander, Atlantic Division
Naval Facilities Engineering Command
Code 1823
Attention: MCB Camp Lejeune, RPM
Ms. Katherine Landman
Norfolk, Virginia 23511-6287

Commanding General
Attention: AC/S, EMD/IRD
Marine Corps Base
PSC Box 20004
Camp Lejeune, NC 28542-0004

RE: Draft Feasibility Study for Operable Unit 6 (Site 36), MCB Camp Lejeune.

Dear Ms. Landman:

The referenced document has been received and reviewed by the North Carolina Superfund Section. Our comments are attached. Please call me at (919) 733-2801 if you have any questions about this.

Sincerely,

Patrick Watters

Patrick Watters
Environmental Engineer
Superfund Section

Attachment

cc: Gena Townsend, US EPA Region IV
Neal Paul, MCB Camp Lejeune
Diane Rossi, DEHNR - Wilmington Regional Office

North Carolina Superfund Comments
Draft Feasibility Study
Operable Unit 6 (Site 36) MCB Camp Lejeune

1. Soil Contamination

The Feasibility Study concludes that the only media of concern is the groundwater. The State believes that there are significant concerns that need to be addressed with regard to the surface and subsurface soil contamination at Site 36. Specific points are as follows:

Surface Soils

- The risk assessment does not include a future residential scenario for surface soil. The levels of subsurface contaminants are much lower (except for the inorganics), therefore we are concerned that the calculated risk is understated. This comment was made on the RI Report however the response to comments did not address any of the risk assessment comments. This aspect of the risk assessment will need to be performed and shown to be acceptable before the State can accept the conclusion that soils are not a media of concern at Site 36.
- The surface soil contains a large number of contaminants of concern that are above the Region III residential RBCs as listed in Tables 6-1 and 6-2 of the RI Report which suggests that the surface soil should be considered a media of concern.

Subsurface Soils

- The magnitude and number of contaminants above the Region III residential RBCs in the subsurface soil samples as noted in Tables 6-3 and 6-4 of the RI Report suggest that the subsurface soil needs to be a considered a media of concern.

- The State is also concerned with the contribution that the soils at Site 36 may be having on the ecological risks and on other environmental media (i.e. sediment).

- There are concerns about inconsistencies in some of the rationale used in the FS to explain the soils contamination. These concerns will be specifically noted in later comments.

2. Page ES-1, Remedial Action Objectives

This section states that the VOCs in the groundwater do not generate an unacceptable human health risk. Because the VOCs in question are above the State 2L groundwater standards, they by regulatory definition generate an unacceptable human health risk.

3. Page ES-2, Remedial Action Objectives

The conclusions regarding the lead and iron in the Site 36 soils are inconsistent and contradictory. Specific points are as follows:

- This section claims that the lead concentrations are a function of the presence of acidic soils and that the lead does not appear to be mobile. If the lead concentrations are a product of the acidic soils then the lead would tend to be more mobile and therefore show up in the groundwater.
- There is a discernable pattern to the frequency of the lead levels exceeding site background. The surface soil lead values exceeded the site background in 24 out of 48 samples. The subsurface soil lead values exceeded site background in 32 out of 50 samples.
- The State agrees that iron naturally occurs at elevated levels in the Camp Lejeune soil and groundwater however the levels at Site 36 are much higher than that typically seen at the base. The surface soil iron exceeded site background in 29 out of 52 samples. The surface soil iron also exceeded the Region III RBC in 39 out of 52 samples. The subsurface iron exceeded site background in 18 out of 51 samples and exceeded the Region III RBC in 40 out of 51 samples.
- This section states that there is no historical record of lead or iron use at Site 36. The RI Scoping Investigation conducted in 1994 identified several containers and steel drums on site some of which contained a weathered paint product containing lead and 2-butanone. Given this and the elevated lead levels in the soils, it is reasonable to suspect that lead based paint was disposed at Site 36 at least on one occasion and possibly more. Also, since Site 36 was a general dumping area it is reasonable to suspect that most anything could have been disposed there.

4. <u>Page 1-9, Section 1.4.1</u>

The State does not agree with several conclusions in this section regarding the levels of soil contamination.
- The State does not agree with the conclusion that the VOCs in the soils are not indicative of long term site disposal operations. The State does agree that the levels of VOCs in the soils are low, however given that VOCs are by definition volatile, we would not expect to see any VOCs in the surface soils. The fact that they are at all present in the surface soils with greater concentration in the subsurface soils and with VOCs above the 2L groundwater standards makes it reasonable to suspect buried sources (i.e. slowly decaying drums). This is further supported by the facts that containers were discovered on the site with VOCs and that VOCs were detected in 9 out of 17 soil samples collected from the container areas. Also, the section on site history (1.2.2) states that solvents were disposed of at this site.

- The levels of pesticides at Site 36 are far greater than that typically seen at other sites at the base except for those at Site 2 (OU 5) which was a pesticide storage area. These levels are in some instances several orders of magnitude above Region III RBC values. Given also that this area was a general dump, it is reasonable to suspect that pesticide disposal did occur.

- The State does not agree with the conclusion regarding the PCBs found at the site. The PCBs are at levels above those used for industrial cleanup (i.e. 10 PPM). This section states that the levels of PCBs are not indicative of disposal operations however the site history section (1.2.2) states that disposal of waste oils did occur at Site 36.

6. Page 1-14, Section 1.4.4.4
The last sentence under Unnamed Tributary appears to be contradictory. The metals in the sediment are not the result of disposal operations but may be attributable to buried or surficial metallic debris. If metallic debris is either on the surface or buried at Site 36 then it was part of a disposal operation. Also, if the inorganics are not mobile as was indicated earlier, please explain how they are migrating to the sediment.

7. Page 1-15, Section 1.5.1
The levels of inorganics found in fish and crab samples are such that unacceptable calculated risk values are generated. If the inorganics are not mobile (see earlier comments) please explain how these contaminants are migrating into the fish and crabs near Site 36.

8. Page 1-15, Section 1.5.2
As noted in comment # 1, please explain why the future residents scenario did not include surface soil as part of the risk assessment. Also, we agree that iron is an essential nutrient however it has not been shown how typical nutrient levels for iron compare with the iron contamination levels seen at Site 36.

9. Page 1-16, Section 1.6.1
Based on the elevated lead in the soils, it does not seem appropriate to conclude that the lead in the sediment is necessarily an anomaly.

Also, the RI report did not have a site maps showing the inorganics results for the surface and subsurface soil samples. In retrospect, this would be a very useful map to have included in the RI report. The State would like to see these inorganics results displayed on a site map.

10. Table 1.1
The column for Standard and Base Background are both labelled NA for soils data. It would be helpful to put the Region III RBCs and the base background values in the table as a point of comparison.

11. Table 2-2
This table does not include the NC State groundwater standard for lead (15ug/L).