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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 3, 1995

Commander, Atlantic Division
Naval Facilities Engineering Command
Code 1823-2
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 Final Remedial Investigation Report for Operable Unit 14 (Site 69), 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
Bruce Reed, DEHNR - Wilmington Regional Office

North Carolina Superfund Comments
Draft Remedial Investigation Report
Operable Unit 14 (Site 69), MCB Camp Lejeune

1. Metals contamination in groundwater

The RI report (especially the Executive Summary, Sections 4.5.2, 4.6 and 8.0) does not adequately explain the metals contamination seen in the groundwater. Figure 4-9 shows that iron, lead, manganese, chromium, and zinc are above North Carolina groundwater standards. The rationale used to explain the metals contamination is not acceptable because of the following.

- Filtered ("dissolved") sample results are used to show that the concentrations are below the 2L standards. As stated in comment # 6 below, the State considers filtered groundwater sample data as invalid.

- The executive summary indicates that there is no pattern or plume associated with the metals contamination. This site is described in Section 2.0 as having discreet trenches and disposal points rather than one open dumping area. As a result, it is not surprising that with the number of samples taken, that we only have "hit or miss" results without establishing a plume or pattern.

- It was noted that the geophysical survey indicated the presence of buried metallic objects at site 69.

- The use of base-wide background values to distinguish between contamination due to site operations versus naturally occurring elements or compounds. (see comment # 4)

- There is a reference (Section 4.5.2) to one Total Suspended Solids (TSS) sample result as support of the conclusion that the total metals result is due to suspended solids. Using TSS samples could provide some support for this conclusion however having only one TSS sample result is not necessarily conclusive evidence for an entire site.

2. Page ES-7, Human Health Risk Assessment (HRA)

While parts of the Executive Summary provide some acknowledgment that there are contaminant levels above the NC groundwater standards, the last paragraph of this section is misleading with regard to the conclusion that "...there are no current risks posed to any population from this site." If there are contaminants above the NC groundwater standards, which there are, the associated risks at the site should be considered as unacceptable. The statement in question in the HRA should be modified accordingly.

3. Figures 2-1, 2-2, and 2-3
The notations on these figures are illegible. Also, the scale noted is not compatible with that indicated for the other figures. As a result, the sampling locations shown on other figures could not be cross checked against the features indicated on the photographs.

4. Page 4-3, Section 4.2.2
The description of the background samples is insufficient to allow use of this data as a means to distinguish between contamination due to site operations versus naturally occurring elements or compounds. The following information will need to be provided before the State can consider this as legitimate background data to be used as indicated in this RI Report.

- Indicate specifically where, when and how (i.e. sampling method) each background sample (i.e. soil, groundwater, sediment, and surface water) was taken and how it was analyzed. This should include maps showing the background sampling locations relative to any nearby suspected or known contamination sources, active maintenance/industrial areas, groundwater flow directions, etc.

The State did review Appendix M (Draft Evaluation of Metals in Groundwater) with regard to background data. This report includes maps for Sites 2 and 78 but does not have maps showing the other sample locations.

5. Tables for Section 4.0
See comment number 4 for those tables using base background data.

6. Section 4.4.2
This section and associated tables makes repeated reference to "dissolved metals" groundwater data. If this is actually filtered data, then this needs to be acknowledged each time the term "dissolved metals" is used. Also, as has been noted on many occasions, the State considers filtered groundwater data as invalid and therefore not useful for any comparative purposes. The State highly recommends that filtered data results not be incorporated in future RI Reports.

7. Figure 4-10
There are no deep groundwater data points west of wells 69-GW15IW and 69-GW02DW. These wells have contaminants above the 2L standards and we have not determined the westerly extent of the deep aquifer contamination. There will need to be at least one additional deep well west of wells 15IW and 02DW before the State considers the deep aquifer adequately characterized.

8. Page 6-7, Section 6.2.2.1
The second paragraph indicates that the prevalence of di-n-butylphthalate is less than 5% when compared to the QA/QC blanks. ALL 23 detections of di-n-butylphthalate shown in Table 4-6 are above 10 times the QA/QC blank (20 ug/L). This compound therefore cannot be eliminated from the surface soil COPC list based on the 5% rule.

9. Page 6-8, Section 6.2.2
The first paragraph under "Subsurface Soil" indicates that acetone was detected above the QA/QC sample value (80 ug/L) in only 1 of 10 samples. Sections 4.2 and 6.2.1.8 indicates that the QA/QC blank sample for acetone was 190 ug/L instead of 80 ug/L. Section 4.4.1.2 states that 7 of the acetone concentrations were greater than 10 times that seen in the QA/QC blank samples which is consistent with the values given in Table 4-8. As a result, acetone cannot be eliminated as a COPC based on the 5 % frequency of detection criterion even when the higher QA/QC blank value is used.

This section also indicates that the methylene chloride in the QA/QC blanks was 80ug/L. Sections 4.2 and 6.2.1.8 state that the methylene chloride in the QA/QC blanks is 19J ug/L. Please clear up this discrepancy.

This section also eliminates di-n-butylphthalate as a subsurface soil COPC based on the 5 % frequency of detection criterion. Table 4-8 shows 5 out of 10 samples greater than 10 times the QA/QC blank value (20ug/L).

10. Tables 6-2 and 6-4
These tables include a column labelled as "Twice the Average Base-Specific Maximum Concentration". This is confusing. Is it an average or is it a maximum value? Assuming that the value is 2 times the average, what is the basis for using this as an indicator of significant contamination. See also the comments regarding the use of base "background" values.

11. Page 8-1, Conclusions
The conclusions regarding metals contamination, deep well contamination, dissolved samples, background samples, and groundwater risk statements may need to be modified to address the State's comments.