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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

May 13, 1996

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

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

RE: Draft Remedial Investigation/Feasibility Study Project Plans for Operable Unit 16, Sites 89 and 93, MCB Camp Lejeune, Jacksonville, NC

Dear Ms. Landman:

The NC Superfund Section has completed its review of the above referenced documents. Our comments are attached. Please call me at (919) 733-2801 x282 if you have any questions about this.

Sincerely,

Patrick Watters

Patrick Watters
Environmental Engineer
NC Superfund Section

Attachment
cc: Neal Paul, MCB Camp Lejeune
Gena Townsend, US EPA Region IV
Bruce Parris, NCDEHNR Wilmington Regional Office

North Carolina Superfund Section Comments
Remedial Investigation/Feasibility Study Project Plans
Operable Unit 16 (Sites 89 and 93)

We understand that the scope of the investigation for the Camp Geiger area has changed to the point that the Project Plans for OU 16 may require extensive revisions. As a result, some of the detailed site specific comments (i.e. 11, 12, 15, and 16) may not be completely applicable. Please keep us informed on the specifics of the change in scope for the Camp Geiger investigation and how this will affect the work for Operable Unit 16.

1. Page 2-9, Section 2.1.11
This section indicates that there are 14 water supply wells within a one mile radius of sites 89 and 93. The RI report should include a comprehensive summary of the supply wells to include:
- Status (active or closed)
- Reason for well closure (i.e. production or contamination)
- Recent analytical results
- If these wells are immediately downgradient of these sites then groundwater samples should be taken.

2. Page 2-10, Section 2.2.2
The third paragraph states that Edwards creek is classified as SC. The water quality regulations (15A NCAC 2B) classify Edwards Creek as HQW (High Quality Waters) and NSW (Nutrient Sensitive Waters) in addition to SC. The water quality standards relevant to Edwards Creek are therefore taken from sections .0208, .0220, .0223, and .0224 of 15A NCAC 2B. Note also that contaminant limits not specifically listed in these sections are determined either by the EPA 304(a) table or by calculations using the methodology in section .0208 of the 2B regulations.

3. Page 2-11, Section 2.2.5.1
The description of the subsurface soil sample noted that the results for oil & grease was 1,400,000 ug/Kg whereas the results for halogenated solvents were below detection limits. Because the oil & grease results were so high, there could have been significant masking of other constituents which caused the non-detects for the halogenated solvents. This point should be noted in the text and probably as a footnote to Table 2-3.

4. Page 2-12, Section 2.2.5.3
The next to last paragraph states that;"The former waste oil underground storage tank at site 89 is also situated in this general vicinity." It is not clear if this UST is different than UST STC-868 discussed earlier in the RI/FS Project Plan. If this is a different UST it should be noted in the text and on the appropriate figure in Section 2.

5. Page 2-13, Section 2.3.2
Please see comment number 2 concerning the classification of Edwards Creek.

6. Page 2-13, Section 2.3.3
The first paragraph noted that five monitoring wells were installed around a 550 gallon UST at site 93 however there was no indication of what contaminants were detected in the groundwater.

7. Page 2-14, Section 2.3.5.1
The second bullet under subsurface soil noted that oil and grease results were as high as 8,126,000 ug/Kg with low concentrations of halogenated solvents. As noted in comment # 3, it appears that masking could have had an affect on sample results and therefore it may be appropriate to make that notation in the text.

8. Table 2-6
Since the Federal and State groundwater standards were included in Table 2-5, it may be appropriate to include the State surface water standards for the contaminants listed in Table 2-6.

Contaminant	Surface Water Standard **
Vinyl Chloride	525 ug/L
1,1-Dichloroethene	3.2 ug/L
1,2-Dichloroethene	7.0 ug/L
Trichloroethene	92.4 ug/L
1,1,2-Trichloroethane	42.0 ug/L
1,1,2,2-Tetrachloroethane	10.8 ug/L

** Based on Edwards Creek classification

9. Table 2-7
See the previous comments on masking due to high oil & grease results.

10. Table 2-9
Naphthalene and 1,2-Dichlorobenzene are listed as volatiles and semivolatiles. Also, the NC groundwater standard for Naphthalene is 21 ug/L.

11. Page 4-2, Section 4.3.1
Based on previous groundwater sampling results, there will be a need to install deep monitoring wells to assess the impact on the deeper portions of the Castle Hayne aquifer at Site 89.

Also, all existing wells at Site 89 should be sampled and analyzed.

12. Page 4-4, Section 4.3.2
As noted in the previous comment, deep monitoring wells will be needed to assess the impact on the deeper portions of the Castle Hayne aquifer at Site 93.

Also, all existing wells at Site 93 should be sampled and analyzed.

13. Page 4-5, Section 4.3.3
All drill cuttings and excavated soils must be containerized and sampled to determine the appropriate disposition. Visual observations and HNu readings are not acceptable methods to use to make this determination.

14. Table 4-2
This table does not include any surface water remediation goals. Table 2-6 lists a few contaminants above the NC Surface Water standards.

15. Figure 4-2
The well spacing at Site 89 appears to be much too far away from the area of interest to provide any realistic data about any groundwater impacts. The closest well (89-MW07) is over 200 feet to the west of the UST area. Three other wells are over 400 feet away and one well (89-MW08) is over 800 feet away. The State feels the well spacing needs to be reduced drastically in order to yield representative results for this site. Temporary wells may also be used in addition to the permanent wells.

Also, this figure shows a creek branching off of Edwards Creek to the south yet there are no surface water/sediment samples shown. This creek should be sampled to determine what contribution it is having on Edwards Creek.

16. Figure 4-4
As noted for Site 89, the well spacing at Site 93 appears to be too great to provide any representative results for this site. All wells are over 300 feet away from the area of interest. This spacing should be reduced considerably. Temporary wells may also be used in addition to the permanent wells.

Sampling and Analysis Plan

17. General
Since these sites do not have a extensive amount of analytical data for pesticides and PCBs, the State feels that all samples for all media should be analyzed for PCBs and pesticides to provide a complete and thorough assessment of site conditions.