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**AUG 24 1994**

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North Carolina Department of Environment,  
Health, and Natural Resources  
Attn: Mr. Patrick Watters  
P. O. Box 27687  
Raleigh, North Carolina 27611

Re: Draft Final Remedial Investigation Report (RI), Operable  
Unit No. 1 (Sites 21, 24, 78) MCB, Camp Lejeune,  
North Carolina

Dear Mr. Watters:

Attached are the responses to NCDEHNR comments on the above  
referenced document dated June 10, 1994. Any questions  
concerning these responses should be directed to Ms. Linda Berry  
at (804) 322-4793.

Sincerely,

L. A. BOUCHER, P.E.  
Head  
Installation Restoration Section  
(South)  
Environmental Programs Branch  
Environmental Quality Division  
By direction of the Commander

Attachment

Copy to: (w/encl)  
EPA Region IV (Ms. Gena Townsend)  
MCB Camp Lejeune (Mr. Neal Paul)  
(w/o encl)  
Baker Environmental (Mr. Ray Wattras, Ms. Tammi Halapin)

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**Response to Comments Submitted by the NC DEHNR on the  
Draft Final RI Report for Sites 21, 24, and 78  
(Operable Unit No. 1),  
MCB, Camp Lejeune, North Carolina**

**Comment Letter by Mr. Patrick Watters dated June 10, 1994**

**General Comments**

1. The support information regarding the "base-specific background" concentrations will be submitted under separate cover. Baker is currently compiling this information.
2. At this time, no other investigations are planned for the deeper groundwater at OU No. 1. The deeper groundwater will be routinely monitored under the proposed remediation plan for OU No. 1. The results of the monitoring will be reviewed every 5 years. If the conditions of the deeper groundwater are deteriorating, other actions may be implemented at that time. All of the previous groundwater data has indicated that the shallow portion of the aquifer is the source of contamination. The proposed remedy for OU No. 1 will remediate this source, thereby reducing the amount of contaminants that can impact the deeper groundwater. It is also important to note that the contaminant levels in the deeper groundwater at the western boundary of OU No. 1 is significantly less than at the plume areas within Site 78. Therefore, the extent of the contaminated groundwater can be approximated based on available data.

Intermediate and deep groundwater wells were not deemed necessary for Site 24. Metals and pesticides are not very mobile contaminants and therefore are not expected to have a significant impact on deeper groundwater. In addition, the total metals concentrations detected in the Site 24 shallow wells were similar to the concentrations detected in the shallow wells from Site 78 (which has intermediate and deep wells). The intermediate and deep groundwater results from Site 78 were not impacted by either metals (except for manganese) or pesticides. Therefore, it is not expected that the deeper groundwater at an adjacent site (Site 24) would be impacted from these contaminants. The results from the proposed monitoring plan for OU No. 1 will be evaluated every 5 years to determine if the groundwater conditions are deteriorating. Additional actions may be implemented at that time.

**Specific Comments**

3. Figure 1-6 will be corrected; buildings 1102 and 1115 will not be shown as areas of concern.

4. Appendix A will be included with the NC DEHNR's copies of the Final RI Report.
5. The text on page 1-30 will be corrected to indicate that there were 34 wells installed during the Characterization Step. This included 27 shallow, 4 intermediate, and 3 deep wells. A listing of the wells will be added to the text. Figure 1-5 is correct as shown. The additional wells identified on the figure were installed during a later investigation. This will be noted in the text on page 1-30.
6. The vegetation which restricted the geophysical survey at Site 24 were mostly trees and large bushes and, therefore, would have required clearing even in the winter months. Although the survey was restricted in some areas, most of the site was studied either by geophysical methods or during the soil and test pit investigations.

The areas which exhibited a conductivity greater than 10 mmhos/m are indicated a Figure A3-1 in Appendix C and the conductivity profiles are provided on Figure A3-3 in Appendix C. Additional copies of these two figures will be provided to the State.

7. The text is correct on pages 2-37 and 2-38 in reference to the number of AOCs at Site 78. The five AOCs are Buildings 903, 1502, 1601 (combined with Building 1608), 1300, and 1103. Three of the AOCs on page 2-37 were described together (Buildings 903, 1502, and 1601) because they were sites suspected of having USTs.
8. The second paragraph on page 4-45 will be removed from the text.
9. The last part of sentence which states "but they are most likely related to industrial processes or buried metal debris" will be deleted from the text since it is based on speculation. Specific sources of the metals are unknown because of the numerous military and industrial activities in the area.
10. The text will be revised in Section 8.0 (page 8-8) to state that storm water runoff from Site 78 or Holcomb Boulevard may be a contributing factor to the surface water contamination in Beaver Dam Creek. This statement was revised because the runoff from the access road is less significant compared to the runoff associated with Holcomb Boulevard or Site 78. Furthermore, usage of the access road is restricted to limited traffic.
11. This sentence will be revised in the text to read, "Accordingly, only the extent of these contaminants will be discussed for this site."

12. The reference to battery disposal will be deleted from the text since it is based on speculation.
13. The sentence will be revised to state that the BTEX concentration levels decrease downgradient (south) from well 78GW22-1. This conclusion is evident by the non-detectable levels of BTEX in wells 78GW18, 78GW17-1, 78GW16, and 78GW21 which are situated downgradient from well 78GW22-1 and the fuel farm.
14. Acetone was eliminated as a COPC since it was detected in only 1 of 9 samples. In addition, based on site history, acetone was not expected to be a COPC. To avoid confusion, the third sentence on page 6-9 was deleted.
15. The sentence will be rewritten for clarity. The sentence will now read, "Vinyl chloride was retained because of its toxicity even though it was detected infrequently (1 in 51 samples).
16. Text will be added to page 6-49 to clarify that no specific risk values were calculated for Site 78 since groundwater was the only media of concern. The potential risks associated with groundwater were evaluated for the entire operable unit and not on a site specific basis.
17. The groundwater standard for lead will be corrected on Table 6-11.
18. To correct the duplication of Table 6-16, remove the second copy from the Draft Final RI Report. The two tables are the same with the exception of regrouping some of the contaminants.
19. The sentence in the first paragraph on page 8-4 will be revised to read, "The site groundwater contamination appears to be migrating both vertically and horizontally."
20. The last sentence of Section 8.1.1.3 on page 8-7 has been deleted. In addition, the second to last sentence has been revised to read, "The groundwater contaminants appear to be migrating both vertically and horizontally."

P 075 318 731

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