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(804) 322-4793

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MAY 12 1994

CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

Re: Draft Final Feasibility Study Report (FS), and Proposed Remedial Action Plan (PRAP), Operable Unit No. 1 (Sites 21, 24, 78), MCB Camp Lejeune, North Carolina

Dear Mr. Watters:

Attached please find responses to NCDEHNR comments on the above referenced documents dated April 7, 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/attachment)
EPA Region IV (Ms. Gena Townsend)
MCB Camp Lejeune (Mr. Neal Paul)
(w/o attachment)
Baker Environmental (Mr. Ray Wattras, Ms. Tammi Halapin)

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Response to Comments Submitted by NC DEHNR on Draft Feasibility Study and Proposed Remedial Action Plan for Sites 21, 24, and 78 (Operable Unit No. 1), MCB, Camp Lejeune, North Carolina

Comment Letter by Mr. Patrick Watters dated April 7, 1994

General comment is noted that a review of the ROD will be delayed until the Draft Final RI,FS, and PRAP are received.

FEASIBILITY STUDY - Comments No. 1 Through No. 13

1. Page ES-11, Table ES-1

   Table ES-1 was reviewed. We were undable to determine which COCs exceeding NC groundwater standards are not included in the table and we request that these be specified so they can be included. Those COCs with toxicological significance are included on Table ES-1.

2. Page ES-13, Table ES-2

   Table ES-1 has been eliminated from the Executive Summary to avoid confusion. Table ES-2 (which is now Table ES-1) has been retitled to indicate that the table includes the COCs which exceeded the remediation levels. Again, it would be helpful if the State specified which COCs that exceeded NC groundwater standards are not included on the table.

3. Page ES-18, RAA No. 3 and RAA No. 4

   The primary basis and rationale for making the claim that the contaminants in the deeper portion of the aquifer will be reduced in time is that the source of the contamination which is the shallow groundwater will be remediated. Therefore, the migration of the contamination to the deeper portion of the aquifer will be mitigated. In addition, the COCs are VOCs which can be passively remediated through processes such as naturally degradation and dispersion. The RAAs include a 5 year evaluation which will determine (through monitoring) if the quality of the deeper portions of the aquifer are deteriorating. This evaluation will be based on real data and not hypothetical models.

4. Page 1-29, Section 1.2.5.1

   Surface water COCs above NC surface water standards are not addressed in the FS because: 1) the streams receive constant stormwater runoff from the industrial area which can contain the COCs (i.e., a potential continuous source), and 2) several other surface water bodies within MCB Camp Lejeune have similar contaminant levels. Therefore, remediation of Cogdels Creek or Beaver Dam Creek does not appear to be

practicable.

5. Page 2-1, Section 2.1

The text in the FS (page 2-1) states that although contaminants were present in both surface water and sediments, neither media will be directly remediated since the resultant action may create a greater risk to the environment. In addition, both surface waters receive stormwater runoff from the HPIA, making remediation impractical.

6. Page 2-8, Table 2-2

The groundwater COCs listed on Table 2-2 now match the groundwater COCs listed on Table 2-1. For the second part of the comment, it would be helpful if the State specified which COCs that exceeded NC groundwater standards are not included on the table.

7. Page 2-16, Section 2.3.1.3

It is not clear which NC Solid and Hazardous Waste regulations citations should be considered as part of the action specific ARAR list. Please identify which regulations are applicable.

8. Page 2-32, Table 2-14

Chlordane was not determined to be a COC for groundwater in the risk assessment conducted in the RI, therefore, it was not included on Table 2-14 (or any other groundwater-related tables). Chlordane was included as a soil COC.

9. Page 2-40, Table 2-19

Table 2-19 identifies the most limiting remedial goal options (RGOs) (i.e., the remediation levels for all of the COCs). It would be helpful if the State specified which COCs are not included on this table that exceed the standards. Please note that Table 2-20 lists the COCs that exceed their corresponding remediation levels.

10. Sections 4.0 and 5.0

A waiver will be requested to not remediate portions of the shallow aquifer on the basis that 1) there is no apparent source of the groundwater contamination; 2) the level of contamination is low; 3) the extent of contamination is limited (in the case of organic contamination); 4) the inorganic levels are elevated in shallow groundwater throughout MCB Camp Lejeune; 5) the inorganic levels in shallow groundwater do not identify any "pattern" or discernable plume; and 6) there is no current health or

ecological risk associated with these AOCs which are not being addressed in the FS. The basis for not remediating the intermediate and deep portions of the Castle Hayne aquifer is related to the criterion in which remedial action would cause greater environmental damage and risk. Specifically, pumping groundwater from the intermediate and/or deep groundwater will likely influence the migration of VOCs from the shallow flow system. The level of VOC contamination is the shallow flow system is two to three orders of magnitude higher than the VOC levels in the intermediate and deep flow systems.

11 & 12. Page 4-9, Section 4.2.1.3 and Page 4-19, Section 4.2.1.4

The primary basis and rationale for making the claim that the contaminants in the deeper portion of the aquifer will be reduced in time is that the source of the contamination which is the shallow groundwater will be remediated. Therefore, the migration of the contamination to the deeper portion of the aquifer will be mitigated. In addition, the COCs are VOCs which can be passively remediated through processes such as naturally degradation and dispersion. The RAAs include a 5 year evaluation which will determine (through monitoring) if the quality of the deeper portions of the aquifer are deteriorating. This evaluation will be based on real data and not hypothetical model.

13. Page 5-15, Section 5.1.1.5

The alternative was costed on a basis of 5 years since air sparging is a technology that is usually implemented on a short-term basis. The actual time frame to meet the remediation levels is unknown. This will be clarified in the report.

PROPOSED REMEDIAL ACTION PLAN - Comments No. 14 Through No. 16

14. Page 17

Disagree with the comment, the proposed alternative will remediate the contaminated groundwater (shallow) and will remediate the soil areas of concern. Therefore, this will reduce the potential for migration of contamination. The deeper portion of the aquifer will not be actively remediated, but it will be monitored to determine the effectiveness of the remedy.

15. Page 31

A reference containing details of the actions being conducted at Site 22 will be added to the PRAP.

16. Page 39

The comment is noted that it is the State's policy to consider on-site treatment as the most desired alternative before off-site treatment options. Note that the volume of soil requiring remediation and the contaminant levels within the soil makes the consideration of on-site treatment not feasible based on cost and implementability. The maximum detected level of PCBs was 4.6 ppm; this is below the criteria for a TSCA waste.