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MCB CAMP LEJEUNE
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Baker

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April 29, 1994

Commander
Atlantic Division
Naval Facilities Engineering Command
1510 Gilbert Street (Building N-26)
Norfolk, Virginia 23511-2699

Attn: Ms. Linda Berry, P.E.
Code 1823

Re: Navy CLEAN, District III
Contract Task Order (CTO) 0177
Draft Final FS Report, PRAP, and ROD
Operable Unit No. 1 (Sites 21, 24, and 78)
MCB, Camp Lejeune, North Carolina

Dear Ms. Berry:

Baker Environmental, Inc. (Baker) is pleased to submit for your review two copies of the Draft Final Feasibility Study (FS), Proposed Remedial Action Plan (PRAP), and Record of Decision (ROD) for Operable Unit (OU) No. 1 -Sites 21, 24, and 78. Two copies of these documents have also been forwarded to Mr. Neal Paul at MCB, Camp Lejeune. Please note that the reduced number of copies is per your verbal request. Copies of these documents have also been submitted to the United States Environmental Protection Agency (USEPA), the North Carolina Department of Environmental Health and Natural Resources (NC DEHNR), and the Technical Review Committee (TRC) members as indicated on the attached transmittal letters. Note that Ms. Gena Townsend has requested that the USEPA receive five copies of the reports for review.

The Draft Final versions of these documents reflect comments from the following:

- FS Report - USEPA Region IV (March 2 and 18, 1994), NC DEHNR (March 23, 1994), and MCB, Camp Lejeune (March 8, 1994)
- PRAP - USEPA Region IV (March 17, 1994) and NC DEHNR (March 23, 1994)
- ROD - USEPA Region IV (March 23, 1994) and MCB, Camp Lejeune (February 24, 1994)

Responses to these comments are included as attachments to this letter.

Submittal of the FS Report and PRAP meets a revised deliverable date. The original deliverable date was April 25, 1994. Written approval, however, was received by Baker from you and the Contracts Specialist (Ms. Beth Hacic) on April 12, 1994, modifying the

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submittal date of the documents to May 2, 1994. Submittal of the Draft Final ROD meets the original planned submittal date.

Please note that in order to finalize the FS and PRAP before the public meeting on May 24, 1994, Baker will need to have all comments submitted on or before May 10, 1994. The comments on the ROD are due on or before June 1, 1994.

If you have any questions regarding these submittals, please contact me at (412) 269-2023 or Mr. Raymond Wattras (Activity Coordinator) at (412) 269-2016.

Sincerely,

BAKER ENVIRONMENTAL, INC.

Tammi A. Halapin
Project Manager

TAH/mp

cc: Ms. Beth Hacic, Code 02231 (letter only)
Ms. Lee Anne Rapp, Code 183 (letter only)
Mr. Neal Paul, MCB, Camp Lejeune (two copies)

ATTACHMENT A

Response to Comments Submitted by USEPA Region IV on the Draft Feasibility Study Report for Sites 21, 24, and 78 (Operable Unit No. 1), MCB, Camp Lejeune, North Carolina

Comment Letter by Ms. Gena D. Townsend dated March 2, 1994

1.0 RESPONSE TO GENERAL COMMENTS 1 THROUGH 5 -

1. The FS will be corrected to indicate that HP-601 is an inactive well and HP-603 is an active well.

   Further evaluation of the historical analytical data from the supply wells will be conducted and incorporated into the design phase of OU No. 1.

2. Supply well HP-603 is an active well. The influence of the capture zone will be evaluated during the design phase of OU No. 1 since it may affect the groundwater extraction system proposed in the FS.

3. Solidification/stabilization was reconsidered as a potential technology/process option. No changes were made in the FS (i.e., the technology was retained during the preliminary screening, but was not retained following the process option evaluation). The reasons the technology was eliminated from further evaluation were: 1) limited amount of soil to be treated; and 2) site-specific land use constraints for disposal (utilities, roads, railroad, etc.) of treated material.

4. Agree with comment. No change to the report is necessary.

5. The typographical error on page 5-27 will be corrected.

ATTACHMENT B

Response to Comments Submitted by USEPA Region IV on the Draft Feasibility Study Report for Sites 21, 24, and 78 (Operable Unit No. 1), MCB, Camp Lejeune, North Carolina

Comment Letter by Ms. Gena D. Townsend dated March 18, 1994

Comment is noted that a detailed review with respect to the human health evaluation will not be performed until the Draft RI is revised based on USEPA's comments and the appropriate changes are incorporated into the FS.

ATTACHMENT C

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. It would be helpful if the State specified which COCs that exceeded NC groundwater standards are not included on the table. 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 offsite 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.

ATTACHMENT D

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

Comment Letter by Mr. Neal Paul dated March 8, 1994

1. NCP on the list of Acronyms and Abbreviations will be corrected.

2. NCP on page ES-1 will be corrected.

ATTACHMENT E

Response to Comments Submitted by USEPA Region IV on the Proposed Remedial Action Plan for Sites 21, 24, and 78 (Operable Unit No. 1), MCB, Camp Lejeune, North Carolina

Comment Letter by Ms. Gena Townsend dated March 17, 1994

1.0 GENERAL COMMENTS

1. The PRAP will indicate that remediation of the shallow aquifer, which may be the source of inorganic contamination in the intermediate zone, will mitigate migration of contaminants in the deeper zone of the Castle Hayne aquifer. In addition, a waiver may be appropriate for not remediation the intermediate or deep zones on the basis that further environmental risks or damage would result. This risk would result from the vertical migration of much higher levels in the shallow groundwater via the cone of influence generated by deeper pumping wells.

2. The discussion of contaminant levels within each portion of the aquifer has been clarified.

2.0 SPECIFIC COMMENTS

1. Page 33 - Second Paragraph

   The basis of this statement is that remediation of the source (i.e., shallow groundwater) will result in mitigating vertical contamination of the deeper zones. As the migration is mitigated, contaminant levels in the deeper zones are expected to decrease.

ATTACHMENT F

Response to Comments Submitted by USEPA Region IV on the Draft Record of Decision for Sites 21, 24, and 78 (Operable Unit No. 1), MCB, Camp Lejeune, North Carolina

Comment Letter by Ms. Gena Townsend dated March 23, 1994

1. Page 12 - First Paragraph

   The location of the IRA documents for public review has been added to the text.

2. Page 12 - Second Paragraph - Second Bullet

   The remediation of Cogdels Creek would be impractical. Cogdels Creek receives storm water runoff from the HPIA. This runoff will continue to impact sediment quality after remediation is completed.

3. Page 19

   Text has been revised based on the RI/FS comments.

4. Page 48 - Fourth Paragraph

   The PCB levels detected in the soil were low enough that the soil would not have to be regulated under TSCA. The soil would be disposed in a landfill permitted to accept low levels (less than 50 ppm of PCBs). The pesticide-contaminated soil is not characteristically hazardous, nor is the soil a listed hazardous waste.

5. Page 54 - ARARs

   The ARARs discussion was expanded as per the comment.

6. Page 54 - ARAR Waivers

   The reasoning for waivers was revised to indicate the reason for the waivers were based on engineering practicability.

ATTACHMENT G

Response to Comments Submitted by MCB Camp Lejeune on the Draft Record of Decision for Sites 21, 24, and 78 (Operable Unit No. 1), MCB, Camp Lejeune, North Carolina

Comment Letter by Mr. Walt Haven dated February 24, 1994

1. Page viii

   Last two sentences will be revised as per the marked comment; the sentences will be removed and replaced with "5 year review will be necessary for this remedial action to ensure complete groundwater remediation."