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DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
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01 NOV 1995

United States Environmental Protection Agency,
Region IV
Attn: Ms. Gena Townsend
Waste Management Division
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: MCB Camp Lejeune
Response to Comments
Draft RI Report
Operable Unit 8 (Site 16)

Dear Ms. Townsend:

Enclosed are Navy/Marine Corps responses to EPA Region IV comments on the above-referenced document. As previously discussed, these responses to comments are being submitted in lieu of a Draft Final RI report for Site 16. Changes reflecting these comments will be included in the Final RI report.

In order to meet the submittal date of December 27, 1995 for the Final RI report, please provide any comments on the enclosed responses by November 27, 1995. Please direct your comments and any questions to Ms. Katherine Landman at (804) 322-4818.

Sincerely,

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

Enclosures

Copy to:
NC DEHNR (Mr. Patrick Watters)
MCB Camp Lejeune (Mr. Neal Paul)
Baker Environmental, Inc. (Mr. Matt Bartman)
Activity Admin Record File

Responses to Comments Submitted by United States Environmental Protection Agency on the Draft Remedial Investigation Report for CTO - 0274 Operable Unit No. 8 (Site 16) MCB, Camp Lejeune, North Carolina

Comment Letter by Ms. Gena D. Townsend dated September 7, 1995

Responses to General Comments

1. All field activities and procedures were discussed in the Field Sampling and Analysis Plan. Concurrence of the activities and procedures was made by USEPA Region IV. Additionally, the site was a former burn dump pit and not a landfill, consequently the application of geophysics on the area would not assist in determining the site boundary.

2. Since this was the initial groundwater investigation wells were positioned to maximize the probability of detecting contaminants and additionally, groundwater flow direction.

3. A preliminary scoping meeting was held between LANTDIV, USEPA and NC DEHNR to finalize the project plans for the Remedial Investigation (RI) at Site 16. This meeting was held to discuss existing information (i.e., historical and analytical) and proposed RI activities. At the meeting, based on the past usage of the site, it was decided to investigate only the shallow aquifer at this time to determine effects of the burn dump on the groundwater. It was understood that based on the information and data obtained from this investigation it may be necessary to perform additional monitoring well installations to further investigate the shallow aquifer and possibly the deeper aquifer (i.e., Castle Hayne). As no groundwater contamination was detected in the surficial aquifer, no further groundwater investigations are recommended.

4. At the time of the field investigation, groundwater monitoring wells were installed so that approximately two feet of well screen was installed above the groundwater depth as determined from moisture content observed in collected soil samples. The noted groundwater levels are slightly above the top of the well screen, and purging procedures prior to sampling would have provided inflow of shallow groundwater and potential NAPLs. Site 16 was not a landfill but a burn dump; therefore, no deep burial of materials occurred and contamination of groundwater would generally be from the ground surface downward. Based on the analytical results from the soil and groundwater analyses, no contamination was detected at the site. The existing monitoring wells provide the required monitoring capabilities to determine the presence or absence of contamination.

5. No general discernable patterns of concentrations was evident from the review of the analytical data for soils and groundwater. This data does not lend itself to isoconcentration maps, other than with a relatively narrow contour interval and few contour lines which would not allow a good representation of the horizontal distribution of compounds.

6. The variation in the pH values between the first and second rounds of groundwater sampling may be due to variations between pH meters from the same or different manufacturers. The variation could be due to probe conditions. The recorded values for the individual rounds are consistent. There is generally a decrease of approximately 0.6 between the two rounds. Wells installed in other areas of MCB, Camp Lejeune have exhibited similar pH values in the 4.5 to 6.0 for the shallow aquifer. The low pH values would not be a problem as the shallow aquifer is not used as a source of drinking water for the base.

7. The second paragraph of Section 4.5.3 will be revised to read the following:

"Arsenic was the only metal detected in surface water at Site 16 above State and/or Federal standards (refer to Figure 4-9). Due to the upgradient surface water location being non-detect for arsenic, the site may be the source of arsenic detected in Northeast Creek. Arsenic was detected in the surface soil one order of magnitude greater than base surface soil background levels. A specific source for the arsenic in the surface soil is unknown; however, arsenic is a component of some pesticides and the historic usage of pesticides at the base may contribute to the

elevated levels detected in the surface soil. Runoff from the open area of the burn dump at Site 16 could then transport the arsenic to Northeast Creek."

8. The last paragraph on page 4-14 (Section 4.6) will be revised to read as follows:

"Inorganics were detected in all media at Site 16. Metal concentrations were greater in site surface soil than in base background surface soil. No specific source has been identified for the elevated metal concentrations in the surface soil; however, it may be the result of the variety of materials burned at the site. Iron was detected in shallow groundwater above State and Federal standards. Iron has been shown to be a naturally occurring metal in shallow groundwater at MCB, Camp Lejeune. Concentrations of iron in shallow groundwater at Site 16 were two to three orders of magnitude less than at other sites at MCB, Camp Lejeune (refer to Appendix G)."

9. Section 5.2 will be updated to include descriptions of all transport pathways applicable to the site.

10. The text in section 5.2.4 will be revised to include an explanation of Table 5-2.

11. An additional conclusion will added to the text providing the necessary rationale for future recommendations at this site. The text will include describe if additional sampling, monitoring is required, if a feasibility study is required and for which media, or if remedial action is required.

12. It is not required that the conclusions presented in this section be referenced. The justifications for the conclusions are presented in the text of the report.

13. This comment will be taken under advisement. Region IV Sediment Screening Criteria will be used along with values published in Long and Morgan. Additionally for contaminants for which a Region IV Value has not been published the Long and Morgan value will be presented if available.

Responses to Specific Comments

1. The text of the Executive Summary will be corrected to indicted that there are five potable supply wells within a one-mile radius of the site.

2. The wood line, dirt roads and site boundary symbols will be added to the legend box with appropriate descriptions. These changes will be present in the Final report.

3. All field activities and procedures were discussed in the Field sampling and Analysis Plan. Concurrence of the activities and procedures was made by USEPA Region IV. Additionally, the site was a former burn dump and not a landfill, therefore, employing geophysics to delineate the site boundary would not be effective.

4. The addition of an explosive/oxygen meter (O_2/LEL) will be incorporated into this paragraph. The paragraph will read, Two air monitoring and field screening procedures were implemented during the drilling, and trenching activities for health and safety and initial contaminant monitoring. During drilling, ambient air monitoring in the vicinity of the borehole was performed with a PID to monitor for airborne contaminants. A Lower Explosive/Oxygen meter was also utilized to monitor the borehole during drilling operations. Samples (i.e., split spoon samples) were screened with a PID to measure for volatile organic vapor. Lastly, soils excavated during test pitting activities were screened with a PID.

5. The decontamination procedure utilized by Baker is similar to that of USEPA Region IV's with the following exceptions:

- Sampling equipment was rinsed with distilled water instead of tap water.
- Solvent (isopropyl alcohol) was only applied once to the sampling equipment, instead of twice. This was done due to the high probability of acetone contamination from the isopropyl alcohol. This

procedure reduces the risk of contaminating the environmental sample with artifacts not truly representative of the sample.

- Organic free water rinse was not conducted due to the associated costs of obtaining large amounts of this type of water.
- Sampling equipment was allowed to dry by either evaporation or baking. The latter was done when the ambient air temperature would not provide sufficient evaporation.

Additionally, several rinsate blanks were collected to verify decontamination procedures. The rinsate samples did not indicate noticeable levels of site or cleaning solvent contamination.

6. "CM" refers to community development. "CO" refers to commercial development. These acronyms will be added to Table 3-4 as footnotes. They will also be included in the LIST OF ACRONYMS AND ABBREVIATIONS located in the Table of Contents.

7. The symbols for the legend will be included on Figure 3-4.

8. The following will be included in the surface soil and subsurface soil discussions of Sections 4.4.1.1 and 4.4.1.2, respectively.

Surface Soil

Section 4.4.1.1, 1st paragraph - insert after the 4th sentence:

"Acetone was detected in background/control location 16-BB-SB01 at a concentration of 16 µg/kg, which is greater than the maximum concentration (14 µg/L) detected in QA/QC blanks. A source for the detected acetone is still believed to be laboratory and/or field procedures."

Section 4.4.1.1, 2nd paragraph - insert after the 5th sentence:

"Bis(2-ethylhexyl)phthalate was detected at location 16-BB-SB01 at a concentration of 70 µg/kg, which was greater than the maximum concentration in QA/QC blanks. Phthalate esters detected in the background and site surface soil may be from laboratory and field procedures, and equipment."

Section 4.4.1.1, 3rd paragraph - insert after the 3rd sentence:

"The pesticides 4,4'-DDE, 4,4'-DDD 4,4'-DDT and dieldrin were detected in background/control surface soil locations at Site 16. These pesticides were also detected in site surface soil samples. It does not seem unusual for pesticides to be detected in background areas of the base due to the historic use of pesticides at the base."

Subsurface Soil

Section 4.4.1.2, 1st paragraph - replace the last sentence with the following:

"Location 16-BB-SB01 exhibited an acetone concentration of 62NJ µg/kg, which is greater than the maximum concentration (14 µg/L) detected in QA/QC blanks. A source for the detected acetone is still laboratory and/or field procedures."

Section 4.4.1.2, 2nd paragraph - insert before the last sentence:

"Phthalate esters detected in the background and site surface soil are still believed to be from laboratory and field procedures and equipment."

The following text will be added to Section 4.6, 1st paragraph, after the 2nd sentence:

"PAH constituents detected in site surface and subsurface soils were not detected in background/control samples from the three background soil boring locations at Site 16. The presence of these constituents may be attributed to past site activities due to the absence of these constituents in the background/control samples, and to the treated poles and roofing shingles encountered in the trenches in the area of borings 16-BD-SB10 and 16-BD-SB08."

9. The Federal and State criteria and standards presented in Section 4 are for comparison purposes to define the nature and extent of contamination. The EPA Region III Risked-Based Concentration Table is used to determine the specific site health based risks in the risk assessment presented in Section 6. No discussion of the EPA Region III Risk-Based Concentrations are required in Section 4 due to the fact that they are risk specific which is covered in Section 6.

10. Phenol and naphthalene are two separate compounds. Table 4-5 (Groundwater, Round 1, VOCs) will be revised with the following information:

Phenol	NE	300	1J	4J	16-MW05-01	3/6	0	0	Central/Southeast
Naphthalene	NE	21	6J	6J	16-MW05-01	1/6	0	0	Central

The text in Section 4.4.2.1 presents the detections of phenol and naphthalene and states that they were detected below State and/or Federal standards.

11. The statement in Section 5.3.2 concerning the presence of PAHs in the soil will be deleted from the text.

12. The text in Section 5.2.4 concerning travel time of contaminants will be revised.

13. This comment will be clarified in the final RI report. Clarification will be presented to indicate if the habitats of the red-cockaded woodpecker and American alligator are included in all portions of OU No. 8.

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