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DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
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22 MAY 1996

CERTIFIED MAIL RETURN RECEIPT REQUESTED

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, Draft Remedial Investigation Report, Operable Unit 12 (Site 3)

Dear Ms. Townsend:

Enclosed please find Navy/Marine Corps responses to your comments on the subject document. We have not yet received comments on the Draft RI from your Risk Section. As agreed to following the submission of the Draft report, these comment responses are being submitted in lieu of a Draft Final RI report. Although we will hold submittal of the Final RI until all outstanding comments are received and addressed, your comments on these responses are requested no later than June 15, 1996. This will allow us to meet the next submittal date for the Final RI report of July 15, 1996.

The Navy/Marine Corps appreciates your continued involvement in this project. Please direct any questions or comments 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

Attachment

Re: MCB Camp Lejeune, Draft Remedial Investigation Report, Operable Unit 12 (Site 3)

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. 12 (Site 3) MCB, Camp Lejeune, North Carolina

Comment Letter by Ms. Gena D. Townsend dated April 4, 1996

Responses to General Comments

1. Section 3, Figure 3-1. The drainage ditches on the eastern and western sides of the site will be added to this figure.

2. Section 4.3, Page 4-5, Paragraph 3. Paragraph 3 will be rewritten to read as follows:

   "Mandatory chemical-specific criteria and/or standards for soils are not available for soils. There are tools which can be used to evaluate concentrations in soil. Risk-based concentrations (RBCs) for residential soil ingestion developed by USEPA (Region III) were used as a guidance criteria to evaluate soil concentrations. Soil Screening Levels (SSLs) were developed by the Office of Solid Waste and Emergency Response (OSWER) for the exposure to soil contaminants via migration to groundwater. The RBCs and SSLs were used as benchmarks for evaluating site investigation data and to assist in predicting single-contaminant health risks. These values were used in conjunction with other criteria in the selection of COPCs. Base-specific background concentrations were compiled to evaluate background levels of inorganic constituents in the surface and subsurface soil. Organic contaminants were not detected in the base-specific background samples. Therefore, it is likely that all organic contaminants detected in the surface and subsurface soil, within Site 3, are attributable to the practices which have or are currently taking place within the areas of concern."

   The following will be added after Risk Based Concentrations (Soil) on Page 4-5:

   "Soil Screening Levels (migration to groundwater) - SSLs are used for comparison purposes of organics and inorganics in soil. The concentrations correspond to levels below which further study or action would not be warranted under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The site screening levels were developed from standardized equations to model exposures to soil contaminants via ingestion, inhalation and migration to groundwater by OSWER (EPA/540/R-94/105). The use of SSLs allow analytical results for soil, for which there are no mandatory specific criteria and standards, to be compared to accepted values to determine the nature and extent of contamination."

3. Section 4.3, Page 4-5, Paragraph 5. The following reference will be added to the end of Paragraph 5:

   "The RBCs used in the evaluation of data for this report were from USEPA Region III Risk-Based Concentrations - October 20, 1995."

   The reference will also be added to Section 4.7 (References).

4. Section 4.4.2.2, Page 4-11, Paragraph 3. The paragraph states that the range of pH values was from 7.70 to 11.96 s.u., which, as shown in Table 4-16, was for three Castle Hayne groundwater monitoring wells (two intermediate and one deep). Wells 3-MW11IW (intermediate well - 85 ft. depth) and 3-MW02DW (deep well - 125 ft. depth) exhibited pH values above the range of Federal Secondary Drinking Water MCLs.

   The following will be added after the last sentence in Paragraph 3:

   "There is no indication of a problem with well construction as a source for the elevated pH values detected in the Castle Hayne monitoring wells. The depth of the wells is such that salt water intrusion is not a factor. Published information [Harned, et al (1989) and Cardinell, et al (1993)] states that salt

water intrusion has not been observed in the Castle Hayne except in the southern portion of the Base at a depth greater than 200 feet. There does not seem to be an apparent reason for the higher pH values observed in the Castle Hayne aquifer at Site 3."

5. Section 4.5.2.1, Page 4-15, Paragraph 5. The following text will be added to Paragraph 5, before the final sentence:

"No specific source for the detected benzene is known. The surrounding area is wooded with no known activities in the upgradient direction. The area around well 3-MW08 is cleared with only light brush and the detected benzene may be just a localized occurrence from past activities."

6. Section 4, Tables 4-14, 4-16, and 4-18. The text in Section 4 presenting and discussing the field parameter measurements for the surficial and Castle Hayne aquifers will be revised to indicate that a specific source for the generally low pH values in the shallow wells is unknown. The area around Site 3 is undeveloped with no current activities that would explain the observed pH values. The surficial soils in the Site 3 area is classified as the Baymeade fine sand. This soil is strongly to medium acidic throughout its profile. This may be contributing to the lower pH values observed in the surficial aquifer at the site. The limestone and shell fragments observed in the Castle Hayne aquifer may be contributing to the more basic pH values measured in the upper portions of the Castle Hayne.

7. A statement will be provided at the end of Sections 5.2.4 and 5.2.6 to discuss if the groundwater or soil is a pathway of concern for the contaminants at this site.

8. All of the COPCs in the surface soil are used in the terrestrial intake model. The exposure routes of the intake model are direct soil ingestion, ingestion of plants that uptake contaminants, and/or the ingestion of small mammals that uptake contaminants. The contaminant concentration in the above media are related to the concentration in the soil and the biotransfer factors. Therefore, even though some contaminants may not have a high potential to bioaccumulate, their potential impacts to the terrestrial receptors cannot be determined unless all the appropriate media are used in the uptake model. In section 7.8.1, however, all the COPCs (including the PAHs) in the surface soil also are compared to surface soil screening values that were developed to evaluate potential impacts to terrestrial flora and/or fauna (i.e., soil plants and invertebrates).

9. The source for the comment "a national average for a particular contaminant is not appropriate for Site 3" is not known and was not referenced in the report. The USEPA Region III surface soil screening values reportedly are based on toxicity data, not a national average. These values only are used when no toxicity data were available from the Oak Ridge National Laboratory. Neither the State of North Carolina or the USEPA Region IV have developed surface soil screening values that can be used to evaluate potential impacts to terrestrial flora and fauna.

Responses to Specific Comments

1. Section 4.4.2.1, Page 4-10, Paragraph 5, Sentence 7. The word "valves" will be changed to "values".

2. Section 4, Table 4-3. Table 4-3 will be revised with the maximum vanadium and zinc base background values presented in Table 4-1.

3. Section 4, Table 4-5. The zinc MCL will be changed to 5,000 μg/L and footnoted to indicate that this is a Secondary MCL.

4. Section 4, Tables 4-7 through 4-13 and 4-15. The noted tables are summaries of the analytical results. Parameters which were not detected in any samples are not listed. Additionally, some parameters may have been detected in only certain samples and not in others. Therefore, the non-detect designation, "ND", is used at those locations to complete the table. Due to the nature of potential contamination at Site 3, only limited analyses for certain parameters was conducted. As with the non-detects, locations in the summary tables where parameters do not apply are noted with the "NA", not analyzed, designation.

5. The text will be revised to indicate that Figure 7-2 presents the flowchart of potential exposure pathways and ecological receptors.

P 075 318 526

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