

03.01-04/21/95-01622



DEPARTMENT OF THE NAVY  
ATLANTIC DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
1510 GILBERT ST  
NORFOLK VA 23511-2699

TELEPHONE NO.

(804) 322-4818

IN REPLY REFER TO:

5090

18232:KHL:cag

21 APR 1995

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  
Response to EPA Region IV Comments  
Draft RI Report  
Operable Unit Number 10 (Site 35)

Dear Ms. Townsend:

Enclosed are Navy/Marine Corps responses to EPA Region IV comments on the above-referenced document. These responses address comments dated January 5, 1995 and February 28, 1995. The Draft Final version of the document (issued March 10, 1995) incorporates these comments.

Please direct any questions to Ms. Katherine Landman at (804) 322-4818.

Sincerely,

A handwritten signature in cursive script that reads "L. G. Saksvig".

L. G. SAKSVIG, P.E.  
Acting 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. Ray Wattras, Mr. Dan Bonk)  
Activity Admin Record File

**Response to Comments Submitted by USEPA Region IV (Ms. Gena D. Townsend) on the Draft RI for Operable Unit No. 10, MCB Camp Lejeune (Dated January 5, 1995)**

**GENERAL COMMENTS**

1. As per the comment, a statement was added to the conclusion indicating the pesticide contaminants were included in the risk assessment.
2. Baker can provide these forms for your review if necessary, however we do not include these forms normally due to the number of forms. These forms, if provided in the appendices, would increase the appendices by approximately 2 volumes. This is the reason for providing the summary tables.
3. References to the locations of the background data has been added to the report. Section 4.1.2, paragraph 1, lists the guidelines used for each media and the table or appendix in which each can be found.
4. The extent of groundwater contamination has been defined in the eastern and southeastern portions of the study area as defined by the results obtained from the samples collected from wells 35-MW-36A/B, 35-MW-35A/B and 35-MW-34A/B. However, the contamination was not defined to the northeast because Baker did not have permission to install and sample wells on the private property on the other side of Brinson Creek. Plans to install and sample three monitoring well clusters on the northeastern side of Brinson Creek to delineate the contamination are included in the proposed additional work at the site. These wells are expected to provide data to delineate the contamination on the northeast side of the site.
5. Additional wells completed in the Castle Hayne Aquifer will be proposed for the next phase of RI at Site 35.

**SPECIFIC COMMENTS**

1. As per the comment, the text has been modified to include a discussion of the type of fluid used for rotary drilling procedures.
2. See response to comment 1.
3. A reference was added to the text to identify which samples were collected for particular analyses. A list of all samples, the depths at which they were collected, and the parameters for which they were analyzed is included in Appendix I which is referenced in the text.
4. As per the comment, the text was revised to indicate the minimum thickness of the sand filter pack and the bentonite seal installed during construction of the wells.
5. Baker concurs that Teflon-coated stainless steel leaders should have been used for purging and sampling purposes at the site. However, due to the high levels of contamination observed in the samples collected from the wells, the procedures used by Baker did not likely impact the results. Baker will implement the use of Teflon-coated stainless steel leaders during the next phase of work at the site.
6. In Section 2.1.4.3, the first sentence was modified to read "Surface water/sediment samples were analyzed for TCL volatiles, semivolatiles, pesticides, PCBs and TAL metals." an

additional sentence has been added that reads, "The 0 to 6 inch sediment sample was analyzed for TOC and particle size distribution." The addition of the second sentence should clarify any discrepancies between sections 2.1.4 and 2.1.4.3.

7. A sentence was added to Section 2.2 to indicate that the decontamination procedures outlined in the Final Sampling and Analysis Plan (SAP) were modified as outlined in the section.
8. Section 5.2.1 clearly states that "A sodium bentonite seal at least 24-inch thick, unless shallow groundwater conditions are encountered, will be placed....". The only wells which did not have at least 24-inches of a bentonite seal were the shallow wells. Therefore the thicknesses of sodium bentonite are in compliance with the Final SAP.
9. As per the comment, the figure has been corrected.
10. The figure has been changed to indicate at which depth the Castle Hayne Aquifer was encountered at the site.
11. See response to general comment 3.
12. The text was modified as per the comment.
13. As per the comment, the figure has been corrected.

**Response to Comments Submitted by USEPA Region IV (Ms. Gena D. Townsend) on the Draft RI for Operable Unit No. 10, MCB Camp Lejeune (Dated February 28, 1995)**

1. Noncarcinogenic toxicity-based RBCs based on a hazard quotient of 0.1 have been used throughout the baseline risk assessment for the purpose of selecting COPCs.
2. All references to these chemicals being detected at frequencies less than 5% have been removed.
3. The ingestion rate and exposure time for surface water used in this risk assessment are more conservative than those presented in this comment. There are no carcinogenic or noncarcinogenic risk to the receptors from surface water exposure using these exposure parameters, therefore, no change has been made.
4. A statement that the fish chemical concentrations are based on analyzed fillets has been added to Section 6.3.4.11 and Table 6-21.
5. Sections 6.5.1.1 and 6.7 have been revised to address the potential risks from fish ingestion.
6. The remedial goal options are included in the Feasibility Study (FS) therefore they are not provided in the Baseline Risk Assessment.
7. The groundwater data summary Table 6-5, has been revised per this comment. References have been updated accordingly.
8. Surface water data summary tables have been revised per this comment. Ambient Water Quality Criteria are no longer referred to as "Standards" in the footnote. This comment identifies the 12/92 EPA Water Management Division Criteria Chart as the applicable reference; however, the January 26, 1995 EPA Region IV WQS Criteria Chart has been used instead, as it is the most recently updated EPA criteria table.
9. Sediment data is compared to sediment background data. This information has been added to Table 6-7. Region III risk-based concentrations for residential soil are based on different exposure parameters than sediment exposure and therefore will not be used for selection of COPCs in the sediment.
10. Table 6-9 has been revised to include all chemicals retained as COPCs in all media. Cadmium, cobalt, copper, nickel, selenium, and zinc exceeded two times the average background levels, therefore, Section 6.2.2.1 has been revised to state this.
11. Section 6.3.4.3 states that the IR for children was derived from a child conducting light ( $0.8 \text{ m}^3/\text{hr}$ ) to moderate ( $2.0 \text{ m}^3/\text{hr}$ ) activity for 8 hours per day.
12. All inhalation reference doses are in units of  $\text{mg}/\text{kg}\text{-d}$ , all text and tables have been revised to indicate this. An RfD value for methyl tertiary butyl ether has been added to Table 6-22. The RfD of  $3\text{E-}04 \text{ mg}/\text{kg}\text{-d}$  and RfC of  $6\text{E-}03 \text{ mg}/\text{m}^3$  for benzene has been included in this Baseline Risk Assessment.

Oral toxicity values to estimate dermal exposure have not been converted to absorbed dose values. Significant uncertainty is associated with modification of Oral Reference Dose (RfD) or Carcinogenic Potency Factor (CPF) to determine an absorbed dose. RfDs and

CPF's are usually expressed as administered dose. Use of administered dose toxicity values is appropriate when evaluating similar routes of exposure. However, when evaluating dermal exposure to a chemical, an adsorbed dose is derived by the risk assessor. Technically, it is not appropriate to evaluate potential health effects associated with an adsorbed dose using a toxicity value generated from an administered dose. Modifying the RfD and CPF (derived from an administered dose) by some arbitrary oral absorption factor does not produce a better or more accurate toxicity index for evaluating potential dermal exposure.

USEPA promulgated absorption values are not available because of the uncertainty in the available absorption data. For example, an absorption value for a given chemical differs from different animal species and the media by which the chemical is administered (i.e., rat vs. guinea pig vs. mouse; corn oil vs. food). Furthermore, available default absorption values cannot account for the variability of absorption between test animals and humans, nor can they account for absorption differences in individual diets or individuals of different ages, weights, race, or socio-economic status. Until more appropriate dose-response factors are derived or promulgated absorption factors are published by USEPA, absorbed dose RfDs or CPFs cannot be derived and used in place of promulgated USEPA administered dose RfDs and CPFs.

13. The child HI for ingestion of groundwater is 103, this value has been included on Table 6-24.
14. Table 6-27 has been revised per specific comments. Values in parentheses, percent contributions to total risk, have been defined in the table notes.
15. Appendix W risk spreadsheets for inhalation of volatile contaminants in groundwater have been revised per specific comments. The RfC for toluene has been corrected.

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