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(804) 322-4793
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SEP 27 1993

CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

Re: MCB Camp Lejeune; Responses to EPA Region IV Comments on the Draft RI/FS Project Plans For Operable Unit No. 4

Dear Ms. Townsend:

The enclosure to this letter addresses comments from the EPA Region IV for the referenced project. These comments were contained in a letter from Ms. Gena Townsend dated August 2, 1993.

Any questions concerning these responses should be directed to Ms. Linda Berry, P.E., 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

Enclosure

Copy to:
NC DEHNR (Mr. Patrick Watters)
MCB Camp Lejeune (Mr. Neal Paul)

Blind copy to:
1823 (LGB 2 copies w/encls)
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RESPONSE TO COMMENTS SUBMITTED BY THE USEPA REGION IV ON THE DRAFT RI/FS PROJECT PLANS FOR OPERABLE UNIT NO. 4 (SITES 69 AND 74), COMMENT LETTER DATED, AUGUST 2, 1993

RESPONSE TO GENERAL COMMENTS

1. The references have been revised in accordance with the comment.

2. The rationale for the reference stations is provided in Section 5.6.2.3. The reference stations will be selected to closely resemble the site-related terrestrial or surface water features. As in the past, these stations will be discussed with the U.S. Fish and Wildlife, DEHNR, Camp Lejeune Department of Natural Resources, and members of the GTAG.

3. Hydropunch sampling stations have been added to Figure 5-2.

RESPONSE TO SPECIFIC COMMENTS

1. The last bullet has been removed.

2. The description of the confining unit has been included.

3. The "SA" areas and "SC" areas are stream characterizations based on Title 15A North Carolina Administrative Code 2B.0200. There are no "physical boundaries" which separate one part of the river or surface water designation from another. The water classifications are based on water quality criteria and use of the water.

4. The fish are harvested by military personnel (recreational fishing) and nearby residents (recreational and commercial). This has been included in the text.

5. The areas of ecological protection are throughout the base, where the habitat is suitable for such species and where such species have been sighted. A paragraph regarding protected areas in relation to the various sites has been included in the text.

6. A map detailing the housing areas and protected areas has been included.

7. The school is located approximately 2 miles northwest of Site 69. A list of building within a one-half mile area for purposes of "determining who might accidentally wander onto a site" is not necessary for a Work Plan (actually, there are no buildings within one-half mile of the site).

8. There is no scale on the original figure, therefore, a scale could not be included. At the time of the site reconnaissance, a contour map (with scale) was not available.

9. The approximate location of the trenches has been included on Figure 2.4.

10. A site fence was constructed in 1990. Military training is not conducted within the site boundary.

11. With respect to the discussion of groundwater flow direction on page 2-15, it was reported in a

previous document (ESE, 1992) that the direction of flow was north and northwest. With respect to the discussion of groundwater flow on page 232, the discussion is for Site 74 and not for Site 69.

It is possible (and probable) that groundwater mounding is occurring per the comment. It is likely that groundwater flow along the eastern half of the site is toward the New River as indicated in the comment. These "theories" are recognized by the Navy/Marine Corps.

Site 69 is a topographic high area and groundwater flow is believed to be in various directions. Only one or two rounds of static water levels have been obtained to date. The direction of groundwater flow will be better evaluated as part of the RI.

12. MCLs have been included on Table 2-2.

13. Table 2-3 has been revised to reflect the correct sampling dates.

14. The standard for iron has been corrected.

15. Future residential use of the area near Site 69 is not likely based on the MCB Camp Lejeune Master Plan, which does not indicate any residential use of this portion of the base (the "rifle range" area of the base is solely used for training). However, future potential human exposure has been included.

16. The acronyms are included with the listing in the front of the Work Plan.

17. The table has been corrected.

18. The future potential human exposure via residential use has been included.

19. The paragraph has been revised.

20. The text has been revised. No surface water/sediment investigation is possible at Site 74.

21. Objective No. 1 has been revised to clearly state that the soil will be analyzed.

22. Objective No. 2 has been revised to clearly state that additional wells will be installed.

23. Parent compounds will not be analyzed since they are unlikely to be present in the soil or groundwater. Parent compounds would only be present if the investigation focused on identifying the contents of the buried materials. No source investigations are planned at this time due to U.S. Army regulations. The list of degradation parameters was provided to the Navy/Marine Corps by specialists from the U.S. Army.

24. Justification for the use of PVC will be provided to the EPA.

25. It is stated in the second paragraph of Section 5.3.1.5 that springs or seeps will be identified and sampled southeast of the site. Figure 5-3 does not cover the area between the site and the New River. If springs/seeps are located during the initial evaluation and sampled during the RI, the locations will be shown in the RI report.

26. Four background soil samples will be obtained upgradient from the site.

27. The scope of work has been revised. No exploratory borings will be required since all soil samples will be collected as part of the test pit investigation, or via installation of monitoring well borings.

28. The well is shown on Figure 5-4 (Well House No. 654).

29. Please forward a copy of the EPA Region IV guidance to Ms. Linda Berry of LANTDIV for review. It is not known whether this guidance is a "final" version or whether it is not up to date with respect to other EPA directives or guidance documents.

30. The bullet has been revised in accordance with the comment.

31. The maximum concentration and the 95% Upper Confidence Limit (UCL) will be presented in the Statistical Summary Appendix. Additionally, if the sample size permits, the maximum and 95% UCL values will be presented in the text. The 95% UCL will be used to estimate potential exposures except in cases where there is great variability and the 95% UCL is greater than the maximum concentration. In this case the maximum concentration will be used to estimate a reasonable risk.

32. The criteria to be used in selecting the Contaminants of Potential Concern (COPCs) from the constituents detected during the sampling and analytical phase of the investigation are: historical information, prevalence, mobility, persistence, toxicity, comparison of the Applicable Relevant and Appropriate Requirements (ARARs), comparison to blank data or base-specific naturally occurring levels (i.e., background), and comparison to anthropogenic levels. These criterion chosen to establish the COPCs are derived from the USEPA's Risk Assessment Guidance for Superfund (USEPA, 1989).

The two times background soil concentration "rule of thumb" will be used in the selection of inorganic COPCs. In this evaluation base-specific and literature values will be used to warrant the elimination or retention of inorganics.

33. This comment will be considered during the preparation of the Baseline Risk Assessment.

34. Because of uncertainty associated with any estimate of exposure concentration, the 95% UCL on the arithmetic average will be used for this variable. If there is great variability in measured or modeled concentration values (i.e., too few samples are collected to estimate a statistically relevant mean concentration) the 95% UCL on the average concentration will be high, and conceivably could be above the maximum detected or modeled concentration. In cases like these, although thought to be too conservative, the maximum value will be used to estimate potential exposure.

35. The text will be revised. The dates on the references will be removed from this work plan. The referenced dates provided in Work Plans will not be relevant at the time the risk assessment is conducted. Therefore, a statement will be provided that the most up-to-date toxicity information obtained from IRIS and/or HEAST will be used in the exposure assessments. Additionally, the definition provided for HEAST will be corrected.

36. The FWQSVs and SQSVs have been included.

37. Ecologically significant risks can be defined as those potential adverse risks (or impacts) to ecological integrity that affect populations, communities, and ecosystems, rather than individuals (i.e., measured impacts to individuals does not necessarily indicate impacts to the ecosystem). However, ecological risk assessments are seldom probabilistic in nature (i.e., the probability of an adverse effect is difficult to quantify as a numeric risk estimate). Therefore, unless the risk assessment can be strictly

limited to comparisons with existing ecological quality criteria, the characterization of ecological risk will consist of a weight-of-evidence evaluation. The risk characterization component is therefore defined by either the presence of an adverse impact based on actual measurements, or the likelihood of an impact based on extrapolation from field or laboratory measurements, or scientific literature. The weight-of-evidence approach is used to approximate the risk based on the combination of empirical observations and inferences founded in reasonable scientific judgment.

38. Mr. Barone will function as QA/QC.