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DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
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TELEPHONE NO
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IN REPLY REFER TO
5090
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JUN 24 1994

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, GA 30365

Re: MCB Camp Lejeune
Response to EPA Region IV Comments
Draft RI/FS Project Plans
Operable Units 8, 11, & 12 (Sites 3, 7, 16, & 80)

Dear Ms. Townsend:

Enclosed are Navy/Marine Corps responses to EPA Region IV comments on the above-referenced documents. These responses address comments from the Engineering Services Division, Dynamac, and the Office of Health Assessment. The Draft Final versions of the documents (to be issued on or before 8/2/94) will incorporate these comments.

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

Sincerely,

for L. A. BOUCHER, 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. Ray Wattras, Mr. Matt Bartman)
Activity Admin Record File

Response to Comments submitted by USEPA
Engineering Services Division
on the Draft RI/FS Project Plans for CTO-0233
Operable Units No. 8, 11, 12
MCB Camp Lejeune, North Carolina

Comment letter by Ms. Gena Townsend dated May 5, 1994

PROJECT PLANS

1. Drill cuttings generated during the augering of test borings will be monitored with an HNu. Cuttings that do not indicate elevated levels or have visual signs of contamination will be placed on polyethylene sheeting and backfilled into the borehole. Cuttings which by their appearance or instrument readings, appear to be contaminated will be containerized in roll-off boxes for temporary storage and subsequent characterization and disposal.

FIELD SAMPLING AND ANALYSIS PLAN

2. No soil trip blanks will be prepared. Validation for soil sample results is compensated for or takes into account the analytical differences between solid sample and aqueous QA/QC sample results.

Preservative blanks will not be included in the QA/QC program. There is some difficulty with preservative blanks as sample containers are supplied by the laboratory with preservatives already added. There may be problems with using the correct preservative supply bottle or lot number when preparing preservative blanks for the field. Large number of sample containers shipped to the field could make coordinating preservative blanks a problem.

3. Stainless steel pans/bowls will be used to mix the collected soil samples. The text will be amended.

4. The use of a bentonite/cement grout mix, as opposed to a pure cement grout, reduces the heat of hydration during the curing of the monitoring well grout. Also the thickness of cement grout around the PVC well riser is not very thick (<3"), so the possible effects from heat of hydration would be minimized. Literature states that grout thicknesses in the range of 12" present more of a problem from heat of hydration.

5. This section of the Field Sampling and Analysis Plan (FSAP) will be amended to show an hydration time of 8 hours or to the manufacturer's specifications (whichever is greater). The procedures for the installation of shallow groundwater monitoring wells does state an 8 hour hydration time.

6. Step 8 of the procedures for the collection of groundwater samples will be amended to read that samples for metals analyses will be for both total (unfiltered) and dissolved (filtered). Step 9 will then clarify that the dissolved samples will be filtered in the field, preserved with acid, then submitted to the laboratory for analysis. Only unfiltered analytical data for metals is used in the risk assessment.

7. Whenever possible, surface water samples will be collected directly into the sample container to be submitted to the laboratory. This is dependent on field conditions.

8. This section will be amended to state that the sediment samples will be homogenized, as per procedures set forth in Section 5.1.2 of the

FSAP, prior to placement in the sample container, with the exception of sediment samples for VOAs.

9. The reference to the use of "10% nitric acid" as a rinse will be removed and replaced with "isopropyl alcohol".

10. The appropriate sections will be amended to reflect the difference in holding times for unpreserved volatile organic compound samples, and that soil samples for analyses for metals and mercury are not preserved with acid, only cooled to 4^0 C.

11. Custody seals will not be placed on individual sample containers. The use of re-enforced "strap tape" for the sealing of the shipping coolers to the laboratory minimizes the risk of a shipping container coming open. Shipping labels are covered with clear package tape to reduce the risk of losing labels in transit. Custody seals are used on the lids of the coolers to maintain custody protocol.

Response to Comments submitted by USEPA
DYNAMAC
on the Draft RI/FS Project Plans for CTO-0233
Operable Units No. 8, 11, and 12,
MCB Camp Lejeune, North Carolina

Comment letter by Ms. Gena Townsend dated May 26, 1994

Work Plan - General Comments 1 through 3

1. The scope of the analytical program for Site 3 has been accepted by the USEPA and the State of North Carolina. In order to satisfy their requests, two groundwater and three soil samples will be submitted for full TCL organic and TAL metals analysis. This agreement was reached during a Sample Strategy Plan meeting conducted by Baker and the Navy/Marines at the USEPA Region IV headquarters.

2. This comment will be taken into consideration in the preparation of the Draft Final Project Plans. If it is feasible and beneficial, the figures will be modified to include supply wells.

3. The text does not specifically mention the installation of background wells, however, for each of the site an upgradient well has been proposed and is shown on the appropriate site figure. The text will be revised to discuss background wells.

Work Plan - Specific Comments 1 through 20

1. Figures will be modified to indicate the proximity of supply wells, if the integrity of the figure is not jeopardized.

2. The legend will be expanded to include the designation of the roads and fences.

3. Although presented on Figure 2-7, the three surface water bodies to be investigated at Site 7 will be identified as part of Figure 2-5 (Site Location).

4. The legend will be expanded to indicate the marsh area.

5. Because there is no reference concentration to determine what is meant by "elevated", this terminology will be removed from the text.

6. A review of the information shown on Table 2-3 indicates that with the exception of iron and manganese, no other contaminant exceeded state of federal groundwater criteria. This table will not be revised in the Draft Final Project Plans.

7. The information displayed on this table was obtained from a previous Site Inspection Report submitted by Halliburton NUS. If possible, the sample locations where the maximum level of contamination was detected will be presented on the table.

8. This comment will be taken under consideration and figures will be modified in the Draft Final version of the Project Plans.

9. Currently the identification of the two UST wells is unknown, however, if identification is determined, the well identifiers will be provided on the figure.

10. The site boundary will be indicated on this figure.

11. Under the new project plan format, figures indicating the proposed sample locations are shown in the Sampling and Analysis Plan.

12. During the Sample Strategy Plan meeting, the USEPA agreed that the location and number of proposed wells are adequate to define both site related and upgradient contamination.

13. The text will be revised to mention the number of samples to be designated for evaluating upgradient conditions. In addition, the figures of proposed sampling locations, presented in the SAP, indicate uprgradient locations.

14. See response 12.

15. See response 13.

16. The Lawn Area mentioned in the text will be delineated on applicable figures for Site 80

17. The approximate location of the former drums will be shown on the figures for Site 80.

18. The proposed background soil locations are presented on figures in the Sampling and Analysis Plan. Under the revised Project Plan format, sampling locations will not be provided in the Work Plan.

19. During the Sample Strategy Plan meeting held at USEPA Region IV, the USEPA and the State of North Carolina were in agreement with the proposed investigation to be conducted at this site. The only changes that will be made to the initial proposal will be the collection of a groundwater sample from one shallow and one intermediate well for analysis of full TCL organics and TAL metals. This revision to the scope satisfied the concerns of all parties.

20. See response 19.

GENERAL COMMENTS

Field Sampling and Analysis Plan - General Comments 4 through 6

4. Groundwater flow directions (verified or estimated) will be plotted on the groundwater investigation figures for the four sites (16, 7, 80, and 3).

5. A statement will be added to Section 5.2 (shallow monitoring well installation) that the well screen will be installed such that the top of the screen will be placed two feet above the groundwater table to allow for seasonal groundwater fluctuations. Placement of the well screen in intermediate monitoring wells is proposed for a particular depth, the assumption being that the groundwater table will be located well above the proposed well depth, so these well screens will be totally submerged in the groundwater.

6. The diagrams included in Section 5 show typical monitoring well constructions, specifics on component dimensions are given in the accompanying text. Actual dimensions on monitoring well components will vary in the field due to the variability of installed depths based on site conditions.

Field Sampling and Analysis Plan - Specific Comments 21 through 37

21. The following sentence will be added to Paragraph 5: "The three background soil borings will be located to the northwest and west of the former burn dump within the woods." A designation will be added to the symbols at the background soil boring locations.

22. Figure 3-4 will be corrected so that the two symbols are distinguishable.

23. This will be taken under consideration. The location of soil borings and monitoring wells, and sampling requirements were discussed and approved in a Strategy Plan Meeting with the EPA, North Carolina Department of Environmental Health and Natural Resources (NCDEHNR), LANTDIV, and Baker Environmental, Inc.. However, in areas where deep water table conditions are encountered, it is likely that a field decision to obtain a third sample will be made. This will be reflected in the Work Plan and FSAP.

24. The following sentence will be added to Paragraph 3: "The three background soil borings will be located to the east, southeast and south of the maintenance area." A designation will be added to the symbols at the background soil boring locations.

25. The text will be corrected to indicate that the intermediate depth well will be located near well 80MW03.

26. A designation will be added to the symbols at the background soil boring locations

27. See response to Comment #19.

28. See response to Comment #20.

29. The text will be revised to conform to the ECB SOPQAM's description of a "trip blank".

30. The text will be revised to conform to the ECB SOPQAM's description of a "equipment rinsate blank".

31. The text will be revised to conform to the ECB SOPQAM's description of a "field blank".

32. The text will be revised to indicate the appropriate section pertaining to the decontamination of the split-spoon sampler.

33. The text will be revised to conform to ECB SOPQAM procedures for decontaminating excavation equipment

34. A statement will be added to Section 5.2 (shallow monitoring well installation) that the well screen will be installed such that the top of the screen will be placed two feet above the groundwater table to allow for seasonal groundwater fluctuations. Placement of the well screen in intermediate monitoring wells is proposed for a particular depth, the assumption being that the groundwater table will be located well above the proposed well depth, so these well screens will be totally submerged in the groundwater.

35. This will be taken under consideration. Frequently, wells will not totally clear of sediments. This is a condition of the water bearing zone. Stabilization of pH, temperature, and specific conductivity is a better criteria for well development than a reduction or elimination of turbidity. Accurate measurements indicating a stabilization, within

10%, of these three criteria give a reliable indication of the groundwater's condition.

36. Item No. 8 of the procedures for the collection of groundwater samples will be amended to read that samples for metals analyses will be for both total (unfiltered) and dissolved (filtered). Item No. 9 will then clarify that the dissolved samples for metals will be filtered in the field, preserved with acid, then submitted to the laboratory for analysis.

37. The text will be amended to state that the sampling technician will stand downstream from the sampling point.

Draft RI/FS Quality Assurance Project Plan

38. These footnotes are not relavent to the analytical methods presented on this page. Therefore, they will be removed from the text.

39. This additional statement will be added to the text.

Response to Comments submitted by USEPA
Office of Health Assessment
on the Draft RI/FS Project Plans for CTO-0233
Operable Units No. 8, 11, and 12,
MCB Camp Lejeune, North Carolina

Comment letter by Ms. Gena Townsend dated May 19, 1994

Work Plan - Comments 1 through 11

1. For risk assessment purposes the soil data obtained from the Halliburton NUS Site Investigations will not be used in conjunction with data obtained with the soil data obtained from this Remedial Investigation.

2. The scope of the analytical program for Site 3 has been accepted by the USEPA and the State of North Carolina. This agreement was reached during a Sample Strategy Plan meeting conducted Baker and the Navy/Marines at the USEPA Region IV headquarters. The sampling plan presented includes collection of two groundwater and three soil samples for full TCL organic and TAL metal. This sampling satisfies the percentage of total analysis required for each sample. Based on previous investigation analytical results and site histories it was concluded that cyanide is not a contaminant of potential concern. Therefore, cyanide will not be included in the contaminant list for any of the sites.

3. One background well has been proposed for each of the investigatory sites. Information collected from these background wells will be compiled with an existing background database which has been developed with data from previous investigations. As for surface water/sediment a base-wide background study has been conducted for all of Camp Lejeune. Results of this study will be used to evaluate surface water/sediment data collected for the investigatory sites. Additionally, calculating an average on two samples does not provide for an accurate or meaningful statistical estimation of background conditions.

4. The achievable detection range of the ENSYS test kits will be discussed in the QAPP.

5. The text will be clarified to indicate that the exposure point concentration should be based on the 95 percent UCL of the arithmetic mean for all of the site samples, including non-detects.

6. In most cases, it is reasonable to assume the soil sampling data are lognormally distributed. However, in cases where there is a question about the distribution of the data set, a statistical test should be used to identify the best distributional assumption for the data set. The W-test is one statistical method that may be used to determine if a data set is consistent with normal or lognormal distribution.

7. The text will be clarified to indicate that the 95 percent UCL of the means will be used throughout the risk assessment. In cases where maximum concentrations are exceeded by the 95 percent UCL, the maximum concentration will be used.

8. This comment will be taken under consideration during the development of the risk assessment.

9. Due to the monthly and/or quarterly updates to IRIS and HEAST providing dates of the latest versions to be used in the risk assessment would not be appropriate. However, the latest toxicity factors presented in IRIS and HEAST will be used to estimate risks.

10. The PRG for chrysene has been revised. The new PRG (9.2 ug/L) is based on the USEPA Region III Risk-Based Concentrations from April 20, 1994. This concentration can be obtained through the use of methods published in the Superfund Analytical Methods for Low Concentration Water For Organics Analysis. However, because an MCL or State standard has not been promulgated for chrysene, the remediation level for chrysene will be based on risk assessment. Therefore, because the Remediation Level, based on the risk assessment, will be developed using site-specific inputs this PRG value is not appropriate nor applicable. Additionally, PRGs are Preliminary and are to be used as a guidance in determining analytical methods.

11. This section presents the Preliminary Remediation Goals (PRGs) which were developed during scoping. PRGs serve as the basis for the development of the RI SAP. This section does not address Remedial Goal Options (RGOs). RGOs will be determined based on the outcome of the baseline risk assessment. The Feasibility Study will include both ARARs and risk-based cleanup goals. In the Feasibility Study a table will be developed to provide the 10e-4, 10e-5, 10e-6 risk levels for each chemical, media and scenario and the HQ of 0.1, 1, and 10 levels as well as any specific chemical-specific ARAR values. Remediation Levels (RLs) are chosen by the risk manager for the chemicals of concern and are included in the Record of Decision.

Field Sampling and Analysis Plan

1. All soil boring and monitoring well locations were approved at the Strategy Plan Meeting attended by EPA, NCDEHNR, LANTDIV, and BAKER representatives.

No intermediate depth wells were proposed for Site 16 at this time because the groundwater has not been investigated. If shallow groundwater is contaminated, intermediate depth wells may be required.

Site 7 is located adjacent to the Northeast Creek and includes a large area of lowlands/marsh. These conditions would indicate a tendency for water movement to be more horizontal, towards the creek, than vertical. Potable supply wells at the base are periodically monitored for TCL organics and TAL metals. Therefore, there is no need to monitor these wells as part of this RI.

2. The reference to TOC for the sediment samples will be clarified as to Total Organic Carbon (TOC).

3. The term "contaminants of concern" will be changed to "chemicals of potential concern".

4. See the response to Comment #3 on the Work Plan. All soil boring and monitoring well locations were approved at the Strategy Plan Meeting attended by EPA, NCDEHNR, LANTDIV, and BAKER representatives.

5. Page 3-11, paragraph seven of Section 3.2.4.1 will be revised.

6. The text will be corrected to read that the intermediate well is near existing well 80MW03 and not 80MW02.

7. Water supply wells that are located within the area of Figures 3-3, 3-5, and 3-11 will be added to the appropriate figures.

8. Table 6-1 is being modified, all footnote numbers will have corresponding references in the table.

Quality Assurance Project Plan - Comments 1 through 3

1. Corrections to reflect the most recent Statement of Work (SOW) will be made to the text. OLM01.8 SOW from August, 1991 will be referenced for organic analyses. In addition, CRQLs indicated on Table 8-1 have been revised per the SOW.

2. TCLP samples are proposed for the characterization of the Investigative Derived Waste (IDW). This reference has been added to Table 4-1 of the Work Plan.

3. The revision to the TCLP herbicide method of analysis and method detection limits will be made in the Draft Final version.

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