

Baker

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January 13, 1994

Commander
Atlantic Division
Naval Facilities Engineering Command
1510 Gilbert Street (Building N-26)
Norfolk, Virginia 23511-2699

Attn: Linda Berry
Code 1823

Re: Contract N62470-89-D-4814
Navy CLEAN, District III
Contract Task Order (CTO) 0003
Site Inspections at Sites 43, 44, 63, and 65
MCB, Camp Lejeune, North Carolina

Dear Ms. Berry:

Baker Environmental, Inc. (Baker) has prepared responses to comments submitted by the United States Environmental Protection Agency (USEPA) and the North Carolina department of the Environment, Health, and Natural Resources (DEHNR) on the Draft Site Inspection (SI) Report for Site 65 (Engineer Area Dump), Marine Corps Base (MCB), Camp Lejeune, North Carolina. Also attached for your convenience is a copy of the comments.

When applicable, the comments have been incorporated into the SI report. Baker anticipates submitting the Final SI Report before the end of January.

The responses have been included on the enclosed disc under the file name RESPONSE. The responses are in Word Perfect 5.1 format.

If you have any questions, please do not hesitate to contact me at (412) 269-2016.

Sincerely,

BAKER ENVIRONMENTAL, INC.



Raymond P. Wattras
Project Manager

Attachments
RPW/jc

cc: Ms. Beth Hacic (w/o attachments)
Ms. Lee Anne Rapp (w/o attachments)



A Total Quality Corporation

**Response to Comments Submitted by the
State of North Carolina
Department of Environment, Health and Natural Resources
on the Draft Site Inspection Report for
Site 65 Engineer Area Dump
MCB Camp Lejeune, North Carolina
Comment Letter Dated March 17, 1993**

Response to General Comments

1. The additional sampling at the site that will be completed under the RI/FS will comply with the US EPA SOPQAM procedures.
2. The higher concentrations of certain contaminants within subsurface samples as compared to surface samples could possibly be attributable to the history of the site as a dump facility. If contaminants were placed upon the previously existing ground surface and subsequently covered with clean fill, the concentrations of contaminants would be greater in the subsurface samples than the surface samples. Furthermore, contaminated materials may have been deposited into excavated pits or trenches which were subsequently backfilled. Additional investigation and analysis will be completed under the RI/FS to further characterize the contaminants and locate possible sources thereof.
3. Additional environmental samples will be collected and analyzed under a RI/FS in order to further characterize the extent of contamination and to generate a statistically significant number of samples at the site. Samples of groundwater, surface water, sediment, and soil will be collected and analyzed. Background samples will be included.
4. A Baseline Risk Assessment, which will include dermal exposure as well as inhalation and ingestion, will be completed under the RI/FS.
5. A glossary of acronyms used in the Site Inspection Report has been included in the report behind the Table of Contents.

Response to Specific Comments

1. The EPA comments have been incorporated into the Site Inspection Report.
2. The decision to proceed with an RI/FS has been made. The Site Inspection Report has been revised accordingly.
3. Additional figures that include topographic contours and relevant surface features will be furnished with the RI/FS Report. The use of a 10-foot contour map would not be appropriate for the site, given the elevation of the site area.
4. Samples of soil cuttings generated from the advancement of test borings and installation of monitoring wells were ultimately analyzed and determined not to be contaminated or hazardous. As such, the soil was deposited on site in accordance with EPA guidelines. Water generated during decontamination and from monitoring well development and purging was also analyzed and determined not to be

contaminated or hazardous. The containerized water was transported to a sewage treatment plant and deposited with other Investigation Derived Waste (IDW) liquids. Section 1.2.5 of the text has been revised to include the description of disposition of the Site Generated Wastes.

5. Courthouse Bay is classified as Tidal Salt Waters, Class SA. Section 2.2.2 has been revised to include this classification.
6. Buildings 201, 239 and 237 are situated approximately 1150, 950 and 1350 feet (respectively) southwest of the site, as referenced from Monitoring Well 65MW03. Section 2.2.5 has been revised to include these distances.
7. The ground surface does slope gently towards the south-southeast. The description of site topography in Section 2.2.1 has been corrected. Additional figures that include topographic contours will be furnished with the RI/FS Report. These figures will allow for more accurate description of site topography.
8. Iron (26,800-129,000 ug/l) has been added to the list (in Section 4.2) of metals for which elevated levels were detected in the groundwater samples collected from the monitoring wells.
9. The Baseline risk assessment to be completed under the RI/FS will include dermal exposure.
10. The current federal MCL for Beryllium is 0.004 mg/l. The previous level was 0.001 mg/l. Table 4-4 (Table 5-4 in the Draft Report) has been revised to include the correct value of 0.3 mg/l for the state MCL for iron.
11. Additional on-site and background data (soils and groundwater) will be collected, and a Baseline Risk Assessment will be completed under the RI/FS that is proposed for Site 65. The recommendations presented in the Site Inspection Report have revised to reflect that the site should undergo a RI/FS.

**Response to Comments Submitted by the
US Environmental Protection Agency, Region IV
on the Draft Site Inspection Report for
Site 65 Engineer Area Dump
MCB Camp Lejeune, North Carolina
Comment Letter Dated 11/30/92**

Response to General Comments

1. Additional environmental samples will be collected and analyzed under a Remedial Investigation/Feasibility Study (RI/FS) in order to further characterize the extent of contamination and to generate a statistically significant number of samples at the site. Samples of groundwater, surface water, sediment, and soil (especially in the area near monitoring well borehole 65MW02 where relatively high concentrations of contaminants were detected during the site inspection) will be collected and analyzed.
2. The RI/FS will include sampling of groundwater from the Castle Hayne aquifer.

The Castle Hayne aquifer is a semi-confined aquifer that consists of a series of sediments and discontinuous clay lenses. The surficial aquifer also consists of a series of sediments (primarily sand) and clay. The layer that separates the surficial and Castle Hayne aquifers is confining in some areas and semi-confining (leaking) in other areas of MCB Camp Lejeune. Therefore, the aquifer as a whole should be considered to be semi-confined. Descriptions of the Castle Hayne aquifer as "confined" have been removed from the text. The shallow aquifer beneath the site will be assessed for justifiable potential future uses under the RI/FS.
3. The Preliminary Risk Assessment has been removed from the text. Analysis completed under the RI/FS will provide additional data pertaining to concentrations of contaminants. Furthermore, a Baseline Risk Assessment will be completed to further identify the potential risks posed by the site under the RI/FS.
4. Preliminary remediation goals (PRGs) have been removed from the SI Report. The RI/FS Work Plan will identify PRGs for those reasons stated in the comment.
5. The additional sampling at the site that will be completed under the RI/FS will comply with the ECB SOPQAM procedures.
6. The footnote on the tables has been corrected.
7. A glossary of acronyms used in the Site Inspection Report has been added to the report following the Table of Contents.

Response to Specific Comments

1. The Site Inspection Report has been revised. It has been concluded that a release of hazardous substances may have occurred and further actions (completion of an RI/FS) are required.

2. The specific NUS report containing information regarding the waste disposal history at the site has been referenced.

The Water and Air Research report (i.e., Initial Assessment Study) has been added to the reference listing.

3. The acronym "NEESA" indicates Naval Energy and Environmental Support Activity. This document is the Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program. The purpose of the document is to specify the requirements for the control of the accuracy, precision, and completeness of samples, and data from the point of collection through reporting. As mentioned previously, QA/QC sample collection and analysis will follow EPA Region IV guidelines.
4. The concentration of Aroclor 1254 (230 ug/kg), detected in one subsurface soil sample, was slightly above the CRQL (190 ug/kg) adjusted for a dry weight basis. The surface soil sample and other subsurface soils collected from this site did not exhibit any PCB contamination. Sampling locations proposed under the RI/FS will be selected in order to obtain site-specific background data and to verify the presence and concentrations of contaminants detected under the Site Inspection.
5. The Preliminary Risk Assessment has been removed from the Site Inspection Report. A quantitative Baseline Risk Assessment (based upon additional data) rather than a Preliminary Risk Assessment (which is qualitative) will be completed as part of the RI/FS.
6. According to the North Carolina Administrative Code, Title 15, Subchapter 2L, "Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina", the Castle Hayne aquifer is classified as GA. This classification of groundwater is for existing or potential sources of drinking water supplies for humans which are considered suitable for drinking in their natural state. The classification of the Castle Hayne aquifer has been included in the Site Inspection Report.
7. The fact that high concentrations of metals may be associated with battery disposal has been noted in the Conclusion of the Executive Summary of the Site Inspection Report.
8. NUS did not conduct any previous investigations at the site. NUS prepared the SI Project Plans.
9. The recommendations presented in the Executive Summary have been revised to state that a RI/FS should be conducted at the site. The use of geophysical techniques to locate buried drums will be considered.
10. Background soil samples will be collected and analyzed under the RI/FS. The source of the disposal area will be further investigated in the RI. The IAS Report (Water and Air Research, 1983) describes in little detail previous disposal activities.
11. Sampling proposed under the RI/FS will follow ECB SOPQAM protocol.
12. Please refer to the response to Specific Comment 11.
13. Sampling activities under the RI/FS will utilize deionized and organic-free water for the decontamination of sampling equipment.

14. **The text of the Site Inspection Report has been changed to reflect that wetlands have not been delineated at the site.**
15. **Please refer to the response to General Comment 2. The description of the aquifer has been revised in the Site Inspection Report.**
16. **The statement that indicates doubt with respect to the necessity of completing additional work at the site has been removed from the text.**
17. **Sampling locations were based on available information, which is limited.**
18. **The term "instrument detection limit" (IDL) was used because there are positive values that may be below the CRQL but have been identified and quantified. These values may not be statistically reproducible from instrument to instrument and consequently values below the CRQL but above the IDL are considered estimated and are "flagged" with a "J" qualifier by the lab and validator. Inorganic and organic data with a "J" qualifier indicate an uncertainty in the reported concentration, but not in the assigned identity. Therefore, these data can be used just as positive results with no data qualifiers. The text is revised to state that only fractions with at least one positive result are presented.**
19. **The correct monitoring well borehole number has been inserted in the text.**
20. **"Significant levels of inorganic contaminants" implies a concentration that is greater than twice the average site-specific background level. Background samples will be collected and analyzed under the RI/FS to determine background levels. The sentence has been removed from the text.**
21. **The higher concentrations of certain contaminants within subsurface samples as compared to surface samples could possibly be attributable to the history of the site as a dump facility. If contaminants were placed upon the previously existing ground surface and subsequently covered with clean fill, the concentrations of contaminants would be greater in the subsurface samples than the surface samples. Furthermore, contaminated materials may have been deposited into excavated pits or trenches which were subsequently backfilled. Additional investigation and analysis will be completed under the RI/FS to further characterize the contaminants and locate the sources thereof.**
22. **Please refer to the response to Specific Comment 18.**
23. **The State Freshwater Quality Standards for contaminants detected in surface water samples are presented in Table 4-6.**
24. **The range of concentrations could be due to earth moving activities during dumping, fill materials used, or specific wastes being deposited in particular areas of the dump. The additional data acquired during the RI/FS should provide greater insight into the variation of metal concentrations at the site. Based on numerous investigations conducted at over eight sites throughout the base, the occurrence of "wide range of metals concentration" is common, contrary to the comment.**
25. **One duplicate sample was collected for every 20 samples of media collected. The investigation at Site 65 was conducted concurrent with investigations at three other sites (Sites 43, 44, and 63). Therefore, a duplicate sample may not be available for every site in every media.**

26. Data acquired during the RI/FS will better define maximum contaminant levels at the site. The Preliminary Risk Assessment has been removed from the report. A Baseline Risk Assessment, in accordance with current EPA risk assessment guidance, will be completed under the RI/FS.
27. The specific discussion of contaminant migration pathways was included in the Preliminary Risk Assessment section, which has been removed from the text.
28. The specific reference to future potential land use was included in the Preliminary Risk Assessment section which has been removed from the text. A Baseline Risk Assessment evaluating current and potential future receptors will be completed under the RI/FS.
29. The Baseline Risk Assessment to be completed under the RI/FS will include assessment of source and mechanism of chemical release, retention or transport medium, exposure point of potential human contact with the contaminated medium and exposure route at the exposure point. The Baseline Risk Assessment completed under the RI/FS will be based upon current aquifer classifications rather than current aquifer use.
30. The specific reference to remedial action was included in the Preliminary Risk Assessment section, which has been removed from the text.
31. The specific reference to wetlands was included in the Preliminary Risk Assessment section, which has been removed from the text.
32. According to the USEPA's Guidance for Conducting a Site Inspection Under CERCLA, published regional data may be used as a background concentration for a focused site inspection. Nevertheless, site-specific and base-specific soil background concentrations will be used for comparison under the RI/FS.
33. Please see the response to Specific Comment 32. In addition, classification of soils was completed during the advancement of soil borings. Open literature TOC values were obtained based upon the soil classifications and utilized for the Site Investigation. The need for TOC analysis will be considered for soil samples collected under the RI/FS.
34. Please refer to the response to Specific Comment 28.
35. The specific sentence was included in the Preliminary Risk Assessment section which has been removed from the text. However, using the terms threat and risk is indeed redundant.

The summary in which the presence of PCBs in the soil was not mentioned was included in the Preliminary Risk Assessment section, which has been removed from the text.