



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
100 ALABAMA STREET, S.W.
ATLANTA, GEORGIA 30303-3104

March 13, 1997

4WD-FFB

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Katherine Landman
Department of the Navy - Atlantic Division
Naval Facilities Engineering Command
Code 1823
Norfolk, Virginia 23511-6287

SUBJ: MCB Camp Lejeune
Draft Remedial Investigation/Feasibility Study Project Plans
Operable Unit 17 - Sites 90, 91 & 92

Dear Ms. Landman:

The Environmental Protection Agency (EPA) has completed its review of the above subject document. Comments are enclosed.

If you have any questions or comments, please call me at (404) 562-8538.

Sincerely,


Gena D. Townsend
Senior Project Manager

Enclosure

cc: Dave Lown, NCDEHNR
Neal Paul, MCB Camp Lejeune

1.0 GENERAL COMMENTS

1. The Work Plan, Section 4.0, Page 4-1, Paragraph 1, lists Phase I investigations and support activities that will be conducted at Sites 90, 91 and 92. However, the text does not address the surface soil sampling from the investigation. The text should state the rationale for excluding surface soil from the investigation.
2. The Work Plan, Section 4.3.3.3, Page 4-4, Paragraph 1, states that the North Carolina Water Quality Standard (NCWQS) or the Federal Maximum Contaminant Level (MCL) will be used as endpoints to determine the contamination. However, since the RI will include a risk assessment, the risk based standard such as the Region 3 RBC levels should also be used. The text should be revised accordingly.
3. The Work Plan, Section 4.6.3, Page 4-6, Paragraph 3, indicates that the Region 3 residential chemicals of concern (COC) screening values are used to identify the soil COPCs. However, the screening values are the Region 3 RBC values. The term COC should be used in the risk assessment after calculating the risk and HI. The COC screening values which appear throughout the entire report should be changed to RBC values.

In addition, the text states that the groundwater contaminants will be compared with NCWQS, but a comparison with RBC values for groundwater is not addressed.

4. The Work Plan, Table 3-1, lists the site evaluation objections for OU 17. However, the Criteria for Meeting Objective column does not include the characterization of contaminant levels in surface soil. The text should explain why surface soil will not be characterized.
5. The Field Sampling and Analysis Plan (FSAP), Figure 4-1, illustrates the existing and proposed soil boring/monitoring well sampling locations. However, the figure does not show an initial soil/monitoring well boring south of BB9, adjacent to the initial investigation area boundary. Placement of a boring in this location will aid in the complete identification and delineation of the contaminant plume. A soil boring/monitoring well should be placed south of BB9, adjacent to the area boundary.

2.0 SPECIFIC COMMENTS

1. **Work Plan, Section 4.3.2, Page 4-2, Paragraph 1, Bullet 3.**
The text states that Phase I investigations will include auguring four soil borings at Site 92. However, Figure 4-3, which depicts Site 92, shows seven wells instead of four. The discrepancy should be corrected.
2. **Work Plan, Section 4.2.2, Page 4-2, Paragraph 3, Sentence 3.**
The text states that three subsurface soil samples from each site will be submitted for fixed base laboratory analysis. However, the number of samples to be submitted should be based on the total number of samples collected from the site. The text should explain the rationale for choosing three soil samples.

3. **Work Plan, Section 4.3.4, Page 4-4, Paragraph 5, Sentence 1.**
The text states that three staff gauges will be installed. However, the locations of the staff gauges are not identified. The text should be revised accordingly.
4. **Work Plan, Section 4.6, Page 4-5, Paragraph 6, Sentences 2 and 4.**
The text references the Phase I RI findings and the Phase II field investigation. However, these terms are confusing. According to previous sections (Sections 4.0 through 4.3), the field investigation is Task 3 which is one of the RI tasks. The text should be clarified accordingly.
5. **Work Plan, Section 4.6, Page 4-5, Paragraph 6, Sentence 3.**
The text states that potential exposure scenarios will be developed based on current and expected land uses of the sites. However, the word "expected" should be "future". The text should be revised accordingly.
6. **Work Plan, Section 6.0, Page 6-1, Paragraph 1, Sentence 1.**
The text states that the proposed project schedule for OU 17 is presented as Figure 6-1. However, Table 6-1 contains the proposed project schedule. The text should be revised accordingly.
7. **Work Plan, Table 2-1.**
Table 2-1 shows the developed areas land use. However, the definitions of CO and CM are not listed in the table notes. The notes should be revised to include the definitions of CO and CM.
8. **Work Plan, Table 2-3.**
The table shows the hydropunch groundwater sample analytical results for PAH. However, the notes do not indicate whether the non-compliant concentrations were compared to state or federal standards. The table notes should be revised accordingly.
9. **Work Plan, Table 2-6.**
Table 2-6 shows monitoring well groundwater sample analytical results. However, the table notes do not explain why some of the wells were not sampled. The table notes should be revised to provide the rationale for not sampling all wells.
10. **Work Plan, Figure 2-2.**
Figure 2-2 shows the location of hydrogeologic cross-sections. However, the figure does not have a legend. A legend should be included in Figure 2-2.

This comment also applies to Figure 2-5.
11. **Figure 2-7.**
Figure 2-7 illustrates previous site investigation hydropunch sample results. However, the units for the analytical results are missing. Units for the sample results should be included in the figure.

This comment also applies to Figures 2-8, 2-9, 2-10, 2-13, and 2-14.

12. FSAP.

According to EPA guidance, the Field Sampling and Analysis Plan should include sample copies of forms to be used during the project (EPA, 1988). These forms include, but are not limited to, the boring log, monitoring well sheet, groundwater sample log sheet, and surface water sampling log sheet. The Field Sampling and Analysis Plan should be revised to include copies of all pertinent forms.

13. FSAP, Section 4.3.2, Page 4-4, Paragraph 3.

The paragraph lists newly installed temporary shallow monitoring wells along with their numbers. However, there is a discrepancy with the well numbers and those reflected on pages 4-2 and 4-3. The discrepancy should be resolved.

14. FSAP, Section 4.4.1, Page 4-5, Paragraph 2, Sentence 1.

The text states that one surface water sample will be collected from six stations in Courthouse Bay. However, the text does not reference a figure that shows the location of the six stations along with the sample numbers. The text should be revised accordingly.

15. FSAP, Section 6.2, Page 6-4, Bullet 1.

The text states that mud rotary drilling will be used to further advance the borehole. However, the text does not explain how the mud will be cleaned up and disposed of when the drilling is complete. The text should be revised accordingly.

3.0 Comments from Science and Ecosystems Support Division (SESD)

The following comments are made to the subject document:

1. Section 6.0, p. 6-1. The region IV SOP reference is outdated. The study plan should be made consistent with the Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, (EISOPQAM), May, 1991.
2. Section 6.4, p. 6-5. The document must clearly state that samples will not be collected through the peristaltic pump head.
3. Section 6.4.3, p. 6-6. The sample tubing must be Teflon.
4. Section 6.6, p. 6-9. No plastic materials must be allowed to contact the sample.
5. Appendix A, SOP F104, Section 5.4.1, p. 10 of 12. The tubing intake should be kept just under the top of the water column.
6. Appendix A, SOP 501, Section 5.2, p. 3 of 4. The drill rig must be decontaminated as specified in the EISOPQAM.
7. The document must clearly state that temporary wells will be purged until turbidity is reduced to 10 NTU or less (if feasible).

4.0 Comments from Quality Assurance - SESD

- 1.** Quality Assurance Project Plan (QAPjP), Section 2.0 - This section references the USEPA Contract Laboratory Program organic and inorganic Statements of Work; however, the versions referenced have been superseded by more recent versions. The document should reference the most recent versions of the SOWs that are available.
- 2.** QAPjP, Section 6.0, Table 6-1 - The sample containers specified in this table for TCL semivolatile and pesticides/PCBs, 1 liter bottles, do not allow any sample volume for reextraction attempts. The use of a one gallon amber glass bottle is specified in the USEPA Region 4 Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, May 1996.
- 3.** QAPjP, Section 6.0, Table 6-2 - The sample container for TCL volatiles should specify a Teflon lined septum cap.