

03.01-05/26/94-01111



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

May 26, 1994

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

4WD-FFB

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

SUBJECT: Draft RI/FS Project Plans
Operable Units #8, 11, & 12
MCB Camp Lejeune, North Carolina

Dear Ms. Landman:

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

If there are any questions or comments, please call me at (404) 347-3016 or voice mail (404) 347-3555 x-6459.

Sincerely,

A handwritten signature in cursive script that reads "Gena D. Townsend".

Gena D. Townsend
Senior Project Manager

Enclosure

cc: Mr. Neal Paul, MCB Camp Lejeune
Mr. Patrick Watters, NCDEHNR

1.0 GENERAL COMMENTS

Draft RI/FS Work Plan

1. The investigation at OU No. 12 (Site 3) should be expanded to include more analytical parameters than just Target Compound List (TCL) semivolatiles. Since the site was formerly a creosote plant, it is logical to analyze samples for polynuclear aromatic hydrocarbons (PAHs). However, other operations at the site could have caused additional contamination (i.e., cleaning solvents, gasoline, etc.). In addition, samples from previous investigations were only analyzed for TCL semivolatiles. Therefore, in order to fully characterize the nature and extent of contamination at Site 3, the first round of sampling for this investigation should include analysis for full scan TCL and Target Analyte List (TAL) constituents for all soil and groundwater samples.
2. Additional details need to be provided on several figures. For example, the legend should show more symbols on figures 2-4 and 2-5 and the site boundary needs to be defined in figures 2-7 and 2-9. Also, the supply wells for sites 16, 7, and 3 should be shown on a figure to show their relation to each site.
3. For most of the groundwater and surface water samples, there is no mention of a control or upgradient sample. If upgradient wells do not exist, then additional wells should be installed upgradient of each site. In addition, the text should also list the background location for surface water samples.

Draft RI/FS Sampling and Analysis Plan

4. Figures should be provided which show the direction of groundwater flow at the various sites in order to properly evaluate the locations of the proposed monitoring wells.
5. The sections describing the installation of the monitoring wells should state where the top of each well screen will be in relation to the water table.
6. The monitoring well diagrams should show the dimensions of the various components of each well.

2.0 SPECIFIC COMMENTS

The specific comments are listed on the following pages in the order of occurrence in the Project Plans. The comments are organized by document name as well as page number, paragraph number or figure/table number, as appropriate.

Draft RI/FS Work Plan

1. Pages 2-13 and 2-14, Paragraphs 7 and 1, respectively:
The supply wells for sites 16, 7 and 3 should be shown on a figure to evaluate the relation between the supply wells and each site.
2. Page 2-15, Figure 2-4:
The legend should be expanded to include the dashed lines and the lines with Xs in them.
3. Page 2-16, Paragraph 5:
The text refers to two unnamed surface water bodies within the site boundaries. These surface water bodies, which are not identified on any figure, should be identified on Figure 2-5.
4. Page 2-17, Figure 2-5:
The legend should be expanded to include the dashed lines and the downward arrows, presumably designating a marsh area.
5. Page 2-18, Paragraph 10:
The text states that "elevated levels" of pesticides and polychlorinated biphenyl (PCB) compounds were detected in the soil sample from location MW02. The term "elevated" should be defined.
6. Page 2-19, Table 2-3:
This table lists Federal maximum contaminant levels (MCLs), the number of positive detections, the number of samples, the range of positive detection values and the location of the maximum concentration. In addition, the number of samples containing concentrations of contaminants above the MCLs should be listed along with the location of each sample and the specific concentrations of the contaminants.
7. Page 2-21, Table 2-4:
The concentrations of contaminants at their respective sample locations should be listed, along with the range and number of positive detections.

8. Page 2-24, Figure 2-7:
The boundary of Site 80 should be clearly defined on this figure.
9. Page 2-26, Figure 2-8:
The two monitoring wells adjacent to the underground storage tanks show a question mark as part of the well identification. Explain the meaning of the question mark.
10. Page 2-31, Figure 2-9:
The boundary of Site 3 should be clearly defined on this figure.
11. Page 4-1, Paragraph 4:
A figure showing the proposed sampling locations should be included for clarification.
12. Page 4-8, Paragraph 2:
There is no mention in the text regarding upgradient samples for groundwater. If upgradient wells do not exist, then additional wells should be installed upgradient of each site in order to evaluate the possibility of contamination from offsite.
13. Page 4-8, Paragraph 3:
There is no mention in the text regarding upgradient samples for surface water. Please state which samples will be used to establish upgradient conditions.
14. Page 4-9, Paragraph 2:
See Specific Comment No. 12.
15. Page 4-10, Paragraph 2:
See Specific Comment No. 13.
16. Page 4-11, Paragraph 1:
The text refers to a "lawn area" where a soil investigation will be conducted. Please show this "lawn area" on either Figure 2-7 or Figure 2-8.
17. Page 4-11, Paragraph 1:
The text refers to an "area where two drums were noted during the site visit." Please identify this area on either Figure 2-7 or Figure 2-8.
18. Page 4-11, Paragraph 1:
The text refers to three background soil borings which will be drilled. Please identify the location of these background soil borings on either Figure 2-7 or Figure 2-8.

19. Page 4-12, Paragraph 2:
The text states that the investigation will be focusing on PAHs and creosote and that where the field screening tests revealed PAH or creosote contamination, soil samples will be collected for TCL semivolatile organic analysis. However, in order to fully characterize the nature and extent of contamination at the site, the first round of soil samples should be analyzed for full scan TCL and TAL constituents. See General Comment No. 1.
20. Page 4-13, Paragraph 1:
The text states that shallow groundwater samples will be analyzed for TCL semivolatile organics and that intermediate groundwater samples will be analyzed for full scan TCL organics and TAL metals. However, in order to fully characterize the nature and extent of groundwater contamination at Site 3, the first round of groundwater samples (both shallow and intermediate) should be analyzed for full scan TCL and TAL constituents. See General Comment No. 1.

Draft RI/FS SAP

21. Page 3-3, Paragraph 5:
The text refers to three borings which will be sampled as background locations. The locations of these background borings should be identified on Figure 3-1.
22. Page 3-9, Figure 3-4:
The symbol for "Proposed soil sample location" and "Proposed trench" are not distinguishable. Please clarify.
23. Page 3-13, Paragraph 4:
The text states that "one surface soil sample (depth 0 to 12 inches) and one subsurface soil sample (depth just above the groundwater table) will be collected from each location." The text also states that the depth to groundwater is "estimated to be between 8 and 20 feet below ground surface." If the depth to groundwater is as much as 20 feet in certain areas, then an additional subsurface soil sample should be collected approximately midway between the ground surface and the groundwater table in order to more thoroughly confirm the presence or absence of contamination.
24. Page 3-14, Paragraph 3:
The background locations referred to in the text should be identified on a figure for clarification.
25. Page 3-14, Paragraph 8:
The text states that "one intermediate depth well will be installed near existing well 80MW02." However, Figure 3-8 shows the intermediate well located near well 80MW03. This

discrepancy should be corrected.

26. Page 3-18, Paragraph 1:
The background locations referred to in the text should be shown on Figure 3-9 or Figure 3-10. It is not clear from the figures which direction is downgradient.
27. Page 3-18, Paragraphs 3 and 4:
See Specific Comment No. 19.
28. Page 3-18, Paragraph 4:
See Specific Comment No. 20.
29. Page 3-22, Paragraph 2:
The definition of a trip blank in the text is incomplete. For clarification, the text should include the statement: "The purpose of a trip blank is to determine if samples were contaminated during storage and transportation back to the laboratory." Section 4.3 of the ECB SOPQAM describes trip blanks.
30. Page 3-22, Paragraph 3:
The text describes equipment rinsate samples as "the final analyte-free water rinse from equipment decontamination procedures." However, for clarification, the text should state that equipment blanks (the term used by EPA) "are defined as samples which are obtained by running organic-free water over/through sample collection equipment after it has been cleaned." Section 4.3 of the ECB SOPQAM describes equipment blanks or equipment rinsates.
31. Page 3-22, Paragraph 4:
The text does not adequately define or state the purpose of a field blank. The text should include the following statement describing field blanks: "Organic-free water is taken to the field in sealed containers and poured into the appropriate sample containers at pre-designated locations. This is done to determine if any contaminants present in the area may have an effect on the sample integrity. Field blanks should not be collected in dusty environments and/or from areas where volatile organic contamination is present in the atmosphere and originating from a source other than the source being sampled." See Section 4.3 of the ECB SOPQAM.
32. Page 5-3, Paragraph 4:
The text makes the statement: "Decontaminate the split-spoon sample as described in Section 5.6." However, the text should read, "Decontaminate the split-spoon *sampler* as described in Section 5.8."

33. Page 5-3, Paragraph 6:
Instead of stating that the excavation equipment shall be "thoroughly decontaminated . . .," the text should state that the "excavation equipment shall be decontaminated according to the ECB SOPQAM . . ."
34. Page 5-4, Paragraph 5:
Section 5.2 should state where the top of each well screen will be located in relation to the surface of the groundwater table (i.e., x feet above or below the water table). See General Comment No. 6.
35. Page 5-10, Paragraph 5:
The text lists "typical limits placed on well development." Two of the limits listed are "a maximum time period (typically one hour for shallow wells)" and "a maximum well volume (typically three to five well volumes)." However, these are not acceptable limits for well development. The ECB SOPQAM states that "the new monitoring well shall be developed until the column of water in the well is free of visible sediment, and the pH, temperature, and specific conductivity have stabilized." Furthermore, the ECB SOPQAM states that "continuous flushing for several days may be necessary to complete the well development."
36. Page 5-11, Paragraph 1:
Item No. 9 in Section 5.3.1 refers to filtering the groundwater samples collected for dissolved metals analysis. It is EPA policy that groundwater samples not be filtered. However, if filtered samples for metals must be collected, EPA requires that an additional unfiltered sample also be collected for metals analyses.
37. Page 5-12, General:
In regard to the collection of surface water samples, the text should note that if sampling personnel are standing in the surface water body, the sampling technician must stand downstream in relation to the sample container in order to minimize the effects of disturbed sediment on the sample.

Draft RI/FS Quality Assurance Project Plan

38. Page 8-10, Table 8-1:
The two footnotes do not seem to correspond to anything in the table. Footnotes 1 and 2 refer to the practical quantitation limit and the method detection limit. However, the text in the table lists the aqueous performance limit and the solid performance limit. Please clarify.
39. Page 10-3, Paragraph 1:
The text should also state (regarding equipment rinsates) that "these samples will be used to determine if cleaning procedures were adequate."