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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

MAY 13 1992

4WD-RCRA/FF

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Byron Brant
Department of the Navy - Atlantic Division
Naval Facilities Engineering Command
Code 1822
Norfolk, Virginia 23511-6287

RE: Marine Corps Base Camp Lejeune NPL Site
Jacksonville, North Carolina

Dear Mr. Brant:

Please find enclosed comments on the Draft Final RI/FS Project Plans for Sites 6, 9, 48 and 69. These documents show improvement and generally outline a good approach for delineating the contaminant plume in each media. The enclosed comments identify errors and suggestions for improving data collection. EPA looks forward to receiving the revised documents.

In addition, EPA is in receipt of Ms. Laurie Boucher's letter dated May 11, 1992 addressing changes to the documents proposed by the Navy. In order to adequately assess potential impacts to the environment at the site it will be necessary to collect a minimum of 10% of the aquatic samples for full TCL/TAL analyses. EPA is willing to concur that full scan analyses is not necessary for each aquatic sample proposed in the plan. The amendments suggested in the letter should reflect that a minimum of 10% of the aquatic samples will be collected for full TCL/TAL analyses.

If you have any questions or comments, please call me at (404) 347-3016.

Sincerely,

Michelle M. Glenn

Michelle M. Glenn
Senior Project Manager

cc: Jack Butler, NCDEHNR
George Radford, MCB Camp Lejeune

EPA Review
Draft Final RI/FS Project Plans
Sites 6, 9, 48 and 69

RI/FS Work Plan

1. Aquifer testing is proposed for sites 6, 9, and 48. However, the text is not clear as to whether the surficial aquifer or the Castle Hayne Aquifer will be tested. If it is found that contaminants have migrated to the Castle Hayne Aquifer, then an aquifer test should be conducted in this zone to determine the degree of confinement between the aquifers and leakage rates.

2. The aquifer test design at each site must be submitted for review. Information such as the location of the pumping and observation wells, pumping rate, duration of test, and analytical method(s) used to analyze test data should be submitted. An aquifer test was not proposed for site 69. A test should be conducted at this site to determine the hydraulic properties and boundary effects within the aquifer in this area.

3. At site 48, it is proposed that water-levels will be measured over a 24-hour period to determine the influence of tides on water levels. It is recommended that a continuous water-level recorder be installed at this site. The effect of the tides on water levels should also be determined at sites 6, 9, and 69.

4. A continuous water level recorder should be installed on a shallow and deep well at each site to determine the difference in hydraulic head between the surficial and Castle Hayne aquifers and how the difference varies with fluctuating tides.

5. A potentiometric surface map for the surficial and the Castle Hayne aquifers should be submitted in future documents. The estimated ground-water flow directions for the surficial aquifer illustrated in figure 5-4 are probably close to the actual flow directions since ground-water elevations in shallow unconfined aquifers are usually a subdued replica of the topography. However, this is not likely the case for the confined Castle Hayne Aquifer. Ground-water elevations in confined aquifers are generally not a function of changes in the topography, and the potentiometric surface for these aquifers is not as convoluted. Table 5-2 provides a monitoring well summary and rationale for well locations. The locations of monitoring wells in the Castle Hayne Aquifer were selected based on the assumption that ground water in the Castle Hayne

will flow in the same direction as ground water in the surficial aquifer. However, ground water in the Castle Hayne Aquifer probably flows in one general direction, possibly to the southeast. The wells that are assumed to monitor downgradient of the source area (as outlined in Table 5-2) may in fact be upgradient of the source. The general direction of ground-water flow in the Castle Hayne aquifer should be determined based on existing data. The locations of monitoring wells in this zone should be repositioned once the general direction of the ground-water flow is known so that the contaminant plume in the Castle Hayne Aquifer may be adequately delineated.

Field Sampling and Analysis Plan

1. Page 5-12, Section 5.3.1, item 9 - Region IV policy is not to filter samples for metals analyses. If results of filtered samples are desired, they must be in addition to unfiltered samples.

2. Page 5-13, Section 5.3.1, item 12 - Region IV policy is not to filter samples for metals analyses. If results of filtered samples are desired, they must be in addition to unfiltered samples.

3. Page 6-2, Table 6-1

Soil samples to be analyzed for pesticides must be extracted within 14 days of collection and analyzed within 40 days.

Footnote 6 - If EPA Methods 601/602 are used, second column confirmation is required.

Holding times for water and soil samples from date of collection to analyses are not specified.

"Standard Methods" needs to be updated to the 17th Edition, 1989.

ASTM D808 is a petroleum method.

The Walkey Black method is for the determination of COD. If TOC is to be calculated from COD results, this should be so specified.

No years are specified by the ASTM methods.

Quality Assurance Project Plan

1. Page 2-1, Section 2.0, item 2

   "O1M01.6" should be "OLM01.6".

   "Statement of Work for Inorganic Analysis" should show "ILM02.0".

   "Test Methods for Evaluating Solid Waste" should be updated to the 1991 version.

2. Page 5-2, Section 5.1 - Same as comment 1 (QAPP).

3. Page 7-2, Table 7-1

   Holding times are computed from the date of collection.

   The holding time for TCL volatile organic compounds is 7 days if unpreserved.

   The holding time for semi-volatile organic compounds is 7 days to extraction and 40 days after extraction.

   The holding time for pesticides is 7 days to extraction and 40 days after extraction.

   The holding time for mercury is 28 days.

   The holding time for TOC is 28 days.

   "BOC" should be "BOD".

4. Page 7-3, Table 7-2

   No acid preservation is used on soil or sediment samples.

   See comment 3 (QAPP).

   Please clarify the proposed analysis for organic chlorine.

   Samples to be analyzed for alkalinity are to be preserved by cooling to 4°C; the holding time is 14 days.

   The holding time for TOC is 28 days.

5. Page 8-1, Section 8.2 - See comment 1 (QAPP).

6. Pages 9-2 through 9-13, Table 9-1

See comment 1 (QAPP).

If EPA Methods 601/602 are used, second column confirmation is required.

"Standard Methods" needs to be updated to the 17th Edition, 1989.

Method 245.5 is the correct method for mercury soil/sediment samples by cold vapor.

Method 258.1 is a direct aspiration method for potassium.

The correct method for nitrate is 352.1.

There is no method 374.4.

The Walkey Black method is for the determination of COD. IF TOC is to be calculated from COD results, this should be so specified.

ASTM D808 is a petroleum method.

There is no EPA method 3502, nor is there a method for organic nitrogen.

SW-846 methods are incomplete without the appropriate extraction/preparation methods.

Byron Brant GLNN0001
~~LAURIE A. BOUCHER, P.E.~~
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