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State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management



James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

February 3, 1994

Commander, Atlantic Division
Naval Facilities Engineering Command
Code 1823-1

Attention: MCB Camp Lejeune, RPM
Ms. Linda Berry, P. E.
Norfolk, Virginia 23511-6287

Commanding General

Attention: AC/S, EMD/IRD
Marine Corps Base
PSC Box 20004
Camp Lejeune, NC 28542-0004

RE: Draft Final Aquatic Survey for Wallace Creek and
Bearhead Creek for Operable Unit #2 (sites 6, 9,
and 82)

Dear Ms. Berry:

The referenced document has been received and reviewed by the North Carolina Superfund Section. Our comments are attached. Please call me at (919) 733-2801 if you have any questions about this.

Sincerely,

Patrick Watters

Patrick Watters
Environmental Engineer
Superfund Section

Attachment

cc: Gena Townsend, US EPA Region IV
Neal Paul, MCB Camp Lejeune
Bruce Reed, DEHNR - Wilmington Regional Office

North Carolina Superfund Comments
Camp Lejeune MCB Operable Unit #2
Supplemental Aquatic Survey for
Wallace Creek & Bearhead Creek

1. Page 2-2, Section 2.2.1
The sample designations shown on Figure 1 are different from those listed on this page and on various tables in the document.
2. Page 2-10, Table 2-2
This table does not include any water quality measurements for Bearhead Creek.
3. Pages 2-13 through 2-19, Section 2.5.2 and Table 2-4
The discussion on composite fish samples does not provide enough detailed information to fully describe how they were generated and handled. Also, the information provided on Table 2-4 needs clarification in the following areas.
 - The first column of Table 2-4 is titled "Number of Individuals" with a list of sequential numbers in the column. It is not clear if this is intended to be just a numerical listing of the samples or to present composite sample information. Please clarify.
 - Please explain how the "mean" at the bottom of the table is calculated. It is supposed to represent the composite mean length however it is apparently not the mean of the listed numbers in the table.
 - Table 2-4 on page 2-14 shows the maximum length fish for WC9A-SF as 273.05 mm when it should be 279.4 mm.
 - Please explain how the length of a fish or crab is measured to the nearest 1/100th of a millimeter. Also, could some of the fish length data been inadvertently placed in more than one column. For example, Table 2-4 on Page 2-17 indicates that there were six separate fish samples each measuring 387.35 mm and four separate fish samples each measuring 400.05 mm.
4. Page 5-3, Section 5.2.2.1
The equation for chronic daily intake (CDI) on this page indicates the exposure frequency (EF) is 48 days/year. This does not seem appropriate for the following reasons. (1) - Page 6-22 of the EPA RAGS manual indicates that if a long-term average contact rate (e.g. daily fish ingestion rate averaged over a year) is used, then a daily exposure frequency (i.e. EF = 365 days) should be used. (2) - An EF of 48 days/year along with an average ingestion rate (IR) of 6.5 grams/day will yield a total of 11 ounces of fish consumed per year. This annual fish consumption rate does not seem representative of the coastal areas of North Carolina.