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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

DEHNR

January 26, 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 Feasibility Study and Proposed Remedial Action Plan for Operable Unit #5 (site 2)

Dear Ms. Berry:

The referenced documents have 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 5
Draft Feasibility Study
Draft Proposed Remedial Action Plan

Draft Feasibility Study

General

1. North Carolina Superfund agrees that based on the information provided in the Remedial Investigation Report and the Feasibility Study, the TCE contamination seen in well 2GW3D should not be related to activities associated with Site 2. Note however, that the TCE contamination will probably need to be addressed with regard to future remedial actions at other Operable Units at Camp Lejeune.

2. Page 1-1, Section 1.0
The date reference indicated for the Draft RI Report and the Baseline Risk Assessment should be December 1993 instead of September 1993.

3. Page 1-2, Section 1.0
The first bullet on the page references the installation of deep monitoring wells on site. Since there was only one deep well installed at Site 2 this reference should be singular.

4. Page 1-12, Section 1.3
As noted in the comments to the Remedial Investigation Report, based on the subsurface sample results, using a depth of 4 feet for the TCRA does not seem adequate to remove all contamination that is above the action levels. Also, it would be helpful to provide some information on the locations and frequencies of the confirmatory sampling and analysis to be conducted in conjunction with the TCRA.

5. Page 1-13, Section 1.3.2
The volume estimates indicated for the TCRA have some inconsistencies. The text indicates an affected area of 14,000 sq. ft. and a total volume of ~1500 cu. yds. A 14,000 sq. ft. area yields a volume of 56,000 cu. ft. (using the indicated 4 ft. average depth) which is ~2074 cu. yds. Also, using the scale provided on Figure 1-3 to the indicated shaded areas yields a volume of ~1700 cu. yds.

6. Page 1-14, Figure 1-3
The shaded area to be removed during the TCRA appears to exclude the area directly under the railroad tracks. If the soils are contaminated on either side of the tracks it does not seem appropriate to exclude that area under the tracks from the TCRA without proper rationale and justification. Also, Figure 4-12 of the Remedial Investigation Report shows 4,4'-DDD and 4,4'-DDT contamination (12,000 µg/kg and 7,600 µg/kg respectively) above the Table 1-16 action limits at the

sediment sample location 2-RRSD17 (6"-12" depth) which is not included in the area to be removed under the TCRA.

7. Page 1-15, Table 1-1
The column listing the No. of Positive Detects/No. of Samples for 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT does not agree with the summary in Appendix H.1 of the Remedial Investigation Report. The values noted in H.1 are 33/46, 38/46 and 40/46 respectively.

8. Page 1-23, Table 1-9
The State groundwater standards for the following chemicals listed in Table 1-9 have been modified as follows:

Xylene (total) =	530	µg/L
Barium =	2000	µg/L
Lead =	15	µg/L

9. Page 2-1, Section 2.0
This section states that the soils and sediment remaining after the TCRA will not pose a risk greater than 1.0×10^{-5}. Page ES-5, Section 1.3.1 (page 1-12), and Tables 1-16 and 1-17 indicates that clean-up levels are based on a 1.0×10^{-6} risk level.

10. Page 5-4, Section 5.1.2
The groundwater monitoring scheme for RAA No. 2 does not include analysis for TAL metals and cyanide. Also, regarding the area intended to be covered by deed restrictions for new well construction, the description should be more definitive than "...within the vicinity of Site 2".

Draft Proposed Remedial Action Plan

11. Page 10
The next to the last paragraph on the page indicates that implementation of the remedial action will reduce the potential for the migration of contamination. The preferred alternative is RAA No. 2 which is acknowledged in the Feasibility Study (Table 5-1) as a method that will still allow migration of contamination.

12. Page 11
The top of the page indicates that soils and sediments will be addressed in the TCRA. The next sentence states that surface water and sediment will not be addressed under the TCRA action which we are interpreting to mean other than those areas indicated in Figure 3.

13. Page 19 and 20
Page ES-7 of the Feasibility Study states that RAA No. 2 will include ordinances restricting the construction of new potable supply wells at Site 2. Pages 4-3 and 5-4 of the Feasibility Study states the deed restrictions would apply to any new wells. Page 19 of the PRAP indicates that the deed

restrictions would prohibit any new supply wells. Page 20 of the PRAP states that these deed restrictions would restrict the installation of any new wells. It is not clear if the different terms describing the types of wells being restricted have the same meaning.

14. Page 23
The selection of RAA No. 2 (Limited Action) as the preferred alternative will require receiving a variance from the groundwater rules. This variance is needed because the preferred alternative will allow continued contamination of the groundwater by chemicals (metals and organics) in concentrations above the North Carolina groundwater standards.

In addition, identification and removal of the source of the contamination may be an important consideration in receiving this variance. Source removal is mentioned in light of the geophysical anomaly noted in the RI Report and the Feasibility Study near the well (2GW3) where most of the organic contamination was detected. It may be necessary to perform further investigation to provide conclusive evidence to either confirm or eliminate the geophysical anomaly as a potential contamination source.