1.01-03/27/85-00207

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511-6287

TELEPHONE NO.
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IN REPLY REFER TO:
5090
1143CFB

27 MAR 1985

Environmental Science and Engineering, Inc.
Attn: Mr. Russ Bowen
Project Manager
P. O. Box ESE
Gainsville, FL 32602

Re: Contract N62470-83-C-6106, Confirmation Study; Evaluation of Data From First Round of Verification Sample Collection and Analysis, Marine Corps Base, Camp Lejeune

Dear Mr. Bowen:

We would like to make the following comments on your interim report. Please incorporate these into your round two sampling report or the Verification Step final report, as appropriate. Our recommendations for round two sampling are described in the draft memorandum which is enclosed for your review and comment. The laboratory analysis completed to date on Camp Lejeune potable wells and water treatment plants is also enclosed for your use.

General Comments

a. Please use both sides of the page when copying your reports.

b. Please include site maps with well and sample locations.

c. For data evaluation, we would like you to use EPA Health Advisories and North Carolina groundwater and surface water quality standards/criteria (if they exist), in addition to the EPA Water Quality Criteria. Please discuss the advantages and disadvantages of each of these guidelines as compared to the Health Risk criteria.

d. Please use the 10^{-6} Health Risk Criteria for comparison if your detection limits are that low; if not, use the 10^{-5} values. (We are asking for guidance from higher authorities on which level to use for Verification Step purposes, so this policy may change).

e. Try to improve the readability of your computer-generated tables. We would like to see, in tabular form: the sample number, parameter, result of analysis, criteria exceeded, and criteria value to make comparison easier.

f. We are adopting a standardized labeling system for wells and other sampling locations at all Confirmation Study sites. Please change your numbering system for potable wells sampled to PW from GW. Also, include a cross-reference between sample numbers and building numbers of potable wells.

g. Measure groundwater level elevations to 0.01 foot accuracy.

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Specific Comments

a. Cover Sheet. Prepared for: Atlantic Division, Naval Facilities Engineering Command, Norfolk, Virginia 23511-6287.

b. Page 2-1. Discuss EPA Health Advisories and state water quality criteria/standards.

c. Page 2-3. "Information concerning expected rate and direction... is based on a relative analysis..."

d. Page 2-29. Soil sampling numbering system is confusing. Why are there two samples with the same sample numbers? Which samples were the composites from 0-1 feet and which from 1-2 feet depths? Which samples came from the same boring?

e. Page 2-34. Migration Potential. "All analytical parameters for well 22GW2 (not 22GW3) were below detection limits..."

f. Page 2-39. Objectives. "1. Locate source of TCE ... detected in deep water supply Wells Nos. 601, 602, 603 (not 604), 608 (not 609), 634, 637, and 642." Agreed

g. Page 2-43. The IAS alluded to TCE use in three buildings in the Hadnot Point industrial area: 901, 909, and 1601. "Approximately 440 gallons of TCE were contained in a tank" (IAS, page 6-16). The IAS did not specify if the tank was underground or aboveground.

h. Page 2-43. "Samples of groundwater should be collected from ... deep water supply wells Nos. 601, ~~603~~ 602, 608 (not 609), 634, 637, 642, and Bldg. 20 Hadnot Point Water Plant (untreated influent)..." You should also include shallow wells at 634, 637, and 642 in the sampling/analysis program. (See attached draft memo).

i. Page 2-43. Your characterization step work should also address overlapping cones of depression. (See attached draft memo).

j. Page 2-44. Data Evaluation. Levels of IAs exceeded the 10^{-5} risk level in Wells 24GW4, 24GW3, 24GW5, and 24GW2. We suggest you use the drinking water standard of 50 ug/l, since your detection limits are higher than the 10^{-5} health risk level of .02 ug/l.

k. Page 2-49. Methylene chloride in Well 24GW2 exceeded the 10^{-5}, not 10^{-7}, risk level.

l. Page 2-50. Migration Potential. We disagree with the statement that no water supply wells which could affect groundwater flow rate and direction are located close to Site 24. Well 608 is within a few blocks of this site.

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m. Page 2-59.

(1) Since the surface water data was significantly different from the groundwater data at Site 28, please discuss the impact of these findings in greater detail.

(2) TCE was detected in the groundwater - Well 28GW1 at 15 ug/1.

n. Page 2-70. Data Evaluation. "The presence of contamination at Well 36GW4... may indicate that the disposal area at Site 36 extends farther to the west than originally estimated."

o. Page 2-71. Why are there two sets of results for each sample number?

p. Page 2-80. DCFM exceeded the 10^{-5} risk level at Well 41GW2, not 41GW1.

q. Page 2-83. Why are there two sets of results for each sample number?

r. Page 2-89. What do these levels of Hg in the soil/sediment mean? Should we go on to the characterization step at this site? Should we sample fish tissue, or what?

s. Page 2-109. Migration Potential. Based on your groundwater elevation data, groundwater appears to flow to the northwest, not the east and southeast as stated. Can you explain this?

t. Page 2-122. Data Evaluation. Why was the analytical method proposed for chloropicrin unsuccessful? Is there another method we can use or a similar parameter we can test for?

u. Page A-1.

(1) Include common names for trichlorofluoromethane and dichlorodifluoromethane, which are Freon 11 and 12, respectively.

(2) The acronym for Marine Corps Air Station, New River should be MCAS(H).

v. Page A-2.

(1) We suggest you use 12DCE in lieu of 12DCLEE.

(2) SNARLs are now called EPA Health Advisories. — Sounds like "Snarlets"

w. Page B-1. Why is there no relative elevation given for some wells? Again, water level should be measured to the nearest 0.01 foot.

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If you should have any questions, please call Cherryl Barnett at (804) 444-9566.

Marine Corps Base, Camp Lejeune is requested to review the enclosure and provide comments on the proposed round two effort by 19 April 1985.

Sincerely yours,

J. R. BAILEY, P.E.
Head, Environmental Quality Branch
Utilities, Energy and Environmental Division
By direction of the Commander

Enclosure

Copy to:
Commanding General
Marine Corps Base
Camp Lejeune, NC 28542