01.01-11/18/86-00098

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

TELEPHONE NO.
(804) 445-1814

IN REPLY REFER TO:
5090
1143CFB

18 NOV 1986

Dames and Moore
7101 Wisconsin Avenue
Suite 700
Bethesda, Maryland 20814-4870

Re: Confirmation Study, Step IA, Round One Reports for
Naval Weapons Station Yorktown and Naval Supply Center
Cheatham Annex and Yorktown Fuels Division

Gentlemen:

We have reviewed your June 1986 submittals and would like to make the following comments on your reports. Please incorporate them into the round two or the verification step reports, as appropriate.

General Comments

1. Each report should be activity-specific. For example, the sampling and analysis plans, the standards and criteria, and the section on laboratory blanks should be revised to apply to the NSC or to the NWS study, not both. It will then be unneccessary to include the sample prefixes CA, YF, and NW in the reports.

2. We would like to see a longer introduction section in the verification step report. The report should begin with a description of the NACIP program in general, then summarize the IAS findings, and finally, describe the multi-step approach taken for the Confirmation Study.

3. Please include EPA's Health Advisories and Acceptable Daily Intake values in your list of criteria. Also, we do not believe any of these criteria (excepting the PPLVs) are appropriate for interpreting constituent concentrations in soil and sediment. Suggest you look at typical background levels for chemical elements in sediment and soil. These are available in EPA publications addressing land disposal of sewage sludge and hazardous waste.

4. In the text, we would like to see tables which show the sample locations, parameters and concentrations which exceeded analytical detection limits, accompanied by applicable standards and criteria (see enclosure (1) for some examples). Include the raw data as an appendix. This will eliminate some of the ponderous discussion in the text.

5. We would prefer you delete the references to the Virginia antidegradation policy for groundwater in your discussion of results. Simply state that no standards or criteria are available for this compound at this time.

6. How can you explain the presence of compounds such as 1,1,1 trichloroethane and various explosives in laboratory blanks? How should these be incorporated into the discussion of results (i.e., should the sample results be corrected for the contaminant concentrations in blanks?)?

7. Please keep your units consistent throughout the text. Use ug/kg for soil/sediment and ug/l for water (in some cases, these appear to be typographical errors).

8. In subsequent reports, please include a table with well elevations and water level elevations in all wells. Well construction details, boring logs, and all field sampling data should comprise an appendix to the verification step report.

Specific Comments: Naval Weapons Station Round One Report

1. Page 1-11. Only include the contaminants we are concerned with in this study.

2. Page 2-1. Use "torpedo rework" in lieu of "Otto fuel".

3. Page 2-8. Could the base-neutral organics present in well 3GW08 be attributed to the PVC pipe used for well installation?

4. Page 2-15. How can the hexavalent chromium concentration (17 ug/l) in well 2GW04 exceed the total chromium concentration (4 ug/l) in that well?

5. Page 2-22. This is unclear: "The purgeable organic analysis for upgradient well 4GW01 ... and for 2311? 4GW04 ...."

6. Page 2-26. We noticed several typographical errors on this page:

"The concentrations of Arochlor 1260 were 550 ug/kg for 5S04 ..."

"This concentration of TNT does not exceed the lowest primary pollutant limit value (PPLV Table 1-4) for TNT (2200, not 1340, ug/kg)."

"Soil sample 6S02 near the impoundment ..."

7. Page 2-35. This sentence is misleading: "The SW samples ... while the sediment samples taken at those sites produced mostly BNE compounds." Only two BNE compounds were present in the sediment samples.

8. Page 2-37. This sentence is incorrect: "The base-neutral fraction ... the two pesticides — endosulfan sulfate and Arochlor 1260 ... were above detection limits." PCB is not a pesticide.

9. Page 2-59. Section 2.12. In the verfication step report, please expand your discussion of Site 20. Provide some background on the site, explain why it was included in the program, and describe the sampling scheme selected.

10. Page 2-63. We suspect that the 8,000 gallon underground fuel oil tank located adjacent to the Otto fuel tank may be the source of the oil and grease found at this site.

11. Section 3.1. We will consider the dedicated submersible pumps for inclusion in a future change order. NWS has recently submitted their Part B application and we are waiting to see how EPA applies the RCRA Section 3004u provisions to Navy facilities.

12. Page 3-1. Section 3.5. We have no way to determine the concentrations of PCBs in transformers that may have been stored at this site. To our knowledge, the State of Virginia has not set any guidelines for PCBs in soils; however, we are planning to propose to EPA and the state a cleanup level of 50 ppm on two similar sites. Since 1.9 ppm was the highest concentration detected at this site, we would prefer to hold off on additional sampling until a precedent is established.

13. Page 3-3. Section 3.7. Two of the three soil sampling locations indicated in Figure 2.6 have been previously sampled. We would prefer not to repeat these samples since contaminant values in soil do not vary considerably over time, but to collect three samples between 7S01 and 7S02.

14. Page 3-3. Section 3.8. Again, we see no need to repeat soil sampling at the previous locations.

15. Page 3-4. Section 3.13. Your new wells should clear a planned building expansion. Well 20GW04, as shown in Figure 2-12, may have to be relocated further to the west; we will provide you with a preliminary drawing showing building expansion shortly.

Specific Comments: NSC Cheatham Annex and Yorktown Fuels Round One Report

1. Page 1-2. Show Site 10 on this figure.

2. Page 2-4. Dimensions are missing from the CA9S04 and S05 sampling locations.

3. Page 2-13. Paragraph 2.1.2. Please revise the text to state that although some PCBs were detected outside the fenced perimeter of the site, all concentrations were less than 1 mg/kg.

Paragraph 2.1.3. From your Field Data Records, it appears that sample number 15 was a composite from the top of several drums. Please revise the text accordingly. We resampled the drums on October 15, 1986 and found 11DT06 to be empty. The analytical results and our subsequent recommendations to CHAX for disposal will be forwarded to you for inclusion in the verification step report.

Please include a discussion of the Site 10 magnetometer survey in the verification step report.

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4. Page 2-17. Section 2.1.3.1. We believe the relatively high numbers of BNE compounds detected in the groundwater at Site 11 can be attributed to the asphalt/roofing compounds stored at this site.

5. Page 2-23. Section 2.2.3. Please delete the term "considerable" from your description of the soil and groundwater contamination at Yorktown Fuels. It has been our experience that these findings are typical of large fuel storage facilities.

6. Page 3-1. Section 3.1. At this time, neither Cheatham Annex nor Yorktown Fuels require RCRA TSD permits; therefore, this recommendation does not apply.

Section 3.2.2. Transformer storage at Site 9 preceeded the 1978 TOSCA regulations on PCBs. It is impossible to determine the PCB content of transformers that may have been stored there, but since all PCB concentrations in the soil were less than 1 ppm, no further sampling/study is required.

7. Page 3-3. Section 3.2.3. We do not agree that a repeat of the surface soil sampling at Site 11 is necessary.

You will be receiving a Scope of Work for round two sampling from our project management office shortly.

Sincerely,

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

Encl:
(1) Sample Tables showing Sample Locations, Parameters, Concentrations, and Applicable Standards/Criteria

Copy to:
WPNSTA Yorktown
NSC Norfolk
NSC Norfolk Cheatham Annex

Blind Copy to: (w/o encl)
09A21
11S
114 (w/encl)
114S
09BS
Doc #1025Z/pvc

T.)-2

MCAS CHERRY POINT
TOXICOLOGICAL EVALUATION
SITE NO. 10

Compound	Concentration Range (No. of Positive Detections/ No. of Samples)[a]		Standards and Criteria				
	Monitoring Wells	Potable Wells	North Carolina Water Quality Standards Groundwater[1][b]	MCLs[2][3][4]	SNARLs[5]	AWQC (5)(6) Drinking Water	ADIs[7]
2-butanone	730 ug/l (1/12)	ND	(c)	NR	10-day: 7,500 ug/l chronic: 750 ug/l	NR	1.4 mg/day
4-methyl-2-pentanone	170 ug/l (1/12)	ND	(c)	NR	NR	NR	7.3 mg/day
benzene	6-130 ug/l (7/24)	ND	(c)	0[e] 5 ug/l[f]	10-day: 230 ug/l chronic: 70 ug/l	0 (0.67 ug/l)[l]	NR
toluene	8-1,100 ug/l (6/24)	ND	(c)	2,000 ug/l[e]	1-day: 21,500 ug/l 10-day: 2,200 ug/l chronic: 340 ug/l	15,000 ug/l	30 mg/day
ethylbenzene	12-37 ug/l (3/24)	ND	(c)	680 ug/l[e]	NR	2,400 ug/l	9.5 mg/day
xylenes	6-110 ug/l (4/12)	ND	(c)	440 ug/l[e]	1-day: 12,000 ug/l 10-day: 1,200 ug/l chronic: 820 ug/l	NR	160 mg/day
chlorobenzene	5-88 ug/l (6/24)	ND	(c)	NR	NR	448 ug/l	1.0 mg/day
1,1,1-trichloroethane	12-160 ug/l (3/24)	ND	(c)	200 ug/l[e][f]	chronic: 1,000 ug/l	18,000 ug/l	36 mg/day
1,1-dichloroethane	8-1,000 ug/l (12/24)	ND	(c)	NR	NR	NR	8.1 mg/day
chloroethane	12-2,500 ug/l (11/24)	ND	(c)	NR	NR	NR	NR
trichloroethene	5-650 ug/l (11/24)	ND	(c)	0[e] 5 ug/l[f]	1-day: 2,000 ug/l 10-day: 200 ug/l chronic: 75 ug/l	0 (2.8 ug/l)[l]	NR
tetrachloroethene	5-280 ug/l (5/24)	ND	(c)	NR	1-day: 2,300 ug/l 10-day: 175 ug/l chronic: 20 ug/l	0 (0.88 ug/l)[l]	NR

TABLE 6-3

MCAS CHERRY POINT
TOXICOLOGICAL EVALUATION
SITE NO. 10

Compound	Concentration Range (No. of Positive Detections/No. of Samples)[a]				North Carolina Water Quality Standards		MCLs[3][4][5]	SNARLs[6]	AWQC[6][7]		ADIs[8]
	Leachate Water	Leachate Soil	Surface Water	Sediment	GW[1][b]	SW[2][b]			Drinking Water	Fish	
1,1-dichloroethane	6 ug/l (1/7)	ND	ND	ND	(c)	NR	NR	NR	NR	NR	8.1 mg/day
phenolics	0.02 mg/l (2/7)	ND	ND	ND	0.001 mg/l (d)	*	NR	NR	35 mg/l[d]	NR	7.0 mg/day (d)
cyanide	0.074 mg/l (1/4)	ND	ND	ND	NR	NR	NR	NR	0.2 mg/l	NR	7.8 mg/day
arsenic	0.001-0.005 mg/l (3/4)	0.44-11.3 mg/kg (4/4)	ND	3.6 mg/kg (1/1)	0.05 mg/l	0.05 mg/l	0.05 mg/l (f)(h)	NR	0(2.5 ng/l)[i]	0(17.5 ng/l)[i]	NR
copper	0.04 mg/l (1/7)	2-39 mg/kg (7/7)	ND	2 mg/kg (1/1)	(c)	0.01 mg/l	1.0 mg/l[g] 1.3 mg/l[h]	NR	1 mg/l	NR	NR
zinc	0.01-0.10 mg/l (5/7)	7-92 mg/kg (6/7)	0.01-0.02 mg/l (2/2)	2 mg/kg (1/1)	(c)	0.05 mg/l	5 mg/l[g]	NR	5 mg/l	NR	NR