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04 SEP 1996

Commonwealth of Virginia  
Department of Environmental Quality  
Attn: Mr. Stephen Mihalko-4th Floor  
Federal Facilities Project Officer  
629 E. Main Street  
Richmond Virginia 23219

Re: Response to Comments on the Draft Work Plan for  
Sites 4, 21, and 22 at Naval Weapons Station  
Yorktown, Yorktown, Virginia

Dear Mr. Mihalko:

The Navy is pleased to provide responses to comments for your letter dated August 21, 1996. Baker Environmental is tentatively planning to mobilize for the field work at Sites 4, 21, & 22 during late October 1996. Any additional concerns should be resolved as soon as possible so the Work Plans can be finalized and the field work can commence on schedule.

If you have any questions concerning these responses to your comments on the Draft Work Plan for Sites 4, 21, and 22, please contact Mr. Richard Stryker (757) 322-4778.

Sincerely,

N. M. JOHNSON, P.E.  
Head  
Installation Restoration Section  
(North)  
Environmental Programs Branch  
Environmental Quality Division  
By direction of the Commander

Copy to:

VDEQ (Mr. Steve Mihalko)

WPNSTA Yorktown (Mr. Jeff Harlow, Code 09E)

Baker Environmental, Inc. (Mr. Rich Hoff)

**RESPONSE TO COMMENTS PROVIDED BY  
VDEQ ON THE DRAFT WORKPLAN  
FOR SITES 4, 21, AND 22  
NAVAL WEAPONS STATION, YORKTOWN**

**VDEQ COMMENT LETTER DATED AUGUST 21, 1996**

1. The soil borings taken during the Round I RI were taken during the construction of monitoring wells appear to be located just beyond the areas of contamination. As a result, the subsurface samples may not present a true indication of subsurface conditions. Additional subsurface samples should be taken within the RI study areas to be able to determine whether subsurface contamination exists.

Response

Five additional subsurface samples have been taken from the bottom footprint of the biocell currently being constructed at Site 22. The Navy believes that these samples, coupled with the subsurface soil samples associated with monitoring well locations will be sufficient to address site conditions.

2. Page 4-2, Section 4.1: It is unclear how the different soil samples will be used for risk assessment. This section indicates that the surface soil samples from this investigation will be combined with the surface soil samples from the removal confirmation. However, page 2-14 indicates that at least some of the confirmatory soil samples were taken from the base of the excavated area at 0-6 inches before backfilling. Will these be treated as subsurface samples?

Response

Former operations at Sites 4 and 21 were conducted at the surface. The Removal Action conducted at these sites involved the removal of waste materials from the surface. The confirmatory samples reflect surface conditions after removal of the waste. Although no backfilling took place, the sites were regraded, covered with topsoil and revegetated after the confirmatory samples were collected. The confirmation samples will be utilized as surface soil data in the human health risk assessment. The text will be revised to clearly state this.

3. Page 4-2, Section 4.1: This section indicates that the data from this investigation will be compared to the USEPA Region III RBC Table dated 10/20/95. Please note that the most recent table available at the time the report is prepared should be used. In addition, it should be noted that this table only contains human health values. The comparison values for the ecological risk assessment should also be noted.

Response

Agreed. The most recent RBC table will be used. The text will be revised to include comparison values for the ecological risk assessment.

4. Page 4-2, Section 4.1.1.1: There appears to be a discrepancy in the number of surface soil samples to be taken. Both 6 and 7 are mentioned in this paragraph. Please clarify.

Response

Six surface soil samples will be collected. This typographical error will be corrected.

5. Page 4-5, Section 4.1.1.3: It is also not clear why the soil sample analyses do not include nitramines/nitroaromatics since they have been detected in previous investigations in both soil and groundwater at this site. These should be included in the Round Two sampling.

Response

Agreed. Nitroaromatics will be included in the sample analyses as requested.

6. Page 4-15, Section 4.2.2.3: The groundwater analyses should also include nitramines/nitroaromatics based on results of previous investigations.

Response

Agreed. Nitroaromatics will be included in the sample analysis as requested.

**INTERNAL VDEQ MEMORANDUM FROM MR. MARK RICHARDS TO MR.  
STEPHEN MIHALKO, DATED AUGUST 22, 1996.**

1. It is noted on page 2-13 of the workplan that seeps have been observed along the banks of Site 21. It is recommended that samples be collected and evaluated for the full suite of analytes from these seeps.

Response

Surface water and sediment samples are proposed in the tributary that separates Sites 4 and 21 (Figure 4-3). These locations are sufficient to monitor the potential for groundwater contaminant discharge to the surface water and sediment of this tributary.

2. In the Round One RI sampling, mercury was detected in the surface water at a concentration of 5.56 ppb at Station 4SW/SD03. This station should be maintained for the Round Two RI sampling. On Figure 4-3, proposed sampling station 4SW/SD07 has been moved slightly in an easterly direction. Please make this correction.

During past meetings, it was speculated that the source of mercury found at other sites could be from disposed mine casings, etc. where mercuric chloride was used as an underwater anti-foulant. Since there is an apparent mercury source based on the description of items disposed at Site 4 and possibly Site 21, it is recommended that further assessment of mercury contamination be conducted. This could be performed through tissue analysis of the unnamed tributary and Felgates Creek which would yield information on biota uptake.

Response

Surface water/sediment sampling locations are approximate. Field conditions such as tides, depth of water and vegetation will influence sample station location. Note that surface water is tidally influenced in this area.

The analytical program for fish sampling (number of samples and analytical parameters) will be determined based on the results of the surface water/sediment sampling. For fish samples selected for analyses, whole body samples of Mummichug will be submitted for analyses.

3. Based on the location of Site 22 relative to Felgates Creek, are there direct pathways for site contaminants to Felgates Creek? How about the adjacent wetland? It is recommended that sediment be evaluated for contaminants directly south of this site (or other more appropriate areas within the adjacent wetland where a pathway exist). Areas where seeps occur should be considered.

Response

Agreed. Three sediment sampling stations will be added to the marsh area surrounding Site 22. Two sediment samples will be collected from each station (0-4" and 4-8").

4. On the bottom of Page 4-9 where the target analytes for surface water and sediment are discussed, there is no mention of pesticides and PCBs. However, pesticides and PCBs are included as target analytes for these media in Tables ES-1 and 4-1. Please clarify this discrepancy as VDEQ strongly recommends pesticides and PCBs be evaluated.

Response

Pesticides and PCBs are included as target analytes for surface water and sediment. The text will be revised to correct this omission.

Re: Response to Comments on the Draft Work Plan for  
Sites 4, 21, and 22 at Naval Weapons Station  
Yorktown, Yorktown, Virginia

Blind copy to:  
1822 (RNS)  
1822 (Admin Record)  
18S  
4-21deq.rns