

03.01-10/15/98-64



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Hazardous Sites
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Date: October 15, 1998

Mr. Tim Reisch
Atlantic Division, Naval Facilities Engineering Command
Environmental Quality Division
Code: 1822
Building N 26, Room 54
1510 Gilbert Street
Norfolk, Va 23511-2699

Re: USN St. Julien Creek Annex, Va.
Landfill B and the Burning Grounds
Review of the Navy's draft *RI/FS Work Plan Addendum*

Dear Mr. Reisch:

The U.S. Environmental Protection Agency (EPA) has preliminarily reviewed the Navy's draft *Remedial Investigation Work Plan Addendum* for Landfill B and the Burning grounds, located at the St. Julien Creek Annex (SJCA), and we offer the following comments:

1.0 GENERAL COMMENTS

1. The document does not include a list of acronyms used throughout the document. This reference should be included at the beginning of the document, typically after the Table of Contents page.
2. Several sections of the document refer to previous documents for information concerning analytical methods, frequency and types of QA/QC samples, sample collection procedures (including holding times, preservation and sample containers), well construction methods and decontamination procedures. Referenced documents include the previous remedial investigation (CDM Federal 1997) and the RI Work Plan (CDM Federal 1997). It is suggested that the information for the items listed above be provided in the appropriate sections of this document in order to allow this document to stand alone.

3. Phosphorus was detected in surface water and sediments at Landfill B and in surface soils and sediments at the Burning Grounds during preliminary investigations. However, phosphorus is not included in the analyte list for the supplemental activities. Phosphorus should be included in the supplemental activities in the media were it was previously detected in order to maintain consistency with previous investigations. Additionally, phosphorus is a contaminant associated with munitions, and therefore should not be eliminated from the COC list merely because it occurs naturally. The determination of whether phosphorus is a COC should be made in conjunction with the finalization of the background study for the facility.
4. Figures 3-1 and 3-2 show existing and proposed sampling locations for surface water, sediment, and soil. The report states that surface water and sediment have been and will be collected from many of the drainage ditches near the site. The BTAG recommends marking these drainage ditches on the figures as well as elevation contours so that potential transport pathways and new sampling locations can be evaluated. There are also several references to wetlands or marshes in the text where sampling will occur. These areas should be clearly marked on the figures.
5. The BTAG provided comments on work in progress on ecological risk assessments (ERA) for Landfill B (Site 2) and the Burning Grounds (Site 5) in July of 1998. The subject documents state that during the preparation of the ERA as well as during discussions with team members, it became apparent that additional data were necessary to fully define the extent of contamination. It does not appear that proposed sampling addresses the previous comments.
6. Although a conceptual model or exposure pathway analysis were not presented in the previous work in progress document or the subject documents, the BTAG continues to assert that site characteristics indicate contaminant migration from the above sites to aquatic areas is probable. Therefore, the BTAG reiterates a request to sample the central area of the tidal wetland and St. Juliens Creek in association with Site 2 and Blows Creek, the estuarine emergent marsh, and the confluence of Blows Creek and the Elizabeth River in association with Sites 3, 4, and 5. We note that background (i.e. upgradient) samples are proposed for St. Juliens Creek and Blows Creek. Once these samples are collected a quick screening level risk assessment should be performed following the 1997 EPA Guidance for Conducting Ecological Risk Assessments For Superfund.
7. The draft Work Plan indicates that composite samples from 0-2 feet will be collected to evaluate the potential exposures to burrowing organisms as suggested by NOAA. Although this seems like a reasonable approach, NOAA suggests coordination with the BTAG on this issue. Surface soil samples are

proposed to be collected from 0-3 inches. Normally, BTAG requests a 0-6 " interval for surface soil collection, and 0-3 " for sediment. A six inch to two foot interval may also be necessary, since sub-surface soil data will be needed for the completion of the ERA.

2.0 SPECIFIC COMMENTS

1. **Page 4, Section 3.3.1** The report states that subsurface soil at six locations around the perimeter of the site will be collected for the ecological risk assessment, and to confirm the extent of subsurface waste material encountered in the southwest corner of the site. The report further states that subsurface soil samples will be collected from a depth of 0.25 to 2 feet, to evaluate risk to burrowing animals. Please refer to general comment number 7 above.
2. **Page 8, Section 3.4.1** The report states that subsurface soil at six locations around the perimeter of the site will be collected for the ecological risk assessment, and to confirm the extent of subsurface waste material encountered in the southwest corner of the site. The report further states that subsurface soil samples will be collected from a depth of 0.25 to 2 feet, to evaluate risk to burrowing animals. Please refer to general comment number 7 above.
3. **Figure 3-1** Figure 3-1 shows the existing and proposed sampling locations for Site 2. The BTAG recommends sediment and surface water samples be taken from Saint Juliens Creek. The creek likely receives surface water runoff from the landfill due to its proximity. In addition, the creek may receive groundwater discharge from under the landfill that could contribute contaminants to the creek. Sampling locations should include areas where surface water or groundwater seeps enter the creek.
4. **Figure 3-2.** Figure 3-2 shows the existing and proposed sampling locations for Site 5. Additional samples should be located in Blows Creek. The creek likely receives surface water runoff from the Burning Grounds due to its proximity. In addition, the creek may receive groundwater discharge from the site that could contribute contaminants to the creek. Sampling should include areas where surface water or groundwater seeps enter the creek.
5. **Table 3-2.** Table 3-2 provides a summary of Landfill B sampling and analysis strategy. The table shows that samples will be analyzed for Target Compound List (TCL)/Target Analyte List (TAL), and explosives. Pesticides and PCBs should be included. These compounds were listed as contaminants of potential concern (COPC) in Table 3-1.

6. **Table 3-4.** Table 3-4 provides a summary of Site 5 sampling and analysis strategy. The table shows that samples will be analyzed for TCL/TAL, and explosives. The BTAG recommends that samples also be analyzed for pesticides, PCBs, and phosphorus. These compounds were listed as COPCs in Table 3-3.
7. **Table 3-2 and Table 3-4.** These tables indicate the analyte group for each media to sampled. However, neither these tables, nor the associated text indicate whether both filtered and unfiltered samples will be collected for metals analyses for groundwater and surface water samples. Collection of both filtered and nonfiltered samples is recommended and should be clarified in the analyte group section of these tables.
8. **Table 3-2 and Table 3-4.** These tables indicate the analyte group for each media to sampled. However, neither these tables, nor the associated text indicate whether low level VOC analysis will be performed for groundwater and surface water samples. Low level VOC analysis is recommended and should be clarified in the analyte group section of these tables.

3.0 **TYPOGRAPHICAL ERRORS**

1. **Figure 3-1.** SB-01 is identified twice in this figure. One SB-01 location is identified on the south-east boundary of the landfill. The second SB-01 is located northwest of the landfill, on the other side of Craddock Street. Since there should be only one subsurface sampling location with the SB-01 designation, subsurface sampling locations should be renumbered as necessary.

This concludes EPA's review of the Navy's draft *Remedial Investigation Work Plan Addendum* for Landfill B and the Burning grounds, located at the SJCA. If you have any questions regarding the above, please feel free to call me at (215) 814-3357,

Sincerely,



Robert Thomson, P.E, AEP
Federal Facilities (3HS50)

cc: Sharon Wilcox (VDEQ, Richmond)
Barbara Okorn (USEPA, 3HS41)