



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107-4431

NOV 03 1995

Mr. Orlando Monaco  
Naval Facilities Engineering Command  
Environmental Contracts Branch  
10 Industrial Highway  
Lester, Pennsylvania 19113

Re: Naval Air Warfare Center (NAWC), Warminster, PA

Dear Mr. Monaco:

This letter provides additional EPA comments on a Proposed Subsurface Soil Investigation for Area A as submitted by Brown and Root Environmental and dated September 7, 1995. In particular, this letter addresses two portions of Area A - the area of former impoundments associated with the industrial waste treatment plant and the area of an apparent former dump (identified and notated by EPA-EPIC as D1).

#### FORMER IMPOUNDMENTS

As noted in the subject sampling proposal, the northwestern corner of Area A is the site of eight former impoundments which have been designated impoundments IM1 through IM8. These impoundments were "closed" prior to 1980 by the Navy without any sampling to confirm that any contamination of concern below the impoundments had been removed as part of the "closure". Recently, the Navy has removed soils of potential concern from below the location of former impoundment IM8 as part of a Remedial Action which includes construction of a groundwater treatment building. To confirm that contaminant levels of concern do not remain in soils underlying impoundments IM1 through IM7, the Navy should collect at least five soil samples from below each impoundment **which are representative of soil between the bottom of fill material placed during "closure" and underlying bedrock.** EPA has already requested this be done in the case of IM4, IM5 and IM 6.

Based on information included in the attachments provided to the proposal, to date, EPA has determined that two (2) "representative" soil samples have been collected from below IM1, one "representative" (1) sample from below IM2, and none from below IM3 or IM7. Assuming at least one sample collected in the case of each impoundment will not be "representative" of the soil of concern (e.g., the sample will be of "clean fill" material or a boring will miss a former impoundment), at least four (4)

additional soil samples should be collected from below IM1, five samples (5) from below IM2, and six (6) samples each from IM3 and IM7.

Each representative soil sample should undergo analysis for TAL metals and cyanide, TCL VOCs and TCL pesticides/PCBs. At least two representative samples from each impoundment should undergo analysis for TCL semi-volatiles. Since each impoundment may have received chromium from plating operations, it is recommended that hexavalent chromium analysis be performed on each sample. Soil boring locations should be based aerial photo analysis and proximity to the center of the impoundments as located by GPS and coordinates provides by EPIC. EPA requests the opportunity to concur with all boring locations in the field prior to the start of the investigation.

#### **FORMER DUMP D1**

Per aerial photos, from at least 1942 to 1950, this approximately one-half acre "dump" was located on the bank of and adjacent to an unnamed tributary of Little Neshaminy Creek located on NAWC property. By 1958, portions of this tributary on NAWC property (and adjacent areas) had been filled in and a storm sewer installed within the fill.

The results of Phase I and Phase III RI sampling of surface water and sediment in the subject tributary indicate elevated levels of lead, copper, zinc and PCBs in surface water and/or sediment downstream of D1 and storm sewer outfall. The detected contaminant levels indicate a potential unacceptable risk to aquatic life in the tributary. The preliminary results of Phase III RI surface soil sampling apparently within the area of D1 indicate elevated levels of lead, copper and zinc, suggesting D1 may be an active source of surface water contamination.

In addition to the metals of concern, both TCE and PCE have been detected in surface water and sediment downstream of D1 and the outfall. While the detected levels do not present a threat to aquatic life, this data suggests that D1 may contributing to unacceptable levels of TCE and PCE in groundwater within Area A. Unfortunately, there are no monitoring wells downgradient of D1 to evaluate any impacts of D1 on groundwater quality.

Exploratory borings S1-25 and S1-26 apparently conducted within the area of D1 during the Phase I RI detected waste materials and organic vapors ranging from 1 to 20 ppm at depths from 2 to 10 feet. To build on this data and to help determine the location of subsurface soil samples, the Phase III RI workplan included the collection of soil gas samples on a 25 foot grid over the entire area of D1 (see letter from Halliburton NUS to the Navy dated April 6, 1995). However, based on the information included in Attachment I to your letter of September 7, 1995, and draft Figures 1C and 1D to your letter off October 25, 1995, soil gas

samples were not collected over a significant portion of D1, or collected at 50 foot rather than 25 foot intervals. When asked why the collection of the planned soil gas samples was omitted, Halliburton NUS could provide no explanation. In addition, because actual site features such as the access road, the guard house and the OHM trailers are not drawn to scale on the maps appearing in these figures and attachments, it impossible to distinguish whether elevated soil gas levels which were detected during the Phase III in the apparent vicinity of D1 were from within D1 or from an adjacent area which may contain a separate potential contaminant source. (It is also worth noting that the draft soil gas figures in the letter of October 25, 1995, suggest that soil gas samples were collected throughout the area of D1, while Attachment I indicates the contrary.) Also, it is currently not possible to distinguish whether the geophysical anomaly appearing in draft Figure 1A to the letter of October 25, 1995, is within or outside of D1. Because of these information gaps, based on the provided information, EPA cannot comment on the number and location of soil samples within the area of D1 at this time.

Prior to developing specific comments on the subsurface soil samples proposed for the vicinity of D1 and/or immediately surrounding areas where elevated soil gas levels and a significant geophysical anomaly were detected, EPA requests a map which accurately locates geophysical survey and soil gas survey stations and monitoring wells relative to site features such as the current access road, the guard house, the OHM trailer and the estimated area of D1 and location of the filled tributary to Little Neshaminy Creek. EPA will provide comments on the subject work as soon as practicable upon receipt of this map.

Should you have any questions or comments regarding the above, please give me a call.

Sincerely,



Darius Ostrauskas  
Remedial Project Manager

cc: Tom Ames, NAWC  
David Kennedy, PADEP