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NCBC DAVISVILLE
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

January 11, 1999

Mr. Philip Otis
Northern Division - NAVFAC
10 Industrial Highway
Code 1811/PO - Mail Stop 82
Lester, PA 19113-2090

Re: Evaluation of PCB contaminated Soils at the Northern Section of Site 9, Allen Harbor Landfill, at the former Naval Construction Battalion Center (NCBC), Davisville, Rhode Island

Dear Mr. Otis:

Pursuant to §7.6 of the NCBC Federal Facility Agreement (FFA), the Environmental Protection Agency (EPA) has reviewed the above referenced document. Comments are enclosed. If you have any questions concerning this letter, please contact me at (617) 573-5736.

Sincerely,

Christine A.P. Williams
Remedial Project Manager
Federal Facilities Superfund Section

cc: Richard Gottlieb, RIDEM
Walter Davis, CSO
Tim Prior, USF&WS
Ken Finkelstein, NOAA
Marilyn Cohen, Town of North Kingston
Howard Cohen, RIEDC
Anne Heffron, Applied Enviro-Tech Inc.
Marjory Myers, Narragansett Tribe
Eileen Curry, Dynamac Corporation
Bryan Conley, Foster Wheeler Environmental
Jim Shultz, EA Engineering Science and Technology

EPA COMMENTS ON PCBS IN LANDFILL NORTH REMEDY COST EVALUATION

General Comments:

1. EPA has determined a risk at the northern end of the Allen Harbor landfill due to PCB, Pesticide, PAH and metal contamination. Therefore, a remedial action must be implemented.

2. The Navy has performed a cost analysis of several remedial alternatives that could be constructed in order to protect human health and the environment. The most cost effective alternative, alternative 3, Cap on Cap, must be shown to be implementable thorough design calculations. Please provide more detailed design documents including a settlement analysis, a leachate collection analysis, temporary berm construction around the planned excavated area to contain the PCB contaminated soil/sediment and to prevent washout of the material due to a rainstorm event and more detailed analysis of the proposed six inches of the existing drainage layer which may not be effective to protect the thin liner (40 mil versus the usual 60 mil thickness) from punctures.

3. If the Navy proposes to remove all contaminated soils in the northern end, a created wetland would enhance the remedy. This would require the removal of PCBs to below 1 ppm in the wetland and the design of erosion protection at the drainage/ditch discharge area.

4. Alternative 2 must include monitoring of the interior of the new cap by installation of new groundwater monitoring well at location "D" provided to you at the BCT meting July 14, 1998 for use during the LTM.

5. Alternatives 2 and 3 must also include the cost of a temporary construction berm around the designated consolidation (cap) area to: 1) contain the PCB contaminated soils/sediment excavated and 2) to prevent washout of the material due to a rainstorm event. Alternative 2 must also include the additional cost of monitoring in outside the revetment and erosion barriers to determine if the cap is effective and protective in containing the contamination.

6. Neither alternative 2 or 3 meet the TSCA requirement to construct a chemical waste landfill cell at least fifty feet above the highest expected groundwater table elevation. Alternative 3 meets the requirement to create the cell above the 100 year flood elevation, but alternative 2 does not. The Navy must request a waiver from the Regional Administrator if the Navy proposes to implement either alternative 2 or 3.

7. Neither alternative 2 or 3 includes site walkovers after every storm event in the LTM to insure any erosion of the soil cap is discovered quickly and repaired quickly. This LTM must be included in the LTMP to ensure the effectiveness of the remedy.

Specific Comments:

EPA COMMENTS ON PCBS IN LANDFILL NORTH REMEDY COST EVALUATION

8. Introduction, Page 1, Paragraph 1. It is stated that the concentrations of PCBs in the soil range from 0 ppm to 200 ppm. It should be noted that these values reflect only surface soil concentration data collected to date, and may not be representative of samples collected at depth.

In addition, the titles of Primary Option 3 (Relocate and Encapsulate Soil > 10 ppm PCBs in Modified TSCA Cell On-Site) and Primary Option 4 (Removal and Off-Site Disposal of Soil > 10 ppm PCBs) should be modified to remove the reference to > 10 ppm PCBs or otherwise incorporate the 1 ppm cleanup level for ecologically-sensitive areas.

9. Primary Option 2, Consolidation/Cap In-Place with a RCRA Subtitle C Landfill Cap, Page 2, Paragraph 2. It is stated that five soil borings will be taken within each of the 43 grids that were established during the August 24, 1998 sampling event. Previous figures of the sampling events show up to 49 grids, and the Site History section on Page 1 of this document specifies 52 grids. The rationale for selecting only 43 grids should be provided.

It is also stated that soil borings will be advanced to the water table. The rationale for selecting the water table as a termination point should be provided. It is unclear that this depth will provide adequate characterization of PCB contamination, particularly at the most northern end where the water table is expected to be quite shallow. Furthermore, the next paragraph states that "Once the additional characterization has been completed, the horizontal and vertical extent of the PCB contamination will be known...." If the sampling is arbitrarily terminated at the water table, the vertical extent of PCB contamination would not be known. EPA previously recommended that "Samples should be collected at depth below the waste, <u>at least</u> to zero foot elevation in the area above the high tide five foot elevation and to two feet below mean sea level from the five foot elevation to the zero foot elevation." This issue requires clarification.

10. Primary Option 2, Consolidation/Cap In-Place with a RCRA Subtitle C Landfill Cap, Page 3, Paragraph 1. It is stated that only six grids of material with PCB concentrations greater than 10 ppm would require complete or partial excavation. Previous figures (Drawing SK-3 dated 9/18/98) show that 8 grids would require complete or partial excavation (grids with >10 ppm outside of the 17 ft elevation representing the top of the composite cap).

11. Appendix B, Analytical Costs.

a) Under General Costing Assumptions, Item 4 assumes that "all drill cuttings, decontamination solids and liquids can to returned to the landfill surface without sampling". With respect to "decontamination solids and liquids", these should be specified as it would not be appropriate to return some of these solids and liquids to the landfill (e.g., decon chemicals for sampling equipment).

b) Under Option 2, the fourth bullet lists "grouting of each well". To avoid confusion, the

word "boring" should be used instead of "well", since there are no wells being installed. The "Assume $8/foot at each boring = 8 feet" is not understood, particularly since the cost of $6/foot is used. In addition, 860 borings are listed at a cost of $41,280 for grouting. There are actually only 215 borings and the cost should be adjusted to $10,320.

c) Option 2 assumes that 6 dry grids would be excavated to 8 feet and 10 wet grids would be excavated to 2 feet. Option 3 assumes 28 dry grids would be excavated to 5 feet and 15 wet grids would be excavated to 2 feet. It is unclear why 5 more wet grids would be excavated under Option 2 than Option 3.

Furthermore, the number of dry grids (6) under Option 2 appears to reflect the grids which have detected PCB concentrations greater than 10 ppm, and that are located outside of the composite cap area (see Drawing SK-3; although 8 complete or partial grids are shown). Using this same logic, the number of dry grids under Option 3 would only assume those that have shown contamination greater than 10 ppm which would be 14 (see Drawing SK-3). However, Option 3 assumes that 28 dry grids (43 total - 15 wet = 28 dry; although see comment above regarding the total number of grids which were shown to be up to 49 in previous figures) require excavation. The same approach to estimating the number of grids and the depth for excavation should be used for Options 2 through 4.

d) Under Option 4, it is assumed that a maximum of 6,500 cubic yards will be excavated; however, the confirmation sampling is stated to mimic the sampling for Option 3 since all of the material will be removed. Option 3 assumes that 15 grids would be excavated to a depth of 2 feet, and 28 grids would be excavated to a depth of 5 feet. This corresponds to approximately 10,074 cubic yards. Additionally, see the previous comment which affects the quantity of soil and sediment estimated under Option 4.