



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

April 19, 1995

Mark Evans, Remedial Project Manager
U.S. Department of the Navy
Naval Facilities Engineering Command
Northern Division
10 Industrial Highway
Code 1823, Mail Stop 82
Lester, PA 19113-2090

Re: Draft Final Feasibility Study ("FS") for the Area A Landfill at the Naval Submarine Base ("NSB") in Groton, CT

Dear Mr. Evans:

I am writing in response to your request for EPA to review the *Draft Final Feasibility Study for the Area A Landfill* dated March 14, 1995. I reviewed this document in light of its responsiveness to our comments dated December 22, 1994; February 14, 1995; and March 2, 1995. Although the FS appears to address many of EPA's concerns adequately, several issues still need to be resolved. These issues are discussed briefly below. Attachment A contains our detailed comments.

Eastern Extent of the Area A Landfill

My December 22, 1994 letter stated that in the absence of detailed records and testing that characterize the eastern portion, EPA must insist that the entire landfill area be capped. Contrary to our agreement on January 4, 1995, the draft final FS indicates that additional investigations will be undertaken so that the landfill boundary can be delineated. Please be advised that EPA together with the Navy and the Connecticut Department of Environmental Protection should agree upon the investigations used to characterize the area and the interpretation of them before any such work is undertaken. As discussed with you before, EPA recommends that soil borings, geophysics, and test pits be taken to determine the eastern extent of the landfill. Otherwise, EPA must maintain that the entire 13 acre area be capped.

Offsite disposal of PCB Contaminated Soils

Throughout the FS the preferred alternative is described as involving excavation of the PCB contaminated hot spot and off-site disposal in a RCRA landfill (*see* pages 119, 170, 183, *etc.*). At least two samples in the area to be excavated exhibited PCBs at concentrations greater than 50 ppm (*see* page 93). Disposal of material containing PCBs at concentrations greater than or equal to 50 ppm must comply with 40 CFR Part 761. As we have discussed several times, all soils with



concentrations of PCBs equal to or greater than 50 parts per million ("ppm") must be disposed in either an incinerator (40 CFR § 761.70) or a chemical waste landfill (40 CFR § 761.75) governed by the Toxic Substances Control Act ("TSCA"). The remedial alternatives in the FS do not comply with these regulations. This should be corrected in the text.

Risk Exposure to Children

The FS indicates that risks to base children playing in adjacent areas exposed to fugitive dust were considered in development of the remedial action objectives. Risks to children playing from soil ingestion and dermal contact do not appear to have been evaluated. The report further states that risks to children were determined to be minimal (*see* pages 66 and 69). The FS must provide the backup to support this conclusion so that EPA can verify whether it is correct.

Landfill Design Issues

Concentrations of several constituents exceeded Maximum Contaminant Levels ("MCLs") in groundwater samples collected from the landfill in Phases I and II of the RI, indicating that the landfill may be a source of groundwater contamination. Although the cap is likely to lower the groundwater level in the landfill, groundwater will still probably remain in contact with the waste. EPA recommends that the landfill cap design be modified to minimize the waste/groundwater contact. One option may be to install an underdrain beneath the storm water system.

As discussed during the March 9, 1995 meeting, there is a potential for slope failures at the toe of the slope along the wetland under the current landfill design. This instability problem may be created because of groundwater accumulation behind the impermeable cap at the toe. The closure design should carefully consider this potential problem. Possible alternatives include an internal landfill toe drain or a carefully designed slope. If a toe drain is used, the collected groundwater may require treatment based on the recent sampling results.

Costs for groundwater monitoring were not included on all cost charts. The revised FS should reflect these costs.

Interface sampling only goes down to a depth of one foot. Therefore, this data can only be used to assess *erosion* of landfill materials to the wetland, not leachate impacts as discussed in the text. As discussed with you on March 9, 1995, a leachate collection system should be included as part of the design for the cap as groundwater levels often saturate the landfill wastes.

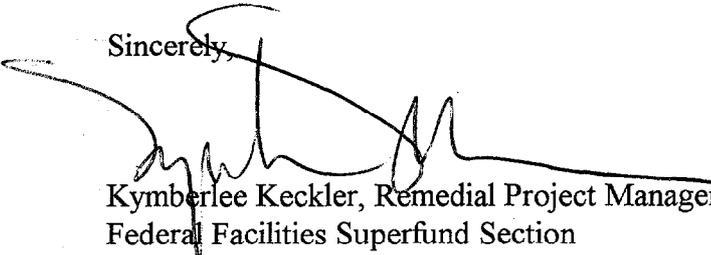
While EPA recognizes the uncertainty associated with future base closures and realignments, the FS must discuss the possibility of constructing a road on top of the cap and refer to any public review process that is ongoing for that endeavor. Failure to reveal such plans could appear furtive and therefore may not be well received by the public.

Although the sampling along the landfill/wetland interface revealed low levels of PCBs in the wetland sediment and soil, the cap design must minimize physical and/or chemical impacts to the wetland. In particular, the selected remedy shall include: i) all components of the selected remedy that address contaminated wetlands; ii) an explanation of why and how the selected remedy in or affects wetlands; iii) a list of significant facts considered in making the decision to locate in or affect wetlands, including alternative locations and actions; and iv) a list of mitigation actions to be taken in response to Section 404 of the Clean Water Act or other Applicable or Relevant and Appropriate Requirements (EPA, 1994).

Because the buffer zone between the cap and the wetland will be either very small or nonexistent, erosion control measures (*e.g.*, siltation fences, hay bales) may be needed within the wetland. This was briefly discussed on March 9, 1995. The final remedial design for the cap should include a discussion of how indirect impacts from remedial activities will be minimized, and how any damage will be assessed and mitigated (*see* EPA OSWER Fact Sheet: "Controlling the Impacts of Remediation Activities in or Around Wetlands" EPA 530-F-93-0202). As discussed in my letter to you dated December 22, 1994, mitigation may involve improvement of habitat adjacent to the landfill or wetland improvement in some other area of the base (*e.g.*, in the downstream wetlands). EPA, the Connecticut Department of Environmental Protection, and the Navy should meet soon to discuss mitigation plans for the Area A Wetland.

I look forward to discussing these comments with you soon. Please do not hesitate to contact me at (617) 573-5777 should you have any questions or wish to arrange a meeting.

Sincerely,



Kimberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc: Andy Stackpole, NSBNL, Groton, CT
Dan Winograd, USEPA, Boston, MA
Patti Tyler, USEPA, Boston, MA
Dale Weiss, TRC, Lowell, MA
Mark Lewis, CT DEP, Hartford, CT

ATTACHMENT A

<u>Page</u>	<u>Comment</u>
p. 13, ¶1 & p. 32, ¶5	EPA's March 2, 1995 comment was not fully addressed. The text should explain the adequacy of the radiological survey conducted in Phase I for detecting the radiological waste potentially disposed in the landfill.
p. 38, ¶2 & Appendix C	<p>The Navy included the wetland/landfill interface sampling and analysis results in Appendix C of the Draft Final FS. The revised text concludes that contamination did not exceed "levels of concern." The FS needs to more clearly explain what these levels of concern are and how the data were evaluated. PCBs and other contaminants above detection limits in the soil/sediment samples were exhibited.</p> <p>Concentrations of contaminants in soil/sediment samples need to either be compared with appropriate sediment benchmarks (<i>i.e.</i>, NOAA sediment guidelines or equilibrium partitioning method) or with soil levels protective of higher tropic level receptors. This assessment should be presented in Section 1.9 of the report.</p> <p>The Sample Log Sheets provided in Appendix C indicate that most of the samples collected at the landfill and wetland interface are sediment samples although some surface soil samples were also collected. However, it is unclear if the "sediment" samples were collected under standing/flowing water or are only saturated. The text should clarify if the samples collected represent sediments or wetland soils. The analytical results need to be compared to the appropriate standards.</p>
p. 61, ¶5, 1st bullet	The text has not been revised to reflect EPA's comment. EPA requested that the second sentence and the "however" from the third sentence be deleted.
Appendix C	<p>The report should describe the sample numbering scheme. The Tables in Attachment A.3 include sample IDs such as DUP-03, QW-1. However, the text does not describe these samples (duplicates, trip blanks, <i>etc.</i>).</p> <p>The report is missing Attachment A.2, Landfill/Wetland Interface Sampling Locations.</p> <p>Several data points are qualified as UR (<i>e.g.</i>, 2200 UR). EPA Region I data validation guidelines require that rejected data be qualified with an "R" only, and the quantified result not be reported (<i>e.g.</i>, R). The data tables should be revised to reflect this guidance to avoid biasing the data.</p>

The report should include a discussion on data quality, describing QC sample collection frequency, completeness, and exceedances of the precision and accuracy objectives proposed for this sampling event.

The Navy should include the data validation memos as an appendix to this report to allow the reviewer to determine if the actions taken during data validation were performed in accordance with EPA Region I protocol. At the present time, the validity of the reported data cannot be confirmed.

REFERENCE

U.S. Environmental Protection Agency. 1994. *Considering Wetlands at CERCLA Sites*. Office of Solid Waste and Emergency Response. EPA 540/R-94/019.