



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
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January 7, 1997

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 Field Sampling Plan for the Goss Cove Landfill - Data Gap Investigation for the
Naval Submarine Base in Groton, Connecticut

Dear Mr. Evans:

I am writing in response to your request for EPA to review the *Draft Field Sampling Plan for the Goss Cove Landfill Data Gap Investigation* ("FSP") dated November 1996. EPA reviewed the FSP for adherence to EPA guidance. In particular, EPA's Low Flow guidance dated July 30, 1996 was used in the technical review (a copy was provided to your office on September 26, 1996). Detailed comments are provided in Attachment A.

I understand that the scope of the FSP is limited to identification of the source of tetrachloroethylene ("PCE") in the groundwater near the Goss Cove landfill. We should, however, discuss other potential data needs (e.g., for ecological assessment of the Goss Cove or the Thames River). The Goss Cove Feasibility Study ("FS") may require additional information (unrelated to the source of PCE in groundwater) in order to compare the appropriateness of the remedial alternatives. I am concerned that such data gaps could inhibit our ability to complete an FS by March 30, 1997.

Section 1.2 of this investigation does not include a summary of existing data relevant to the source of PCE. Although information on previous investigation is provided in introductory subsections, little is presented about the current knowledge of the source of PCE. For example, a discussion of why the Goss Cove landfill is a questionable source of PCE should be included.

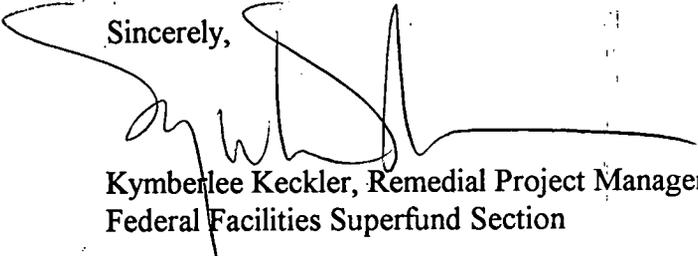
The potential for offsite contaminant sources (e.g., the nearby dry cleaners) should be assessed in this data gap investigation in addition to potential on-site DNAPLs. Currently there is not a well directly downgradient of establishments along the Military Highway. EPA recommends that a well be installed in phase 1 that would be directly west of establishments along the Military Highway.



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I look forward to working with you on the forthcoming feasibility study for the Goss Cove landfill. Please do not hesitate to contact me at (617) 573-5777 should you have any questions or wish to arrange a meeting.

Sincerely,



Kymberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

- cc: Mark Lewis, CTDEP, Hartford, CT
Andy Stackpole, NSBNL, Groton, CT
Patti Lynne Tyler, USEPA, Boston, MA
Ken Finkelstein, NOAA, Boston, MA
Jennifer Hayes, Gannett Fleming, Harrisburg, PA
Matthew Cochran, Brown & Root, Pittsburgh, PA

ATTACHMENT A

<u>Page</u>	<u>Comment</u>
p. 1-3	The landfill boundary depicted on Figure 1-2 does not appear to extend to monitoring wells 8MW8S and 8MW8D. These wells exhibited relatively high concentrations of PCE. Page 1-10 of the FSP states that the depicted estimated eastern landfill limit is justified by "the lack of VOC contamination to the east." Since 8MW8S and 8MW8D are east the estimated eastern landfill boundary, further clarification in the text and on the figure is necessary.
p. 1-5	Please provide a figure number for the plate included in the pocket. EPA assumes that the plate is Figure 1-3 since its title is consistent with the title for Figure 1-3 given in the table of contents.
p. 1-8	Figure 1-4 is referenced in the text. There is no Figure 1-4 included in the plan or listed in the table of contents.
p. 2-2	Please change the analysis cited in Table 2-1 from "TCL Chlorinated VOCs" to "TCL VOCs" as there is not an analytical method solely for chlorinated VOCs.
p. 2-3	It appears that one of the monitoring wells on Figure 2-1 has been mislabeled. The proposed monitoring well on Shark Boulevard is identified as "8MW8S." There are two wells labeled as "8MW8S." Page 2-7 describes the proposed monitoring wells as "8MW9S" and "8MW10S."
p. 2-6, §2.2.1.3	The two proposed monitoring wells, 8MW9S and 8MW10S, will be advanced using hollow-stem auguring techniques. Please specify what actions will be taken if an impenetrable fill or boulder is encountered. If a resistant material is encountered, will the borehole be abandoned and backfilled? Or will the material be cored or drilled? Please also include an estimated well depth for the proposed wells, based on existing data, in the FSP.
p. 2-6, §2.2.1.3	Please explain how the screen length of 5 feet and slot size of 0.010 inches for the two proposed shallow overburden monitoring wells were determined. Also, an illustration of a typical well construction for a shallow overburden would be helpful.

- p. 2-6, §2.2.1.3 Please describe the position of the wellhead within the steel protective casing at each well. Since the proposed well locations appear to be within a road, it is important to explain the measures that will be taken to prevent surface drainage into the well. For example, will the concrete or asphalt around the top of the flush mount casing be sloped downward in all directions to prevent ponding of water around the casing and surface drainage into the well? Also, please discuss whether a locking well cap to seal the well and a well identification tag will be used.
- p. 2-7, §2.2.1.3 The text states that well development will continue until water parameters stabilize, or seven well casing volumes are purged or four hours have elapsed whichever is greater. Page 2-8, however, states that the lack of stabilization will be noted in the field notes. If well development ceases without stabilized parameters, then all applicable observations should be noted in the logbook along with a description of the problems encountered during well development and possible explanations why the parameters did not stabilize.
- p. 2-7, §2.2.1.4 Please explain the strategic basis for sampling monitoring wells HNUS-22, 23 and 24 in the FSP. What data gaps will the wells satisfy?
- p. 2-7, §2.2.1.4 The text regarding proposed monitoring wells HNUS-22, HNUS-23, and HNUS-24 appears to contradict Figure 2-1, which indicates that they are existing wells.
- p. 2-7, §2.2.1.4 Please clarify whether the water quality parameters will be measured every 3 to 5 minutes while the well is being purged or just during the first 3 to 5 minutes. According to EPA's Low Flow guidance, the data should be recorded "every three to five minutes (or as appropriate) during purging."
- p. 2-7, §2.2.1.4 Please reference Section 3.0, Quality Assurance/Quality Control, for the sample identification system used to label sample bottles and the sample handling, packing and shipping procedures.
- p. 2-7, §2.2.1.4 The text states that two groundwater samples will be collected from each of the seven wells installed during the Phase 1 investigation. Quality control ("QC") samples should also be collected to assess the quality of the sampling procedures and laboratory analysis. Field QC samples discussed in Section 3.0 should be referenced in Section 2.2.1.4.
- p. 2-7, §2.2.1.4 The pumping rates should be reduced, as needed, to the minimum capabilities of the pump (e.g., 0.1 - 0.4 L/min) to ensure stabilization of indicator parameters.

p. 2-8, §2.2.2.2 The text states that during the Phase 2 Investigation, three deep bedrock monitoring wells will be installed in a cluster with a shallow overburden monitoring well except for monitoring wells 8MW8S and 8MW8D. Please explain why these shallow overburden wells are exempt.

p. 2-9, §2.2.2.2 As stated earlier, please include a diagram of a typical well construction for a deep bedrock monitoring well.

p. 2-9, §2.2.2.2 As discussed on page 2-6, soil samples will be collected during the installation of the shallow wells. There is no discussion of soil sampling during the installation of the deep bedrock monitoring wells. EPA recommends that soil samples also be collected for the deep wells.

p. 2-9, §2.2.2.3 Page 2-9 states that twelve groundwater samples will be collected from the six monitoring wells installed during the Phase 2. Please collect trip blanks and duplicate samples as well, and reference them here.

p. 2-9, §2.2.2.3 The description of methodologies should remain consistent throughout the FSP. Page 2-9 states that groundwater samples will be collected using the same methodology described in Section 2.2.1.4 for collecting a *free-phase sample* and a *regular sample*. However Section 2.2.1.4 refers to these methodologies as *free-phase sampling* and *low-flow purging and sampling*.

p. 3-1, §3.1.2 Please add the following: "Trip blanks will be returned to the laboratory unopened."

p. 3-2, Table 3-1 Three environmental soil samples are listed in Table 3-1. This does not correspond to the five soil samples proposed on page 2-5 (one sample from each of the three test borings and one sample from each of the two new monitoring wells).

The footnote regarding the groundwater duplicate samples is incorrect. The number of duplicate samples collected is 10% of the groundwater samples, not one per phase of sampling as the footnote states.

Also when including the quality control samples, the total number of samples should be 31. Please correct.