



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



November 25, 1991

Ms. Adrienne Townsell
c/o Commanding Officer
Northern Division
Naval Facilities Engineering Command
Building 77-L, U.S. Naval Base
Philadelphia, PA 19112-5094

Subject: Comments on the "Installation Restoration Study - Naval Submarine Base - New London Groton, Connecticut", August 1991, prepared by Atlantic Environmental Services, Inc.

Dear Ms. Townsell:

The Remedial Investigation (RI) report for the Groton Subbase has been reviewed by staff from the Site Remediation and Closure Division (SRCD) of the Waste Management Bureau. The report was prepared by Atlantic Environmental Services, Inc., on behalf of the Department of the Navy. The following are comments based on a review of the report:

General Comments:

- 1) Radiation surveys were performed by Radiation Safety Associates, Inc. (RSA) of Hebron, Connecticut for the Area A Landfill, Goss Cove Landfill and DRMO. It is noted that the surveys are contained in a separately bound report. A copy of this report is required by the State for our records.
- 2) Please supply the report on the geophysical work performed by Weston Geophysical of Westboro, Massachusetts. The RI report noted that the complete geophysical report is contained in a separately bound report.
- 3) Background concentrations for inorganics at the Groton Subbase were based on data supplied by the U.S. Geological Survey for the Eastern United States. This data was used as the standard in determining whether site-related inorganic sampling results were exceeded. This is not an acceptable practice because of site-specific variations in geology and soil type. Background samples should be obtained for each site in determining whether site-related activities have had an impact on the site.

Groton Subase
November 25, 1991
Page Two

Specific Comments:

- 4) Section 1.2.3.1, Page 1-5 - In 1991, the Connecticut Department of Environmental Protection (CTDEP) issued a report containing revisions to the 1987 "Connecticut Water Quality Standards and Criteria". This section should be changed to reflect those changes. In addition, the last sentence in the second paragraph noted the following for the groundwater classification of GB/GA: "The immediate goal, where appropriate, is to maintain the water at Class GB condition; the long term goal is to restore the water to drinking water quality (GA)." The State's goal is to restore the groundwater to drinking water quality for this classification. It is inaccurate to state that there is an immediate goal to maintain the water at a Class GB condition.
- 5) Section 3.7.2, Page 3-20 - The groundwater flow velocity should be 1.4 feet/day, not 1.7 feet/day as stated in the text.
- 6) Section 3.7.5, Page 3-27 - There is a monitoring well identified as 2LMW13D listed in the text of this section. This monitoring well does not appear on figure 3-16. Please identify where this monitoring well is located.
- 7) Section 3.7.5, Page 3-35 - In constructing the groundwater elevation contour map for Area A, off-site wells east of RT 12 were pumped for twenty minutes before water level elevations were measured. The rationale for this procedure needs to be explained.
- 8) Plate 3-3 - Groundwater contours shown on this plate indicate that some of the water table elevations are plotted higher than the land surface. Please make appropriate corrections.
- 9) Section 3.8, Page 3-48 - Please indicate what source was used within the Town of New London to establish temperatures, variant ranges in temperatures and precipitation for southeastern Connecticut.
- 10) Table 4-1A, Page 4-3 - Under the column labeled ARAR for the State of Connecticut, Pesticide Control should be labeled as Pesticide/PCB.

Groton Subase
November 25, 1991
Page Three

- 11) Section 1.2.5.1, Page 4-18 - It was noted in the 1983 Initial Assessment Study (IAS) that some of the 55 gallon drums were found leaking. Please note if the soil samples acquired during the remedial investigation were taken from where the observed releases occurred.
- 12) Section 4.5, Page 4-25 - It is noted that the concentration of delta-BHC and methoxychlor from the surface soil composite sample 4SS3C (Rubble Fill at Bunker A-86) is likely associated with past Area A pesticide applications and not from discrete disposal activities associated with this site. These compounds were not identified in any of the sampling results obtained from the Area A (landfill, wetlands and downstream watercourses) site. Explain the rationale for the conclusion stated.
- 13) Section 4.6.1, Page 4-25 - It is noted that the highest concentration of an unknown VOC (possibly toluene) was detected at location SG-21 during the soil gas survey. Future investigations of the northern septic system (which formerly served the Torpedo Shops site) need to identify and quantify what the unknown VOCs are in this area.
- 14) Section 4.6.2, Page 4-31 - An odor was encountered during the drilling of monitor well 7MW1 and was described as that similar to "Simple Green". Identify the components of Simple Green and if the soil sampling results obtained from monitor well 7MW1 correlate with this product.
- 15) Section 4.8, Page 4-47 - It was found that field measured organic vapor readings for surface soil location 14SS1D were detected above background levels for the OBDANE site. This surface soil sample came up non-detect under lab analysis for VOCs. Please identify what the background reading was on the PID and what may be the cause or source of the higher background levels.
- 16) Section 4.11.1.1, Page 4-58 - Identify if any background readings were taken during the performance of the radiation survey at the Area A Landfill. In addition, explain why gamma readings equal to or greater than 20 uR/hr for each surveyed point was used as a benchmark for further investigation as to the origin of the radiation. It is noted that location 8.5E showed 21 uR/hr at waist level and 19 uR/hr in contact with the ground. Explain how the radiation level can be higher at the waist than in contact with the ground.

Groton Subbase
November 25, 1991
Page Four

- 17) Section 4.11.1.4, Page 4-74 - It is noted that PCBs were detected in two surface soil samples (2LSS1 & 2LSS2) that are located adjacent to the concrete storage pad where drums, PCB transformers and electric switches were once stored. Figure 4-16 and Plate 4-1 identify where the samples are located, but do not depict where the pad is located. The location of the pad should be depicted in the figure and plate.
- 18) Table 4-32, Page 4-103 - This table lists the groundwater ARAR for benzene at 5 ppb. Table 4-14 (page 4-45) notes that the To Be Considered (TBC) level for benzene is 1 ppb for groundwater at the Goss Cove Landfill. Please explain why a different standard is used at each location for the same constituent in the groundwater.
- 19) Section 4.11.6, Page 4-118 - Information on page 6-82 noted that surface water sampling locations (2DSW12 & 2DSW13) are approximately ten feet away from the outfalls of the Area A Downstream Watercourses. This information should be included on page 4-118 when discussing surface water sampling results.
- 20) Section 4.11.6, Page 4-122, - It is unclear where an upgradient sample designated as 2LWSD1 is located.
- 21) Plate 4-1, End of Report - Monitor well 2DMW15S is not displayed on Plate 4-1. However, it is shown on Figure 4-22 on page 4-89. Please revise Plate 4-1 to show the monitor well location.
- 22) Section 6.2.3, Page 6-82 - Title of this section should be "Qualification of Exposure" for Step I sites.
- 23) Section 6.2.3.1, Page 6-82 - It was noted that the pesticides identified at the Rubble Fill at Bunker A-86 might be indicative of localized contamination because they were different from the pesticides detected at the NSB-NLON. This statement is contrary to the conclusion reached in Section 4.5 on page 4-25. The text on page 4-25 indicates that the pesticides were likely associated with historic Area A applications and not as a result of disposal activities identified with the Rubble Fill at Bunker A-86.

Groton Subbase
November 25, 1991
Page Five

- 24) Section 8.1.1.2, Page 8-1 - Although no further action was recommended for the CBU Drum Storage Area, further investigation is warranted for the following reasons: 1) total petroleum hydrocarbons (TPH) were found at each surface soil sample location at concentrations ranging up to 9800 ppm; 2) except for sample 1SS1, TPH concentrations at the other two sample locations (1SS2 & 1SS3) increased with depth; and 3) the composite sample (1SS4C) indicated the presence of two PAHs. Further sampling of soils is required to characterize the depth and lateral extent of contamination. The potential exists that groundwater in this area may have been impacted from the documented leakage of drums which contained waste oil, lube oil and paint materials.
- 25) Section 8.1.3.2, Page 8-3 - The report has recommended that the Torpedo Shops proceed to the Step II phase of the Installation Restoration (IR) program. It is recommended that an inventory of compounds that are or have been used at the Torpedo Shops be compiled to assist in a review of this site.
- 26) Section 8.1.4.2, Page 8-5 - Any future subgrade construction projects planned for the Goss Cove Landfill, on which the Nautilus Museum is located, should be noted in this section or that the information exists in Appendix E. In addition, it is noted that worker health and safety will be assessed for any future construction activities proposed at this site. Potential public exposure to VOCs and/or fugitive dust should also be addressed in this assessment.
- 27) Section 8.1.6.2, Page 8-7 - If any future construction activity is required at the Spent Acid Storage and Disposal Area, health and safety considerations should include the public.
- 28) Section 8.2.1.2, Landfill Soils, Page 8-18 - It was recommended that further soil sampling should be accomplished around the Area A concrete pad to define the full extent of contamination. In addition, a sampling plan to address PCB contamination of the concrete pad should be conducted. This plan should include areal wipe samples and chip and/or cor samples to determine the depth of potential contamination. This action appears appropriate due to the storage of drums and transformers on the pad and the subsequent discovery of PCBs in the soils adjacent to the pad.

Groton Subas
November 25, 1991
Page Six

- 29) Area A Downstream, Page 8-11 - Further characterization of the area around sample location 2DMW15S may be necessary due to an unconfirmed report stating that past disposal may have occurred in this general vicinity. It is possible that the TCE and PCE detected in the subsurface soils may be related to this activity.

If you have any questions regarding the comments, please call
m at (203) 566-5486.

Sincerely,



Paul E. Jameson
Site Remediation & Closure Division
Waste Management Bureau