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Ms. Kymberlee Keckler  
Remedial Project Manager  
U.S. Environmental Protection Agency  
J.F.K. Federal Building (HBT)  
Boston, MA 02203-2211

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SUBJ: RESPONSES TO EPA LETTER OF APRIL 23, 1997 REGARDING THE  
DRAFT DATA GAP INVESTIGATION REPORT FOR THE GOSS COVE  
LANDFILL

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Dear Ms. Keckler:

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Thank you for reviewing the Draft Data Gap Investigation Report  
for the Goss Cove Landfill site at the Naval Submarine Base New  
London dated March 1997. Please find attached the Navy's  
responses to the comments in your April 23, 1997 letter.

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If you have any other questions or comments please do not  
hesitate to contact me at (610) 595-0567 ext. 162.

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Sincerely,

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Mark Evans  
Remedial Project Manager  
By direction of the  
Commanding Officer

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Copy to: Mr. Mark Lewis, CTDEP  
Mr. Andy Stackpole, NSB-NLON  
Mr. Jean-Luc Glorieux, Brown & Root - Pittsburgh

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PREPARED BY

**RESPONSES TO  
USEPA's APRIL 23, 1997 LETTER OF COMMENTS  
REGARDING THE  
MARCH 1997 DRAFT DATA GAP INVESTIGATION REPORT  
FOR THE GOSS COVE LANDFILL  
NAVAL SUBMARINE BASE NEW LONDON  
GROTON, CONNECTICUT**

CTO No. 275  
June 10, 1997

**1. page 2-5**

Comment: According to the text, the installation of monitoring wells 8MW9S and 8MW10S included the placement of filter pack from the bottom of the well to approximately 2 feet above the screen. Please discuss whether a minimum of 6 inches of filter pack material was under the bottom of the screen to provide a firm footing and an unrestricted flow under the screened area.

Response:

Six inches of filter pack were installed under the bottom of the filter screen. The first sentence of the fifth paragraph of Section 2.2 (page 2-5) will be changed to:

***"The annulus between the well and the borehole was backfilled with a quartz sand from 6 inches below the bottom of the well cap to approximately two feet above the top of the screen."***

**2. page 3-7**

Comment: The characterization of groundwater concentrations is described as "low," "very low," and "minor" is not fully explained. PCE was detected in both subsurface soil and groundwater samples collected during the investigation. The text states that these concentrations were relatively low and minor by comparison, but does not explain the basis of comparison.

Response: The text of the second sentence of the first paragraph of page 3-7 characterizes the concentrations of PCE detected in soil as "relatively low". The text of the last sentence of the fourth paragraph of page 3-7 characterizes the concentrations of VOCs other than PCE detected in the groundwater as "relatively minor". In both cases, numerical values have been provided in the text to illustrate the qualitative of "relatively low" and "relatively minor". No qualitative of "very low" was used to characterize detected concentrations on page 3-7.

The text of the second sentence of the first paragraph of page 3-7 will be amended to better explain that the PCE concentrations detected in soil at borings 8TB16, 8TB17, and 8TB18 are "relatively low" because they are much lower than the PCE concentrations detected in the groundwater at well cluster 8MW8S/8MW8D and also because their numerical values are low (i.e., maximum of 86 µg/kg).

The text of the last sentence of the fourth paragraph of page 3-7 already indicates that the concentrations of VOCs other than PCE detected in groundwater are "relatively minor" by comparison to the detected concentrations of PCE. The text of this sentence will be amended to also indicate that the concentrations of VOCs other than PCE are "relatively minor" because their numerical values are low (e.g., for the first bullet of Section 3.3, the maximum TCE concentration detected at well 8MW8D can be characterized as

“relatively minor” because the maximum PCE concentration detected in the same well is 1,900 µg/L and because it is only 25 µg/L).

### 3. page 3-10

Comment: Statements and conclusions regarding the extent of PCE groundwater contamination need to be reevaluated to ensure consistency. The report states that PCE contamination extends along a southeast to northwest axis and that this axis coincides with the general direction of groundwater flow. The report concludes in Section 3 that PCE contamination is migrating in a northwest direction. In Section 4, it is concluded that the contamination is migrating onto the site from a southeasterly direction and that the source area is most likely located off-site, southeast of the 8MW8S/8MW8D well cluster. The potentiometric map included as Figure 2-2, indicates that the general direction of groundwater flow is in a southwest direction, forming a northeast to southwest axis.

Response: This inconsistency is due to an error of orientation which will be corrected in the text of Sections 3 and 4. Specifically, the following corrections will be made:

The first paragraph (following the first set of bullets) of page 3-10 will be changed to :

“As shown on Figure 3-3, the most significant PCE concentration extends along the **southwest to northeast** axis formed by the alignment of well cluster 8MW8S/8MW8D with wells 8MW9S and 8MW10S. Since this axis coincides with the general direction of groundwater towards the Thames River at the site and its vicinity, this observation tends to demonstrate that the source of PCE contamination detected in well cluster 8MW8S/8MW8D is not located within the site but rather **northeast** of it and, most likely, outside NSB-NLON. The following arguments can also be made in support of this statement:”

The second of the second set of bullets on page 3-10 will be changed to:

“A likely source of PCE contamination is the dry cleaning establishment which is located approximately 150 feet **northeast** of well cluster 8MW8S/8MW8D, next to well 8MW9S.”

The second bullet of Section 4-1 on page 4-1 will be changed to:

“The PCE contamination detected in the groundwater at well cluster 8MW8S/8MW8D is migrating onto the Goss Cove Landfill Site from a **northeasterly** direction and could originate at a dry cleaning establishment located approximately 150 feet **northeast** of this well cluster, opposite NSB-NLON's main gate.”

### 4. page 3-10, 3rd. bullet

Comment: The text is not consistent with Figure 3-3 with respect to the concentrations of PCE detected in shallow well 8MW8S.

Response:

The text of this bullet will be changed to indicate the correct concentration of PCE detected in well 8MW8S, which is 29 µg/L, as shown on Figure 3-3 and in Table 3-2.

### 5. page 4-1

Comment: The recommendation that “no further groundwater investigations be conducted as part of the FS and that groundwater be removed from consideration as an Operable Unit” appears to be premature. Moreover, it is not consistent with our discussions of January 9, 1997 where we agreed to evaluate groundwater as part of the basewide groundwater OU or on April 9, 1997 where we agreed to evaluate

whether Goss Cove could be contaminated by groundwater. The source of PCE contamination has not yet been confirmed. Also, conclusions regarding contaminant migration direction need to be better supported.

Response: The text of Section 4.2 does not recommend that no further groundwater investigations be conducted, only that additional investigations be conducted in a separate arena from the Goss Cove Landfill FS since it was demonstrated that groundwater contamination does not originate at the site. Actually, the second paragraph of Section 4.2 does recommend further groundwater investigations.

The text of Section 4.2 will be amended to indicate that additional groundwater investigations will be conducted as part of a base-wide evaluation of groundwater.

The agreement reached during the meeting of April 9, 1997 was subsequent to the publication of this report and it was focused on the performance of a simple mass-flow model to evaluate the potential migration of contaminants from the soil of the Goss Cove Landfill to the sediment and surface water of Goss Cove via groundwater. No other potential contaminant migration vectors will be investigated as part of this modeling effort. The text of Section 4.2 will be amended to mention this modeling.

It is the Navy's opinion that the conclusions regarding the direction of contaminant migration are sufficiently well supported by the discussion presented in Section 3.3.