

RESPONSES TO COMMENTS
DRAFT FINAL FOCUSED FEASIBILITY STUDY
SITE 7, NAVAL AMPHIBIOUS BASE LANDFILL
DATE: August 2008
NAVAL AMPHIBIOUS BASE LITTLE CREEK
VIRGINIA BEACH, VIRGINIA

The U.S Environmental Protection Agency (EPA) Region III and Virginia Department of Environmental Quality (VDEQ) provided Naval Amphibious Base (NAB) Little Creek with comments and questions regarding the Draft Final Focused Feasibility Study (FFS) for Site 7, Naval Amphibious Base Landfill, distributed during the July 2008 partnering meeting. The comments were provided via track changes in the Microsoft Word Document. All grammatical suggestions and changes were incorporated as proposed. Responses to comments provided from EPA and VDEQ which were not incorporated or were modified based on further clarification are documented below. The recommended revisions provided within this RTC document are reflected in the Final Focused FS distributed on August 29, 2008.

Responses to (redline) Comments Transmitted 18 Aug 08 by Jeffrey M. Boylan, Remedial Project Manager, EPA Region III Hazardous Site Cleanup Division:

- 1. Section 1.3, 2nd paragraph: Did the DD consider the dense forested area vegetation to be adequate cover?*

Response: The DD considered the dense forested area vegetation to be adequate cover. The document has been updated throughout to explain how the 1998 Remedial Action was a limited soil cover over the portion of the landfill where cover was inadequate to support vegetation. The 2nd paragraph was revised to read: "A limited soil cover was placed over the Site 7 Amphibious Base Landfill (excluding the "ear") in accordance with the 1998 DD (CH2M HILL, 1998) agreed upon by the Navy, USEPA, and VDEQ. The soil cover remedy was constructed in 1999, and included the removal of 610 cubic yards of debris along the landfill shoreline and placement of soil cover and topsoil on those areas where the existing soil cover was inadequate to support vegetation. A 12- to 18-inch-thick fill layer was placed over the central portion of the landfill where cover was inadequate, and a 6- to 8-inch topsoil cover was placed over the cover and remaining landfill area lacking adequate vegetation (OHM Remediation Services Corporation, 1999). Approximately 8,640 cubic yards of clean fill and 11,260 cubic yards of topsoil were placed on the landfill during the RA."

- 2. Section 1.3, EPA suggests a "lead in" sentence as to why test pitting was done.*

Response: The first sentence of the March 2008 test pitting discussion was revised to read: "It was assumed there was no waste in place west of the drainage canal (the "ear") and the LUC boundary was initially drafted to encompass the landfill area east of the canal. However, the Navy, USEPA, and VDEQ agreed adequate data was not available to ensure the absence of waste in the "ear" area and in March 2008, 9 test pits were excavated to confirm the presence or absence of subsurface debris west of the drainage canal."

3. *Section 1.4.1, 2nd paragraph, Section 1.4.2, 2nd paragraph, and Section 1.4.3, 2nd paragraph: Describe the type of analysis.*

Response: The statistical analysis was identified as the Kendall test in Sections 1.4.1, 1.4.2, and 1.4.3.

4. *Section 1.4.2, 2nd paragraph: Was this conclusion adequately discussed and agreed upon by all?*

Response: Yes. The conclusion was considered by and agreed to by the Team during development of the 2004 RI.

5. *Section 1.5, 2nd paragraph: What does this mean?*

Response: The data set selected in the RI was supplemented with the groundwater data from the “ear area” which was collected at the same time. To clarify the data set used in the RI and revised HHRA for groundwater, the following sentences were added to the 1st paragraph of Section 1.5: “Groundwater (excluding LS07-MW06 on the “ear”), surface water, and sediment data from Rounds 5, 6, and 7 used in the risk assessment. These sampling events were conducted in February/March 2001, October 2001, and February 2002. The groundwater, surface water, and sediment data collected prior to these dates were not included in the risk assessment because these more recent samples are most representative of current site conditions for these media. Soil data collected during the FWES RI/FS and during the February 2002 sampling event were evaluated in the risk assessment.”

Additionally, the 2nd and 3rd sentences of the 2nd paragraph were revised to read: “The receptor scenarios and groundwater data set (LTM Rounds 5, 6, and 7) including LS07-MW06 were used to recalculate risk associated with exposure to groundwater in the revised 2008 HHRA. Monitoring well LS07-MW05 was not sampled during LTM Rounds 5, 6, and 7; therefore, was not included in the revised groundwater risk assessment.”

6. *Section 1.5.3, Iron and Manganese: Please clarify how total background UTL can be less than dissolved.*

Response: Samples collected for total and dissolved metals analysis are not homogeneous, as the aquifer is also not homogenous. Total and dissolved samples collected from an individual monitoring well are collected in separate bottles at different times and thus differing results (totals less than dissolved) can occur.

As a conservative measure, background values can default to the lower UTL for initial screening; however when making risk management decisions the range of detections for both total and dissolved must be taken into consideration. Further discussion with regards to the use of established background values is warranted.

7. *Section 2.1: Is there a better word to use here*

Response: This was language carried through from FS guidance. There are no “hotspots” at Site 7, therefore the term “hotspots” was removed from the bullet.

8. *Section 3.2.2, 1st paragraph, 1st sentence: Is the existing soil cover 2 feet?*

Response: Yes, 24 inches of soil cover exists over the entire landfill following recent operations and maintenance activities. Section 3.2.2 was revised to incorporate the maintenance actions conducted in 2008.

9. *Section 3.2.2, 1st paragraph, 3rd sentence: Explain how this is limited. Include discussion of recent maintenance activities to extend the 2 foot cover.*

Response: The 3rd sentence was revised to read: “The initial limited soil cover was installed in 1997 (CH2M HILL, 1997) and in 2008 the vegetation covering the remaining portion of the landfill was removed and a 24-inch soil cover was established over the entire landfill area (JV, 2008).”

The following discussion regarding the 2008 O&M activities was added to Section 1.3: “Landfill operations and maintenance (O&M) activities were conducted January through July 2008 to extend the soil cover over the remaining portion of the landfill area (AGVIQ/CH2M HILL, 2008). Vegetation was removed from the landfill and the northern boundary was stabilized with bamboo matting to prevent erosion and sedimentation in Little Creek Cove (Figure 1-3). An 18-inch thick layer of clean fill and a 6-inch layer of topsoil were placed over the landfill and seeded. Additionally, debris was removed from the pond and the adjacent landfill boundary was stabilized using concrete matting.”

10. *Section 3.2.2, 4th paragraph, 1st sentence: Are these post ROD LUC activities?*

Response: Yes. The 1st sentence was revised to read: “Post-ROD operation and maintenance activities at Site 7 will include soil cover maintenance and inspection, erosion and stormwater controls maintenance, and mowing.”

Responses to (redline) Comments transmitted July 24, 2008 by Paul E. Herman, P.E., Remediation Project Manager, Federal Facilities Program, Virginia Department of Environmental Quality:

1. *Executive Summary, 2nd paragraph, 5th sentence: Identify the agency that issued the non-conforming permit.*

Response: The 5th sentence was revised to read: “A nonconforming permit was issued by the Commonwealth of Virginia Department of Health on August 28, 1979 to allow disposal on an interim basis at Site 7, as site conditions were not conducive for landfilling.”

2. *Section 1.2.1, 1st paragraph: Address the presence or absence of access restrictions along the northern boundary of the site.*

Response: The 8th sentence was revised to read: “There is no longer access to the landfill from the west across the drainage canal and access from the north is limited by Desert Cove.”

NAVFAC Mid-Atlantic review of the draft final document:

1. Revise the 2nd paragraph of Section 3.2.2 to read: “LUCs will prevent unrestricted exposure to landfill contents by restricting intrusive digging/excavation within the defined LUC boundary. Signage with notification of environmental concerns and imposed digging/excavation restrictions will be posted along the perimeter of the defined LUC boundary.”
2. Section 3.2.2, 1st sentence: Replace “other land use” with “an unlimited use/unrestricted exposure land use”.
3. Sections 4.1.1 and 4.1.3: Remove “unlimited site use” from preventative measures of Alternative 1.