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MCB CAMP LEJUENE  
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U S NAVY RESPONSE TO U S EPA REGION IV AND NORTH CAROLINA DEPARTMENT OF  
ENVIRONMENT AND NATURAL RESOURCES COMMENTS REGARDING DRAFT  
PRELIMINARY ASSESSMENT/SITE INSPECTION REPORT MCB CAMP LEJEUNE NC

06/02/2011  
CH2M HILL

Response to Comments  
Draft Preliminary Assessment/Site Inspection Report for Site UXO-07 Former D-6  
Practice Hand Grenade Course ASR #2.77  
MCB Camp Lejeune, North Carolina

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The purpose of this document is to address comments to the Draft Preliminary Assessment/Site Inspection Report for UXO-07 Former D-6 Practice Hand Grenade Course, Marine Corps Base (MCB) Camp Lejeune, North Carolina. The North Carolina Department of Environment and Natural Resources (NCDENR) and the United States Environmental Protection Agency (USEPA) provided the comments listed below. Responses to comments are provided in bold type.

North Carolina Department of Environment and Natural Resources  
(dated February 9, 2011)  
*Specific Comments*

1. Table 3-2 presents the groundwater field parameters. There is a wide range in the pH levels measured in these wells, with the lowest at well MR07-TW12 at a pH of 3.93. What might cause such a low pH in this well?

**The MR07-TW12 well completion boring log indicates that the clay sediments observed at depth were darker in color than what was recorded in the boring logs from the other site monitoring wells. The lower pH may be due to geochemical properties associated with naturally occurring organic material present in the sediments surrounding MR07-TW12. Localized variation of pH in groundwater is commonly found at Camp Lejeune.**

2. On page 4-4, the statement is made: "Figure 4-4 depicts the locations of groundwater soil samples that exceed two times the mean base background concentration and at least one of the screening levels (NCGWQS or USEPA Tap Water RSLs)". Possibly the word "soil" should be deleted from this sentence.

**The word "soil" has been deleted from this sentence.**

3. Section 4.2.2, which provides a summary of the results for groundwater sampling, lists all of the results and screening criteria as ug/kg. These results should be listed as ug/L.

**The units have been revised to ug/L.**

4. In Section 4.2.2 which lists the screening criteria for explosives in groundwater, the State of North Carolina has established an Interim Maximum Allowable Concentration for perchlorate of 2 ug/L, (IMAC effective date December 1, 2010).

**The screening criteria for perchlorate has been revised to 2 ug/L.**

5. In Section 4.2.2, the screening criteria for chromium are listed as 2X Mean BBG and the EPA tapwater RSL. Since there is a North Carolina 2L standard for chromium, 10 ug/L, possibly that should be used in lieu of the EPA tapwater RSL.

**The more conservative EPA RSL is being used for human health risk screening purposes.**

6. NCDENR concurs with the recommendations made in Section 7.2 that an intrusive investigation be performed to assess the nature of the identified geophysical anomalies.

**Comment noted.**

The following are comments provided on the Human Health Sections of the Draft Preliminary Assessment/Site Inspection Report, MMRP Site UXO-7 Former D-6 Practice Hand Grenade Course from Dave Lilley:

7. Appendix H, Table Table 2.1, footnote 4. The latest RSL table is dated November, 2010.

**Appendix H has been updated using the most current RSL values from November 2010.**

8. Appendix H should be revised using this updated information.

**See response to comment 7.**

United States Environmental Protection Agency  
(dated February 9, 2011)  
*Specific Comments*

EPA agrees with the documented recommendation to perform an intrusive investigation and assess the geophysical anomalies. However, the recommendation for no further environmental sampling at this time may be premature. It appears that explosive constituents are being detected in the soil media (surface and subsurface), especially in the southern area. The sampling scheme was designed appropriately for the initial assessment; however, there is an absence of data in the 4" to 8' zone. EPA supports the statement that the current data and analysis does not identify an unacceptable risk to human health or the environment, but, additional samples should be collected from the 4" to 8' zone and the risk be reassessed.

**Composite subsurface soil samples were collected adjacent to each of the six former temporary monitoring well locations and submitted to a laboratory for the analysis of explosives constituents and perchlorate. Data indicate that none of the constituents analyzed were detected above screening levels.**