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U S MARINE CORPS RESPONSE TO REGULATOR COMMENTS TO DRAFT PRELIMINARY
ASSESSMENT/SITE INSPECTION REPORT SITE UXO-02 UNNAMED EXPLOSIVES RANGE
(ASR 2.201) MCB CAMP LEJEUNE NC
3/13/2012
CH2M HILL

Response to Comments
Draft Preliminary Assessment/Site Inspection Report for Site UXO-02 Unnamed
Explosives Range (ASR #2.201)
Marine Corps Base 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-02 Unnamed Explosives Range, Marine Corps Base Camp Lejeune (MCB CamLej), 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
(Comment letters dated September 30, 2011 and November 17, 2011)
Specific Comments

1. Please complete the last sentence of the last paragraph on at the bottom of page 5-4.

The missing text on page 5-5 was provided to the NCDENR and USEPA via email on October 6, 2011 and will be included in the final report.

2. The paragraph at the top of page 6-3 regarding Ecological Risk Screening or surface water compares the surface water at Site UXO-02 with Marine Waters. I expect, based on the surface water sample locations shown on Figure 3-5, that most of the surface water samples collected at the site are fresh water samples not marine waters. If the specific contaminated samples discussed in this section are in the marine surface waters, please clarify the locations and that they are in specific areas that have been determined to be marine waters. The statement is not specific enough. Please make appropriate changes in this section of the report to clarify the marine waters statement.

The text has been amended to note that fresh water surface water samples were collected during the PA/SI.

3. Due to the extent of metals that exceed screening values at the site, it may be appropriate to take additional samples from a few of these areas and average them to see if we have an area with metals contamination that could have been caused by range activities or to verify that the isolated concentration of metals consist of a few isolated high background concentrations.

Additional soil samples have been collected at the site to provide further delineation of select metals, as proposed in the September 2011 Site Specific Work Plan Addendum. Results will be provided in the upcoming Site UXO-02 Expanded SI Report.

4. The Exposure Pathways in Section 7.2.3 on page 7-2 should include the future residential scenario as a default, worst case, scenario.

The following statement will be added to Section 7.2.3 for clarification: "For conservativeness, potential risks were assessed based on future residential use of the site to be protective of all potential receptors (e.g., residents, industrial workers, construction workers)."

5. Appendix I: All chemicals analyzed for should appear in the ecological risk screening tables.

The ecological risk screening tables have been revised to include all chemicals analyzed by the laboratory.

6. Table G-1: Please provide all the surface sampling results so the risk assessment can be reviewed. All lab results (detects and nondetects) should be provided for each chemical in each media.

Surface soil sampling results have been forwarded to NCDENR.

7. Appendix H: Tables 2.x should include all chemicals sampled for, even if they were not detected.

All chemicals analyzed by the laboratory have been included in Appendix G (formerly Appendix H).

8. The purpose of using the 95% UCL to further evaluate the groundwater samples is unclear and inconsistent with EPA Region 4's policy of using the average of the wells in the center of the plume. Including all the samples dilutes the effect of the contaminated wells.

A groundwater plume has not been identified at UXO-02, and it is not possible to select wells in the center of a plume for calculating the groundwater EPC. Therefore, the arithmetic average of groundwater concentrations of the Step 2 groundwater COPCs were used in Step 3. The report will be revised with the following language:

“The risk-based screening and risk ratio evaluation for groundwater are presented in Tables 2.4 through 2.4b of Appendix G. As shown on Table 2.4, Appendix G, nine metals (aluminum, antimony, arsenic, chromium, cobalt, iron, lead, manganese, and vanadium) exceeded the first step of the screening and were identified as COPCs for evaluation in Step 2. Lead was evaluated separately, as discussed below. Based on Step 2 (risk ratio using maximum detected concentrations, Table 2.4a, Appendix G), all of the Step 1 COPCs were carried forward to Step 3. Based on Step 3 (risk ratio using arithmetic average in groundwater (Table 2.4b, Appendix G), arsenic, chromium, and cobalt were retained as COPCs. All of the groundwater data collected from the monitoring wells in February and March 2010 were used to estimate the groundwater concentration for the Step 3 evaluation. A groundwater plume has not been identified, and no specific “hot spots” or more contaminated wells were identified. Therefore, using all of the data to calculate the arithmetic average groundwater concentration was considered appropriate.”

**United States Environmental Protection Agency
(dated December 1, 2011)
*Specific Comments***

The Environmental Protection Agency (EPA) has completed its review of the above subject document, dated September, 2011. EPA agrees with the recommendations as stated. The recommendations are: perform an intrusive investigation and re-evaluate the need for additional sampling after completion of the intrusive investigation and conduct additional groundwater assessment for metal constituents. EPA recommends that the reevaluation also includes a reassessment of the human health and ecological risk based on the results of the intrusive investigation.

An Expanded SI was conducted at UXO-02 in September-October 2011 to address the recommendations from the PA/SI.