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MCRD PARRIS ISLAND
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U S NAVY RESPONSES TO U S EPA REGION IV COMMENTS ON DRAFT RECORD OF DECISION FOR SITE 1 INCINERATOR LANDFILL AND SITE 41 FORMER INCINERATOR
MCRD PARRIS ISLAND SC
7/1/2002
NAVAL FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION

Response to U.S. EPA Comments to the Draft ROD for Site 1 and SWMU 41
MCRD Parris Island, South Carolina

The Navy concurs with U.S. EPA comments provided on June 12, 2002 with the exceptions listed below. Comment responses providing further clarification are also provided.

Responses to General Comments

General Comment 1: The Draft Record of Decision (ROD) is well written and generally follows EPA guidance for RODs. Although the document does not exactly follow the model outline and recommended language/format presented in EPA guidance, all pertinent information is contained within the ROD.

Response: It is agreed that the document does not exactly follow the model outline and recommended language/format presented in U.S. EPA guidance. However, in June 2000, U.S. EPA requested that the ROD for Operable Unit 4 at the Marine Corps Logistic Base, Albany Georgia be used as a template for RODs performed at MCRD Parris Island. Much of the outline and some of the language used in the Site 1 ROD follows that contained in the Albany document although there have been some modifications to the format and language as a result of regulatory comments to previous RODs written for Sites 2 and 3 at the MCRD Parris Island.

General Comment 3: In addition, a final groundwater COC table is needed similar to the sediment/soil table presented as Table 2-9. Tables 2-6 and 2-8 only present the COPC list for multiple media. As the project moves into Long Term Monitoring, Table 2-9 will be used to determine which contaminants are monitored in the sediment. A groundwater COC table is needed to address the groundwater contaminants that will also be monitored.

Response: A similar table has been added to the ROD listing groundwater COCs and their respective RGOs. The methodology for the selection of the COCs/RGOs will be included as an Appendix to the ROD.

Response to Specific Comments

1. **Comment:** Page 1.1, Section 1.1, Second Paragraph. The Superfund site identification number for MCRD Parris Island is 04NY03488.

   Response: Per discussions with EPA, no change to the Site identification number will be made.

4. **Comment:** Page 1-3, Section 1.3, 2nd and 3rd paragraphs: The list of chemicals needs to be stated in the text and the receptors that have had risk shown also need to be listed in the text.

   Response: Partially agree. The requested detail will be added to Section 2.7.2 of the ROD (Ecological Risk Assessment Summary); however, the Navy feels that this information is too detailed to be included in Section 1.3.

15. **Comment:** Page 1-6, Section 1.7. A signature block that includes EPA must be in the ROD.

    Response: To be discussed with Navy.

17. **Comment:** Page 2-7, Section 2.5.3, 1st paragraph, 3rd sentence. As state in subsequent portions of the ROD, the high salinity of the shallow groundwater at Site 1 is also a major contributor to the determination that groundwater is non-potable. Revise the text to reflect this.

    Response: Values for salinity are typically reported as total dissolved solids (TDS) in mg/L. For clarity, "high total dissolved solids content" will be replaced with high total dissolved solids/salinity content."

23. **Comment:** Page 2-14, Section 2.7.2, unnumbered table. This table should be revised to include which contaminants produced the elevated HQs. The contaminants present in this table should correspond with the list of final COCs. In addition, in the first cell in the Hazard Quotients column, two different values for the HQ for surface water are presented. Revise the table.

    Response: Disagree with the comment "The contaminants presented in this table should correspond with the final list of COCs." Ecological COCs were derived based on the following methodology:

    In Steps 1 and 2 of the ERA, conservative assumptions are used to evaluate site data to determine whether additional assessment or accelerated cleanup may be warranted or to conclude that the site poses negligible ecological risks. Because maximum concentrations of several analytes exceeded conservative ecological screening levels in Site 1 and SWMU 41 meida, Step 3a of the risk assessment process was performed.

    In Step 3a, chemicals that were identified as COPCs in Step 2 underwent a refinement process that involved the consideration of factors such as:

    - toxicological evaluation of COPCs

- frequency of detection of COPCs
- spatial analysis of COPCs
- comparisons of COPCs to alternative guidelines
- background data (for inorganics)
- magnitude of screening level HQs and food-chain modeling HQs

Based on consideration of these factors, each COPC was either retained or dropped from consideration as a COC. As a result of this Step 3a assessment, the following chemicals were identified as ecological COCs for soil and sediment.

Surface Soil Ecological COCs – Total PAHs, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-BHC, beat-BHC, gamma-BHC (Lindane), Aroclor 1260, aluminum, antimony, arsenic, barium, cadmium, chromium (total), copper, iron, lead, manganese, mercury, nickel, selenium, silver, vanadium, zinc

Sediment Ecological COCs – Total PAHs, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, gamma-chlordane, copper, lead, and mercury

24. **Comment:** Page 2-15, Section 2.8.1: Discussion should be added to clarify how the ecological RGOs were selected. It is unclear why the results of the food chain models are discussed in this ROD when all the ecological RGOs are either EPA Region 4 Ecological Screening Values (ESVs) or background values.

    Response: As agreed upon by the MCRD Parris Island Partnering Team, U.S. EPA Region 4 ESVs were established as the RGOs for protection of ecological receptors; however, RGOs were modified to eliminate background and typical facility pesticide concentration effects. Food-chain modeling was performed in accordance with the ERA methodology discussed in the first paragraph of Section 2.7.2. The results of the food-chain modeling were used during the Step 3a ERA discussions to aid in the selection of ecological COCs.

26. **Comment:** Page 2-17, Section 2.8.2, Captial Costs and O&M Costs. These costs need to be broken out more for all of the alternatives. At a minimum, the major portions of the remedy should be shown (Excavation and consolidation of sediment, MNA of PAHs, Excavation and consolidation of waste materials, Installation of the cap, Restoration and monitoring of the salt marsh, Implementation of the LUCs). Also, the O&M costs should be broken out to show the engineering costs (Cap maintenance, LTM) and the LUC costs.

Response: Disagree. The level of detail for the cost breakdown of the summary of alternatives follows U.S. EPA ROD guidance (July 1999). A detailed summary of all the alternatives are presented in the FS and a detailed cost summary for the selected remedy is also provided as an Appendix to the ROD. No change is proposed.

39. **Comment:** Page 2-40, Table 2-7, Adult Resident, 1st and 3rd Rows, Last Column. The existence of elevated hazard indices is indicated for two chemicals, but the chemical names were omitted. Please revise accordingly.

Response: The column contains the names of chemicals whose concentration results in a HI greater than 1.0. Although the cumulative HI total exceeds 1.0, no individual chemical concentration resulted in an HI greater than 1.0. Consequently, no change will be made.

40. **Comment:** Page 2-43, Table 2-9. A more accurate rationale should be included for not developing a sediment RGO for arsenic. Currently, the table incorrectly states that the maximum concentration (18.8 mg/kg) is below the RGO. However, the maximum arsenic concentration exceeds both the site background value and the Region 4 ESV.

Response: The following text will be added to the ROD.

Please note that upon discussion with the MCRD Parris Island Partnering Team, arsenic was dropped from consideration as an ecological COC in Site 1 sediment. Arsenic concentrations in sediment were below alternate screening values [arsenic's effects range-median value (Long et al, 1995), probable effects level (FDEP, 1994), probable effects concentration (U.S. EPA 1996d), and apparent effects threshold (Buchman, 1999)] and background sediment concentrations were exceeded in only two sediment samples. In the aquatic food-chain model (that utilizes sediment concentrations), food chain HQs were greater than 1.0 only for the raccoon (HQ = 10.6) using NOAELs. Given the conservative assumptions used in the food-chain model, arsenic does not appear to pose significant risks to upper level aquatic receptors. Consequently, arsenic was dropped from further consideration as an ecological COC for sediment.