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U S NAVY RESPONSES TO REGULATOR COMMENTS ON TECHNICAL MEMORANDUM POST-INTERIM CONSTRUCTION RISK ASSESSMENT FOR SITE 3 CAUSEWAY LANDFILL

MCRD PARRIS ISLAND SC

9/10/2010

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST

RESPONSE TO EPA REGION 4 COMMENTS
For the Marine Corps Recruit Depot (MCRD)
Parris Island, South Carolina
Site/SWMU 3
Technical Memorandum Post-Interim
Construction Risk Assessment - July 2010.

1. **Comment:** Section 4.3, Page 27. Please explain here and in Table 11 if the results are dry weight or wet weight for ease of comparison to literature or other data sets.

   Response: The results for the fish tissue samples are on a wet weight basis. This will be added to the text on Page 27 and to Table 11.

2. **Comment:** Section 5.1, Page 30. In the first paragraph on Page 30:

   - Change "CERCLA established fish ingestion rates" to "other fish ingestion rates" or clarify this statement.
   - In the last sentence of the paragraph (beginning "Subsequent discussions…), "CERCLA receptors" should be changed to "the selected exposure scenarios."

   Response: The text has been modified as requested.

3. **Comment:** Section 5.1, Page 33. In the last paragraph prior to Section 5.2, the text mentions analysis of fish tissue included DDE and DDT in addition to DDD "and dioxin-like PCBs at the request of U.S. EPA." This should be revised to state that analysis included DDD, DDE, and DDT "at the request of U.S. EPA and NOAA, and PCBs at the request of SCDHEC based on recommendations of ATSDR. In order to address SCDHEC's request for PCB analysis, EPA's guidance required the analysis of PCB congeners. This allowed for appropriate detection limits and for comparison against screening levels for fish tissue." Also, correct this if similar text occurs elsewhere in the document. Otherwise, remove all references to specific Agencies and simply describe what was done and for what purpose.

   Response: References to specific Agencies have been removed from the aforementioned text.

4. **Comment:** Section 5.3, Page 34. The text mentions fish tissue concentrations as being wet weight. Please indicate so on Table 13, if this is the case.

   Response: Table 13 will be revised to indicate the fish tissue results are on a wet-weight basis.

5. **Comment:** Section 5.4.1, Page 35. The text references Tables 14, 14A and 14B. However there is little information regarding Table 14. Table 14 includes "Total PCBs (non-dioxin

like" and "Total PCBs (dioxin like)." These terms are contradictory to the analysis obtained. The table includes a non-dioxin like Total PCB exposure point concentration. This appears to be an error. Analyses were not performed for the non-dioxin like PCB congeners (p. 46). Also, since non-dioxin like PCBs were not analyzed for, "Total" PCBs cannot be addressed. It appears 14A and 14B represent what was analyzed and calculated. Delete Table 14 and remove references to it.

Response: Table 14 and all references to it have been deleted as requested.

6. **Comment:** Section 5.6.3, Page 40. At the end of the first paragraph a reference is made to Tables "18A and 18B". However, there is no reference to "Table 18". Table 18 is located just before Tables 18A and 18B. Table 18 does not include sufficient information to differentiate it from the other tables, yet it presents results which are in conflict with 18A and/or 18B. It appears Tables 18A and 18B represent results in accordance with EPA guidance. Delete Table 18 and any references to it, if there are any.

   Furthermore, the non-cancer results for child subsistence fisher (19) and adult subsistence fisher (8) from the RAGS tables in Appendix H differ from those in Table 18A (17 and 7 respectively). Please reconcile the differences.

   Response: Table 18 has been deleted as requested. The values in Appendix H are the correct values. Table 18A, Figure 12, and the text will be revised to present the values shown in Appendix H.

7. **Comment:** Section 5.7, Page 43, last paragraph. Delete the last sentence in the paragraph regarding "typical" CERCLA evaluations. CERCLA evaluations are site-specific.

   Response: The sentence has been deleted as requested.

8. **Comment:** Section 5.8, Page 47, First Bullet at the bottom. This bullet discusses the comparison of the results of the risk characterization of Site 3 .vs. the reference pond. The text in this bullet seems to overstate the similarities of the comparisons as compared to the discussion in Section 5.6.3, which states, the "statistical analyses…show mixed results when considering whether or not Site 3 dioxin-like PCB concentrations are statistically greater than those detected in the reference area." Please use this statement of uncertainty in the summary bullet in Section 5.8.

   Response: The statement mentioned above in Section 5.6.3 has been used to replace the first bullet in the list of items to be considered when evaluating the results of the risk assessment at the end of Section 5.8, as requested.

9. **Comment:** Section 7.1, Page 64, next to last sentence before 7.2. Replace "at the request of EPA" with "in accordance with EPA guidance."

Response: The text has been modified as requested.

10. **Comment:** Section 7.2.1, Page 65, second paragraph. The first sentence states the risks "are comparable". This description is too vague. To better reflect the comparisons between the two, the sentence should be reworded to "… are comparable to, but exceed, those from the reference location." In the second sentence, delete "and statistical comparisons". In the same sentence, Mercury is omitted from the list of primary risk drivers. Add mercury and describe its comparison by factors. Then add a new last sentence that states, "However, a statistical analysis of the two data sets showed mixed results when considering whether or not Site 3 dioxin-like PCB concentrations are statistically greater than those detected in the reference area."

    Response: The text has been modified as requested.

RESPONSE TO ENGINEERING COMMENTS SITE 3
PROPOSED PLAN AND TECH MEMO
Prepared by Meredith Amick
Marine Corps Recruit Depot (MCRD)
September 10, 2010

General Comments (Amick)

1. **Comment:** Based on the August 31, 2010 conference call, the Department understands there will be new proposed language issued for the signs on the fishing pier submitted by September 10. The Department understands that the language will be discussed at the September 14-15, 2010 Partnering Meeting.

   Response: Comment noted.

2. **Comment:** The Department commented to the Site 3 Proposed Plan December 11, 2007. Please provide response to comments.

   Response: Responses to the comments from December 11, 2007 will be provided as requested.

3. **Comment:** The Department's concerns as documented in comments to the Site 3 Tech Memo SAP and Site 3 Tech Memo are still applicable.

   Response: Comment noted.

4. **Comment:** Please note the following comment has been made to the Site 3 Causeway Landfill Sinkholes letter: Per the Department's August 3, 2007 letter (Amick to Sanford), methods ensuring that Land Use Controls were implemented and followed properly were to be carried out at Site 3. It is apparent from this letter that both the lack of the stability of the landfill and communication of Land Use Controls at Site 3 are still an issue. The implementation of Land Use Controls (LUCs) as described in the upcoming LUC RD for Site 3, should clearly state how the Depot has corrected these problems and anticipates compliance with the LUCs in the future (i.e. the leaking culvert must be corrected, proof of communication of LUCs must be provided, etc.).

   Response: Comment noted. This comment will be addressed as part of the LUC RD.

5. **Comment:** As stated in the Five Year Review, "quarterly LUC inspections are occurring at Site 3." Based on this statement in the Five Year Review as well as the recent LUC implementation issues (subsidence of the landfill as well as material removed from the landfill without Department notification) at Site 3, the Department expects the quarterly

monitoring requirement to be included to the ROD and LUC RD for Site 3.

Response: Comment noted. This comment will be addressed in the ROD and LUC RD.

6. **Comment:** Please note because Site 3 is to be inspected quarterly, the Department should be receiving the LUC Inspection Reports quarterly.

   Response: Comment noted.

7. **Comment:** Please note that the FFA is a three party agreement in which the SCDHEC and EPA have equal stake. Multiple places in this document list EPA as the lead support agency or state Navy and EPA, in conjunction with SCDHEC, etc. All such references should be corrected.

   Response: The aforementioned change will be incorporated in the final revision of the Proposed Plan.

8. **Comment:** The Department agrees with the following comment from page 11:

   " Although unacceptable risks to the aforementioned receptors was identified, because exposure point concentrations for the dioxin-like PCBs (the primary risk drives) did not exceed reference area concentrations by more than a factor of 2, the Navy considers it reasonable to conclude that contamination identified in fish at both the reference location and the 3rd Battalion Pond is anthropogenic background rather than that resulting from any Site 3 related releases (s)."

   Therefore, the Department believes that the 4th bullet under the LUC Objectives should read, "To provide notice to individuals fishing from the 3rd Battalion Pond regarding fish limitations." Please revise the document.

   Response: Because the agreed upon sign will be "MCRD Parris Island Notice: No Fishing", the bullet was changed to "To prevent ingestion of contaminants in fish tissue."

9. **Comment:** There was no unacceptable human exposure identified for swimming and wading at Site 3 and there is no LUC Objective listed in the Proposed Plan to prohibit swimming or wading; therefore, under Engineering Controls on page 14, signs prohibiting swimming and wading should not be listed.

   Response: The sign is to ensure the prevention of intrusive activities which is a LUC Objective.

Specific Comments (Amick)

1. **Comment:** Introduction Second Paragraph
   Please make the correction that the Proposed Plan was developed by the Navy/Marines, instead of the MCRD Parris Island Partnering Team.

   Response: The aforementioned changes will be incorporated in the final revision of the Proposed Plan.

2. **Comment:** Last Paragraph Page 3
   To be clearer, the sentence should read, "The HHRA indicated that potential risks exist to adult subsistence, child subsistence, and child recreational fisherman."

   Response: The text has been modified to reflect this change.

3. **Comment:** LUC Objectives Page 11
   Please bullet out, "To prohibit the extraction or any use of the groundwater beneath the site."

   Response: This text has been made into a separate bullet.

4. **Comment:** Pg 12
   The last bullet heading on page 14 should read, "CONTINUATION/MODIFICATION of Land Use Controls from the Interim Record of Decision."

   Response: The bullet heading text has been modified to ADOPTION OF THE INTERIM REMEDIAL ACTION (IRA) AS FINAL.

General Comments for both documents (Krieg):

1. **Comment:** The Department has previously issued suggestions on ways to better convey these non-site related risks. As stated in prior comments to the Technical Memorandum and past team discussions, the Department still believes that the data concludes the elevated risk is not site related.

   Response: Comment noted.

2. **Comment:** Because the Department does not agree that the risk is elevated due to contamination from Site 3, we do not concur with the need for posting any fish restriction signage. If the Navy feels that fishing restrictions are in their best interests, the Department suggests one of the following:

   a) The removal of the fishing piers to limit access to fishing and, therefore, consumption of fish from the 3rd Battalion Pond.

b) The Navy designates the 3rd Battalion Pond as 'Catch and Release Only' to remove the human receptors from eating the fish from the 3rd Battalion Pond.

c) The Navy proposes new changes to the sign language. As stated during the August 31, 2010 Partnering Team conference call, the language of the sign will be discussed further at the September 2010 Tier I/II Partnering Team Meeting.

Response: Comment noted.

Specific Tech. Memo Comments (Krieg):

1. **Comment:** The Department believes that similar language used in the last paragraph of the *Proposed Plan* on page 9 should have been included in the *Tech. Memo's* Results of the Risk Characterization (5.6.3 - page 40), the Summary (5.8 - page 46), and Human Health Risk Assessment (7.2.1 – page 64). Although a document revision is not requested, this additional language would help clarify the Navy's position on the effect of anthropogenic background to the site as well as to bring consistency between the two documents.

   Response: Text has been added to address the consistency between the Tech Memo and the Proposed Plan. The additional text includes a statement that the human health risk via fish ingestion of chemicals other than dioxin-like PCB congeners such as mercury and DDx cannot be eliminated from consideration because they are site related COCs. The bullets after aforementioned text in the previous Proposed Plan revision have been removed.

Specific Proposed Plan Comments (Krieg):

Comment: Final Remedy Proposal Summary, *No Action for Sediment*, page 2 and Post-IRA Sediment Risk Conclusions, page 8: Prior to the post-IRA risk assessment, uncertainty analysis, and risk communication discussions, the ecological risks were above EPA's point of departure of a HI=1. The Department recommends that the bullet point's wording be changed to something similar to that of 'No Action for Ground Water' and 'No Action for Surface Water,' including discussion of how the sediment concentration (and therefore the risk) of the COC's post-IRA decreased. Stating there is no unacceptable human health or ecological risks may seem misleading to the public since the site's elevated potential risks fell within the EPA's risk management range and were found to be acceptable. It could be also confusing since sediment was the primary proposed pathway for the contamination of fish from the site.

Response: The text was revised to indicate that sediment concentrations post-IRA continued to decrease.