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MCRD PARRIS ISLAND
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LETTER REGARDING U S EPA REGION IV COMMENTS ON DRAFT 1 REVISION 1
PROPOSED PLAN FOR A FINAL REMEDY AT SITE 3 CAUSEWAY LANDFILL MCRD
PARRIS ISLAND SC
1/21/2008
U S EPA REGION IV



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303-8960

January 21, 2008

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

4SD-FFB

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PO Box 5028
Parris Island, SC 29905-9001

SUBJ: EPA Review of the Site 3 D1 Rev 1 Proposed Plan for a Final Remedy (E-mail October 2007).

Dear Sirs:

EPA has reviewed the D1 Rev 1 Site 3 Proposed Plan (PP) and the associated Response To Comments (RTC). The review has resulted in additional comments which require a response and modifications to the revised draft, before a Draft Final is submitted. Since this review generated comments, it is implicit that EPA did not agree to all RTCs nor all changes made to the document. However, to save time, EPA has not addressed the RTCs specifically, but would be willing to discuss them with the Navy/MCRD if they so choose. EPA's comments on this D1 Rev 1 are as follows:

General Comments:

1. Overall, the Navy did a good job at addressing EPA's comments. Most of the requested language changes were made. However, as noted below there are several areas that require modification by the Navy to fully address EPA's comments. Also, there is

probably too much information provided on the characterization of the sediments for a Proposed Plan, especially considering the No Action proposal.

2. This Proposed Plan is presenting three distinct decisions: 1) Final Action for Site 3; 2) No Action for sediments deferred by the IROD; and 3) No Action for surface water (emphasis added) deferred by the IROD. Consequently, the **Summary of Site Risk** Section must be modified to add a discussion of why no remedial action is required for the surface water (see Specific Comments below).

The RI states that for human health, the contaminant concentrations in the surface water were compared to the “Water Quality Standards (WQS) for human health (consumption of water and organisms), and the chemicals were retained as COPCs whenever the standards were exceeded. If WQS were not available for detected chemicals, comparisons were made to the U.S. EPA Region III tap water screening criteria.” (See Table 6-1). The RI goes on to state that a “comparison of the maximum detected concentrations to risk-based screening levels is presented in Table 6-4.” Table 6-4 shows comparisons against criteria published in 40CFR 131.36 (unless otherwise noted as tap water RBCs.) The RI also discusses risk assessment results. The RI Executive Summary states, “Fluoranthene, mercury, and silver were detected in surface water at concentrations in excess of the most stringent human health RBCs or ecological screening values.” However, the RI section on Human Health (HH) Baseline Risk Assessment (BRA) states that 6 SVOCs, aluminum, arsenic, iron, and manganese exceeded the risk-based COPC screening levels. It also states that lead, mercury and vanadium exceeded screening criteria. Some chemicals only exceeded the criteria in 1 of 20 samples, and were therefore dropped from the list. Ultimately, the RI Conclusions and Recommendations for HH states for Construction workers there is a calculated carcinogenic risk of 1.0×10^{-5} and a non-carcinogenic HI of .14 for exposure to surface water. Maintenance Workers were not exposed to surface water, and Recreational Users were exposed to Fish, which should be discussed in another Section to support selecting Land Use Controls.

The RI also discusses an Ecological Risk Assessment and states that PCOCs were screened against Region IV Ecological Screening Values (ESVs) (U.S. EPA, 1995b; 1998b), where they existed. Since the surface water was saline, the surface water COPCs were screened against salt water ESVs, consistent with U.S. EPA (1996a) and SCDHEC (1998) guidance. If no salt water ESV was available, the chemical was considered to be an ecological COPC and was retained for further study in the ecological risk assessment. The initial eco screening determined that the maximum concentrations of several metals, PCBs, and PAHs exceeded ESVs, and several others were retained as COPCs due to a lack of an ESV. A discussion of Step 3A and Food Chain Modeling considerations, as well as an uncertainty analysis is included in the RI. Section 8, Conclusions and Recommendations, of the RI makes many general statements about eco risks, but only one specific to surface water (the same one in question from the Executive Summary mentioned above for HH). Section 8 does make one specific statement about surface water: “Because of the transient nature of surface water, water quality concerns would be better addressed through management of sediment and soil.”

Also, the FS may contain more specific information about projected surface water concentrations resulting after the IROD selected remedies were implemented. Preferably, Post-IROD surface water samples would have been taken to validate the projected surface water contaminant levels, and could be referenced in this PP. Please indicate if any Post-IROD surface water samples were, or are intended to be, taken. Describe the results of those samples, if already taken.

Determine what are accurate and representative statements for reference in the proposed plan which supports a No Action determination and explain. Include specific statements about the relative levels of contamination in surface water specifically where possible.

Specific Comments:

1. **Final Remedy Proposal Summary text box, Page 2** – The text for the surface water bullet should be changed to speak to whether or not there are unacceptable risks associated with COCs in the surface water based upon the RI sampling data, projected levels from the FS, and consistent with the EPA comments provided above in General Comment 2. If the data supports No Action, in addition to the new text statements, the existing text could be revised as follows: “Additionally, the capping of the landfill contents and covering of surrounding contaminated sediments as part of the IRA successfully contains potential sources of surface water contamination.”
2. **Final Remedy Proposal Summary text box, Page 2** – The text for the LUCs bullet should be changed to reflect that IMPLEMENTATION, not CONTINUTATION, of land use controls is part of the final remedy for Site 3. Please make this change elsewhere in the document consistent with this comment.
3. **Site Characteristics, Page 4** – Please add the following to the end of the last paragraph. “Since these wastes remain in place, Land Use Controls have been selected as part of the final remedy to prevent exposure to COCs, as well as to maintain the cover over these wastes.”
4. **Scope and Role of this Action, Page 5** – Revise the first sentence of the third paragraph to read: “The specific components of the proposed final remedy for Site 3 are described below in the **Preferred Alternative** Section.” As a result of this requested change the Navy can delete the five bullets since these are provided in the **Preferred Alternative** Section. Also replace “FFA” with “SMP” in the last sentence of the second paragraph. Also, please move the last paragraph of this Section and combine with the third paragraph.
5. **Scope and Role of this Action, Page 5** – The fourth full paragraph describing LUC implementation strategy and RAOs should be relocated to the **Preferred Alternative** Section and **Remedial Action Objectives** Sections as indicated in Specific Comments below.

6. **Summary of Site Risks - Sediments, Page 5, 6 and 7** – It is not clear whether there are Subsections for this Section that includes the post-IRA HH, Eco, and EPA Sampling summary text (See Comment below). Overall, this Section seems a bit disjointed and it is not clear how each Subsection supports the Preferred Alternative. Also, why are each of these next three “Sections” considered to be a separate Section? Please make these Subsections. The Subsection Titles under this Section should be indented, italicized and the font made smaller to highlight that they are indeed Subsections of this Section.
7. **Sediment Sampling and Analysis Performed Outside Sediment Area 4, Page 7** – This subsection should be formatted as requested in the above Specific Comment. Also as previously mentioned in earlier Comments and during teleconferences, the EPA expects the Navy to reissue/update the Risk Assessment document(s) for the sediments with conclusions and recommendation for No Action for EPA and SCDHEC approval. This document must be approved before issuance of the Final ROD so as to be included in the Administrative Record. Consequently, please delete the last sentence of the third full paragraph that suggests the Partnering Team is still considering whether the Administrative Record requires additional documentation, since this is contrary to EPA’s expectations.
8. **Summary of Site Risks - Groundwater, Page 7** – The first and second sentences misrepresent the status of the groundwater with respect to risk, contamination characteristics and classification. Accordingly, revise the first couple of sentences to read: “Although the groundwater is contaminated, some of the detected chemicals with elevated concentrations are likely naturally occurring [See Table 4 summarizing the post-IRA groundwater data]. However, the shallow groundwater within the Site 3 boundary has been determined to be non-potable.....”. Discuss salinity and TDS, specifically reference RI statements if possible, check your references on EPA threshold for potable water (model language after the Site 12 ROD language.)
9. **Summary of Site Risks - Groundwater, Page 7** – Revise the next to last sentence of the first paragraph as follows: “The LUCs (including institutional controls and signage) prohibiting any use of the groundwater will be implemented as part of the selected remedy to prevent unacceptable exposure from consumption and to ensure protection of human health and the environment.”
10. **Summary of Site Risks - Surface Water, Page 7** – As mentioned in EPA’s General Comment 2 above, the Navy needs to add a subsection entitled **Summary of Site Risks-Surface Water** and summarize the sampling and analysis data in the RI (including the Baseline Risk Assessment), and projected levels from the FS, that demonstrate there are no COCs that require an action be taken to restore surface water quality. In other words, the Navy must provide the justification based upon surface water characterization data that No Action is necessary to protect human health and the environment.
11. **Remedial Action Objectives, Page 7** – Insert the following revised sentence from the page 5 as the second sentence of the first paragraph of this Section: “The RAOs

established in the September 2000 IROD remain unchanged with respect to the performance of the IRA cap and cover, however, an objective has been added pertaining to fishing.” Then add a bullet at the end that says “ * To prohibit unacceptable exposure to humans via consumption of fish”.

12. **Remedial Action Objectives, Page 7** – Revise the first bullet by adding the following phrase to the end of the text: “on the landfill cap;”
13. **Preferred Alternative, Page 8** – Please revise the first two sentences to read as follows: “Sampling data for sediments obtained after construction of the landfill cap and sediment cover system indicate that the response actions undertaken to date are adequately protecting human health and the environment. Consequently, the Navy is proposing that the IRA be selected as the Final Action with the addition of long-term maintenance of the cap and cover.” Also, add the following sentence after the sentence beginning with “The IRA was the best...: “No additional remedial alternatives were evaluated considering the performance of the IRA as described above.”
14. **Preferred Alternative, Page 8** – Please delete the last sentence of the first full paragraph since in fact the residual contamination does present a risk that requires LUCs to ensure continued protection of human health and the environment.
15. **Preferred Alternative, Page 8** – Please add the following to the end of the first bullet pertaining to adoption of the interim action as final: ...for such soils and sediments “, and adds a requirement to maintain the integrity of the landfill cover.”
16. **Preferred Alternative, Page 8** – As indicated in earlier Comments, the justification for why No Action has been determined for surface water should be based on RI data that concluded there were no COCs that required action, projected levels from the FS, etc. Please update the bullet to be consistent with any changes made in the **Summary of Site Risks –Surface Water** Section.
17. **Preferred Alternative, Page 8** – As indicated in earlier Comments, revise the bullet to read IMPLEMENTATION of LUCs. Also, the text in the bullet does not seem consistent with the RAOs and the description of each of the LUCs. Accordingly, revise the second sentence to read: “Since the IROD in 2001, the Navy and EPA have agreed that LUC implementation and oversight details are to be included in a LUC Remedial Design (a post-ROD primary document submitted by the Navy and approved by EPA in accordance with the FFA). Once approved, the LUC RD will supersede the LUC Implementation Plan that was part of the IROD, as well as supersede the procedures contained in the LUC memorandum of Agreement between the Navy, U.S.EPA, and SCDHEC.” In order to accept a prohibition against subsistence fishing while allowing recreational fishing, EPA needs to understand how this will be enforceable. Please explain. ALSO, THEN ADD prohibitions against “..., swimming or wading in, or subsistence fishing from, the pond adjacent to the causeway,...” to each Institutional Control bulleted LUC description.

18. **Preferred Alternative, Page 8** – As a result of the above change, revise the third full paragraph to read: “The following describes those LUCs which will be implemented at Site 3 to achieve the aforementioned LUC Performance Objectives listed in the **Remedial Action Objectives** Section.”
19. **Preferred Alternative, Page 8** – In the bullet describing Engineering Controls, EPA would recommend changing the restriction to be within “250” or “300” feet of the landfill’s boundaries, thereby allowing the Navy/MCRD to mark the map from the center line of the landfill and be able to completely encompass the site areas, as well as measure a distinct line for enforcement, rather than trying to track the toe of the landfill or sediment cover. Then correct the map.
20. **Preferred Alternative, Page 9** – Cut the second sentence of the third bullet describing the LUCs in the Depot Order and paste it into the IMPLEMENTATION of LUCs bullet on page 8 as the last sentence. Delete the remaining text in this bullet on page 9 that describes the LUC RD since this matter is addressed briefly above. The remaining details on how the LUC RD supersedes the LUC MOA should be provided in the ROD.
21. **Community Participation, Page 23** – Please add the following paragraph as an introduction below the Section title or include in the text box: “State concurrence with the Preferred Alternative was obtained through the review and approval of documents in the Administrative Record file. Community acceptance will be determined through the publication of this Proposed Plan and solicitation of their input (including formal comments) during the public comment period. During the public comment period, the Navy, EPA and SCDHEC welcome comments and/or suggestions on the Preferred Alternative.”

The Navy requested relief from the FY08 SMP Milestone date for this PP Draft Final document and the forthcoming ROD. EPA is willing to grant relief, provided another reasonable milestone date is offered in return. This can be discussed at the next Partnering Meeting.

EPA appreciates the efforts put forth by the Base and Navy in developing this PP and looks forward to resolution of these comments, and submittal of a Draft Final Site 3 PP. If there are any questions about these comments, please do not hesitate to contact me at (404) 562-9969.

Sincerely,

Lila Llamas
Senior RPM

cc: Meredith Amick, SCDHEC
Sommer Barker, SCDHEC
Mark Sladic, TtNUS