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LETTER OF TRANSMITTAL AND U S EPA REGION IV COMMENTS ON INTERIM REMEDIAL  
ACTION/CORRECTIVE ACTION REPORT FOR SITE 3 CAUSEWAY LANDFILL MCRD  
PARRIS ISLAND SC  
10/22/2001  
U S EPA REGION IV



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

OCT 22 2001

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

4WD-FFB

Brigadier General Joseph J. McMenamin  
Commander  
Marine Corps Recruiting Depot - Parris Island  
P. O. Box 19001  
Parris Island, SC 29906-9001

SUBJ: Interim Remedial Action/Corrective Action Report (September 2001)  
Site/SWMU 3 - Causeway Landfill  
Marine Corps Recruit Depot Parris Island, South Carolina  
EPA ID#: SC6170022767

Dear General McMenamin:

The U.S. Environmental Protection Agency (EPA) has received and reviewed the above referenced document. EPA's comments are enclosed. The comments must be completely and satisfactorily addressed before the document can be approved and considered final.

If I can be of assistance in any way or you have questions regarding this issue, please call me at (404)562-8506.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert H. Pope".

Robert H. Pope  
Federal Facilities Branch  
Waste Management Division

cc: Tim Harrington, MCRD  
Jerry Stamps, SCDHEC  
Don Hargrove, SCDHEC  
Art Sanford, NAVFAC

**Interim Remedial Action/Corrective Action Report  
Site/SWMU 3 Causeway Landfill  
U.S. Marine Corps Recruit Depot, South Carolina  
EPA ID# SC6170022762**

General Comments:

1. The Interim Remedial Action/Corrective Action Report (IRA/CAR) is generally well written and provides a good presentation of the results of the IRA/CA at Site/SWMU 3. The IRA/CAR generally follows the annotated outline for this report previously reviewed by the Partnering Team with a few exceptions. Specifically, a summary presentation of the QA/QC protocols implemented and their results would help support and validate that the remedial action objectives were met.
2. Several significant CERCLA milestones are likely to be achieved for this site in the near future. These include an operational and functional certification for the interim remedy, a Final Record of Decision for the site, and a remedial construction completion determination. Some of this information is presented in Section 5 of the IRA/CAR, but additional discussion and/or a flow chart illustrating the path(s) forward for this site should be included. The long-term monitoring and operation and maintenance plans for the interim remedy, or a schedule for their submittal, should be provided in the revised IRA/CAR.
3. The IRAR must present the final cost of the remedy and make a comparison to the estimated cost derived in the FS, PP, and ROD. If costs are not within 30% below and 50% above the estimated costs, adequate justification should be provided.

Specific Comments:

1. **Page 2-4, Section 2.1.4, 2<sup>nd</sup> Paragraph, 1<sup>st</sup> Sentence and 3<sup>rd</sup> Paragraph, 1<sup>st</sup> Sentence.** Please change "...chemical constituents..." to "contaminants of concern (COCs)" to be consistent with the results of the RI/RFI. Likewise, change "The chemicals present..." to "The COCs present..."
2. **Page 2-4, Section 2.1.4, 2<sup>nd</sup> Paragraph, 2<sup>nd</sup> Sentence.** Add sediment along with surface soil to the description of primary impacted media.
3. **Page 2-4, Section 2.2, 1<sup>st</sup> Paragraph, 3<sup>rd</sup> Sentence.** Please add a bulletized list of the remedial action objectives as presented in the Interim Soil Record of Decision (section 2.8.1).
4. **Page 2-5, Section 2.2, 1<sup>st</sup> Paragraph, 2<sup>nd</sup> Bullet.** Clarify that the sediment areas were covered due to the presence of elevated contaminants of concern (COC), but the extent of sediment contamination had not been established.
5. **Page 2-5, Section 2.3, 2<sup>nd</sup> Paragraph, 2<sup>nd</sup> Sentence.** Please add "of wastes through treatment." to the end of this sentence to clarify this statement.
6. **Page 2-5, Section 2.3, 3<sup>rd</sup> Paragraph.** Add an additional bullet to the list to state the interim remedy also provides cover of contaminated sediments to minimize contaminant migration and ecological exposure to COCs.

7. **Page 3-2, Section 3.1, Last Paragraph, Last Sentence.** State that annual reporting to the regulatory agencies regarding the long-term integrity of the remedy and effectiveness of the LUCs is required.
8. **Page 3-2, Section 3.2, 2<sup>nd</sup> Paragraph, 2<sup>nd</sup> Bullet, 5<sup>th</sup> Sentence.** State whether this modification resulted in a reduction of the minimum 2-ft of soil cover over the wastes.
9. **Page 3-5, Table 3-1, Land Use Controls and Long-term Monitoring, 1<sup>st</sup> Comment.** Clarify that the LTM Plan for the site has not been submitted or approved. The LTM Plan will adhere to the requirements set forth in the Interim Soil ROD. Also, comment that periodic inspections and annual reporting are required per the IROD and the LUCIP.
10. **Page 4-5, Section 4.2, 2<sup>nd</sup> Paragraph, 4<sup>th</sup> Sentence.** As shown in Appendix B, some of the compaction tests failed to meet the 95% compaction criterion as would be expected. However, it is unclear whether all of these were re-tested and subsequently passed, or whether some percentage not meeting this criterion was acceptable. A statement clarifying the final pass/fail ratio, and the impact, if any, on the remedial action objectives (RAO), should be added.
11. **Page 4-5, Section 4.2, 6<sup>th</sup> Paragraph, 3<sup>rd</sup> Sentence and Page 4-6, Section 4.2, 3<sup>rd</sup> Paragraph, 3<sup>rd</sup> Sentence.** Clarify whether the referenced appendix should be to "B" rather than "D" as this contains the compaction test results. Also, see Specific Comment 9 for additional detail that should be included for these compacted areas as well.
12. **Page 4-7, Section 4.3, 1<sup>st</sup> Paragraph, 3<sup>rd</sup> Sentence.** Clarify whether this geotextile was placed to 1-ft AMSL or 1-ft above the break in slope. Also, clarify how this geotextile layer relates to the geotextile used for sediment cover. It is recommended that a schematic cross-section be presented to clarify how the various fill layers and geotextile layers relate to one another.
13. **Page 4-9, section 4.5, 1<sup>st</sup> Paragraph.** Please add a statement verifying that that the pavement and subgrade do not constitute a portion of the 2-ft of soil cover.
14. **Page 4-13, section 4.10, 3<sup>rd</sup> Paragraph, 2<sup>nd</sup> Sentence.** The survey data provided on CD does not allow for independent verification that the RAOs have been met. The pre-construction surface elevations and waste elevations (based on geotechnical borings) should be included. Additionally, survey points that verify field measurements and the placement of 2-ft of clean fill above the wastes should be clearly distinguished from other survey features (e.g., roadway, gabions, piers, etc.). It is recommended that a series of isopach maps be added to illustrate achievement of RAOs.
15. **Page 5-1, Section 5.2, 1<sup>st</sup> Paragraph, 2<sup>nd</sup> Sentence.** Operation and maintenance (O&M) requirements are not generally included with Long-term Monitoring (LTM) Plans, but are usually the subject of a separate O&M Plan. However, these plans could be combined into a single submittal. The content and schedule for submittal of the O&M and LTM Plan(s) should be included in the IRA/CAR.
16. **Page 5-2, Section 5.2.2, 1<sup>st</sup> Paragraph, 3<sup>rd</sup> Sentence.** Please add "of the previous wells" after the word "location" in this series to clarify the reference.

17. **Page 5-2, Section 5.2.2, 1<sup>st</sup> Paragraph, 4<sup>th</sup> Sentence.** The reference for monitoring well installation should be changed to the *Final Site/SWMU 3 Letter Work Plan for Monitoring Well Re-Installation* (TtNUS, 2001).
18. **Page 5-2, Section 5.2.3, 2<sup>nd</sup> Paragraph, 1<sup>st</sup> Sentence.** The referenced Work Plan should be deleted since it does not address groundwater sampling. The sampling protocols, frequency, analyte list, and method of data evaluation have not been determined. This information should be included in the LTM Plan for this site that has not yet been submitted by the Navy. However, the LTM Plan could be appended to the IRA/CAR at the discretion of the Navy.
19. **Page 5-2, Section 5.2.4, 1<sup>st</sup> Paragraph, 5<sup>th</sup> Sentence.** The content and frequency of reporting for routine inspection activities should be established in the O&M Plan for the site. This should be developed and submitted before the IRAR is approved, or appended to the revised IRA/CAR. Due to the nature of the interim remedy (i.e., containment), approval of the IRA/CAR will also document that the interim remedy is operational and functional. At that point, O&M will commence, and an O&M Plan should be in place. At a minimum, routine inspections must be documented on an annual basis and as problems in O&M arise. Annual reporting to EPA is also required.
20. **Appendix A.** If more legible copies of the Well Records available, please replace these copies.
21. **Appendix E.** The as-built drawings should include title and legend blocks. Additionally, a pre-construction survey map at the same scale as the as-builts should be included. Isopach maps of the soil/granular fill/cover over the waste materials and a total final cover thickness over waste must be included.
22. **Appendices G and H.** The field record documentation provided on CD appeared to be thorough and complete.
23. **Appendix I.** All photographs must be submitted in an electronic format (CD).

Typographical Errors:

1. **Page 4-1, Section 4.1.1, 1<sup>st</sup> Paragraph, 2<sup>nd</sup> Sentence.** The word "to" should be omitted.
2. **Page 4-7, Section 4.3, 5<sup>th</sup> Paragraph, 4<sup>th</sup> Sentence, Page 4-8, Section 4.3, 2<sup>nd</sup> Paragraph, 3<sup>rd</sup> Sentence, and Page 4-9, section 4.4, 4<sup>th</sup> Paragraph, 2<sup>nd</sup> Sentence.** The word "filed" should probably be changed to "field".
3. **Page 4-8, Section 4.3, 4<sup>th</sup> paragraph, 2<sup>nd</sup> Sentence.** The word "of" before riprap should be omitted.
4. **Page 4-8, Section 4.3, 5<sup>th</sup> paragraph, 2<sup>nd</sup> Sentence.** The word "was" should be changed to "were".
5. **Page 5-1, Section 5.2, 1<sup>st</sup> Paragraph, 1<sup>st</sup> Sentence.** "Site ISWMU 3" should be changed to "Site/SWMU 3".

6. **Page 5-1, Section 5.2.1, 1<sup>st</sup> Paragraph, 3<sup>rd</sup> Sentence.** The word “and” should be changed to “an”.
7. **Page 5-3, Section 5.3, 2<sup>nd</sup> Paragraph, 2<sup>nd</sup> Sentence.** Correct the disagreements between singular and plural word forms.
8. **Page 5-3, Section 5.4, 1<sup>st</sup> Paragraph, 1<sup>st</sup> Sentence.** Delete the second “at the” in this sentence.