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MCRD PARRIS ISLAND
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LETTER OF TRANSMITTAL AND SOUTH CAROLINA DEPARTMENT OF HEALTH AND
ENVIRONMENTAL CONTROL COMMENTS ON DRAFT REMEDIAL INVESTIGATION FOR
SITE 12 JERICO ISLAND DISPOSAL AREA MCRD PARRIS ISLAND SC
4/11/2001
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL



2600 Bull Street
Columbia, SC 29201-1708

1D 212
19.01.12.0006

April 11, 2001

Commanding Officer
Department of the Navy
SOUTHNAVFACENGCOM
ATTN: Mr. Art Sanford
2155 Eagle Drive
North Charleston, South Carolina 29406

RE: Draft Remedial Investigation/RCRA Facility Investigation for Site 12/SWMU 10
- Jericho Island Disposal Area (10/00)
Marine Corp Recruit Depot
Parris Island
SC6 170 022 762

Dear Mr. Sanford:

The Corrective Action Engineering and the Hydrogeology Sections of the South Carolina Department of Health and Environmental Control (Department) have completed the review of the above referenced document, which was received on November 8, 2000. The Department has determined that the attached comments must be adequately addressed prior to receiving final approval.

If you have any questions or concerns, please feel free to contact Jerry Stamps at (803) 896-4285 or Don Hargrove of the Division of Hydrogeology at (803) 896-4033.

Sincerely,

Jerry Stamps, Engineer Associate
Corrective Action Engineering Section
Division of Hazardous and Infectious Waste Management

cc:

David Brayack, TiNUS
Tim Harrington, MCRD Parris Island
Don Hargrove, Hydrogeology
Rob Pope, EPA Region IV
Priscilla Wendt, SCDNR
Tom Dillon, NOAA

ENGINEERING COMMENTS
prepared by Jerry Stamps
Corrective Action Engineering Section
Division of Waste Management
Bureau of Land and Waste Management
February 6, 2001

1. General

The Department agrees with the EPA concerning the development of a focused CMS. This focused CMS must evaluate, at a minimum, the removal and disposal of the waste material.

2. Section 3.2.2

It is unclear why subsurface soil samples were not analyzed for the typical investigative parameters such as VOCs, SVOCs, pesticides, etc... There are two facts to consider that would indicate the potential need for additional subsurface soil sampling such as:

- a. Landfill debris was encountered at depth at PAI-10-SB-06 and PAI-10-SB-07. Contaminants may have leached from the waste to the subsurface soils.
- b. Several subsurface soil borings (PAI-10-SB-01 and PAI-10-SB-06) had elevated PID readings indicating potential VOC contamination.

3. Section 3.2.5, Page 3-5

Please include a figure illustrating background sample locations relative to SWMU 10 (Jericho Island).

4. Figure 1-2 and Figure 3-2

Figures on a smaller scale are necessary to better identify the proximity of the sample location relative to the waste piles.

5. Section 4 Figures

The Department would like to commend the author for incorporating the applicable screening levels onto these figures. By doing so, the reviewer can easily determine the magnitude of the human health and/or ecological exceedances.

6. Section 4.2

This section states that the EPA Region 4 freshwater ecological screening values were used for comparison purposes based upon the assumption that the groundwater would eventually become surface water. However, Section 7.3.1 states that the EPA Region 4 saltwater ecological values would be used for screening based upon the elevated salinity in both the surface water and groundwater. Please revise accordingly.

7. Figure 4-1

It does not appear as though soil samples were collected within the vicinity of the inland waste piles; particularly the northern-most waste pile. Please explain.

8. Figure 4-1

Soil sample PAI-10-SS-05-01 appears to have elevated concentrations of PAHs; however, there is not a waste pile within the vicinity of this sample. Please attempt to explain the source of this contamination.

9. Figures 4-3 and 4-5

There does not appear to be a correlation between the surface water and sediment samples to the east side of the site. The surface water samples have consistently elevated detections of metals, particularly manganese. However, the corresponding sediment samples do not have any exceedances; thereby, eliminating elevated turbidity as an explanation. Please attempt to explain the source of the elevated metals in the surface water.

10. Section 6.2.3.3, Page 6-10; Figure 6-2; Table 6-13

Section 6.2.3.3 states that the ingestion of groundwater will be considered a pathway. This is confirmed in Table 6-13 for the child resident, adult resident, and lifelong resident. However, the CSM provided in Figure 6-2 does not indicate this exposure route for the onsite resident. Please revise accordingly.



2600 Bull Street
Columbia, SC 29201-1708

MEMORANDUM

TO: Jerry Stamps, Engineering Associate
Corrective Action Engineering Section
Division of Hazardous and Infectious Waste Management
Bureau of Land and Waste Management

FROM: Donald C. Hargrove, Hydrogeologist
Hazardous Waste Section
Division of Hydrogeology
Bureau of Land and Waste Management

DATE: 26 February, 2001

RE: Parris Island Marine Corps Recruit Depot (MCRD)
Parris Island, South Carolina
Beaufort County
SC6 170 022 767

DRAFT Remedial Investigation/RCRA Facilities Investigation for
Site 12/SWMU 10 – Jericho Island Disposal Area
(October, 2000)

The Division of Hydrogeology has reviewed the above referenced document. This document was received on 15 November, 2000. It provides a physical description of SWMU 10 that includes the known history this SWMU. It briefly describes previous studies performed at this SWMU, and presents analytical data generated during this current RI/RFI.

This document was reviewed with respect to R.61-79 of the South Carolina Hazardous Waste Management Regulations (SCHWMR), and appropriate guidance documents.

The Division of Hydrogeology found this report technically inadequate. This document should be revised to incorporate the following comments, and then resubmitted for review/approval:

1) Section 3.2.8, Tidal Influence Study: The observations with respect to the tidal influence upon watertable levels in the monitoring wells are reported, but this section lacks any real discussion of the meaning or usefulness of this data. Additionally, there's no discussion on the timing of the groundwater sampling with respect to tidal levels. Please revise the text to expound upon this topic.

- 2) Monitoring well water levels are reported in Table 3-6, but there are no figures showing groundwater contours or flow directions for the shallow and deeper components of the surficial aquifer at SWMU-10. Please revise the document to include figures that show the groundwater contours, and revise the current figures to indicate the groundwater flow for the shallow and deeper components of the surficial aquifer. Depending on the results of these figures, additional discussion might be necessary concerning how groundwater flows at SWMU-10. This could be tied in to the response with Comment 1.
- 3) There is no discussion on the proximity of drinking water wells near SWMU-10. A survey of the residences in this area should have already been performed to identify drinking water wells (public or private) in the vicinity of SWMU-10. The results of this survey should be reported in this document.
- 4) There is no discussion about the drinking water well that is currently located on SWMU-10. This well should be sampled and if clean, abandoned per R.61-71 of the South Carolina Well Standards and Regulations.
- 5) The base boundary is not shown on any of the figures. Please revise the figures to indicate the location of the base boundary.
- 6) The figures do not indicate the presence of any residences in the area of SWMU-10 even though there are residences located adjacent to this area. Any residences that are located within the area covered by the figures should be noted on said figures, including docks or piers that would indicate recreational use of the tidal creeks nearby. Please revise the figures accordingly.

If you have any questions regarding these comments, please call me at (803) 896-4033.



2600 Bull Street
Columbia, SC 29201-1708

MEMORANDUM

TO: Jerry Stamps, Environmental Engineer Associate
Corrective Action Engineering Section
Division of Hazardous and Infectious Waste Management
Bureau of Land and Waste Management

FROM: Pamela DuBois, Risk Assessor *PmD*
Corrective Action Engineering Section
Division of Waste Management
Bureau of Land and Waste Management

DATE: April 11, 2001

RE: Parris Island, South Carolina
Parris Island Marine Corps Recruit Depot (MCRD)

Document:

Draft Remedial Investigation/RCRA Facilities Investigation for Site12/SWMU 10
-Jericho Island Disposal Area
October 2000
SC6 170 022 762

The Department has reviewed the above referenced document and has the following comments pertaining to the human health and ecological risk assessments.

GENERAL COMMENTS:

Comments by NOAA, EPA, and DNR have been reviewed. The department concurs with their comments and adds the following:

- 1.) Detection Limits of some surface soil samples are above the perspective Human Health and Ecological Screening Values (i.e.; semi-volatile and mercury samples in Appendix C pages 5-7). Please provide specific laboratory information for these samples to indicate if the contaminants could have been detected in the form of J-flagged data down to the level of the screening value.
- 2.) Based on the Human Health Risk Assessment Guidance for Superfund document, the use of unfiltered samples is normally recommended. Please provide justification for the use of filtered samples for ecological screening. Commonly, filtered samples are used in

conjunction with unfiltered ones to show turbidity related increases/decreases for inorganics. However, the Department does not recommend the use of filtered samples for COPC selection.

3.) The Department concurs with NOAA and SCDNR regarding the need for further site delineation.

SPECIFIC COMMENTS:

- 1.) Tables 4-7 and 4-8: It appears as though the ecological screening criteria used for pesticides in these tables are the Region IV Sediment Effects Values and not the Screening Values. Please re-screen against Region IV's recommended screening criteria as listed in Region IV's Ecological Risk Assessment Bulletins.
- 2.) Table 6-1: As no dilution attenuation factor (DAF) was given, it appears that the Soil Screening Levels (SSLs) for migration to ground water are those corresponding to a (DAF) of 20. The Department recommends screening against the generic SSLs corresponding to a DAF of 1. If a contaminant exceeds the generic SSL, MCRD may consider calculating a site specific DAF.
- 3.) Table 6-8: It is most likely a typographical error, but the selection of "None" as type of analysis for surface soil in the trespasser scenario needs to be changed.
- 4.) Page 6-10: Since additional site delineation is needed, the zone of tidal influence may change with respect to its closest point of contamination. Therefore the human health fish ingestion scenario may need to be reevaluated. Please provide a map showing tidal zones in relation to contamination.
- 5.) Table 6-14: Magnesium (1,100,000 ug/L) far exceeds the screening value of 118,807 ug/L for surface water. Human Health Risk Assessment Guidance for Superfund states, "In order to eliminate an essential nutrient from the risk assessment, it must be shown to be present at levels not associated with adverse health effects." Please provide more justification for eliminating magnesium as a COPC.

If you need any additional information or have any questions, feel free to contact me at (803) 896-4131.