

M00263.AR.000137
MCRD PARRIS ISLAND
5090.3a

LETTER AND MEMORANDUM REGARDING SOUTH CAROLINA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL CONTROL COMMENTS ON REMEDIAL
INVESTIGATION/RESOURCE CONSERVATION AND RECOVERY ACT FACILITY
INVESTIGATION FOR SITE 3 MCRD PARRIS ISLAND SC
5/14/1999
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL



2600 Bull Street
Columbia, SC 29201-1708

19.01.03.0010 ID 200

CERTIFIED MAIL

May 14, 1999

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

RE: RCRA Facilities Investigation/Remedial Investigation for Site/SWMU 3-
Causeway Landfill (3/99)
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 March 9, 1999. The Department has determined that the following comments must be adequately addressed prior to receiving final approval:

1. Title
Identify if this document is in draft or final version.
2. Page 3-17, Section 3.2.4, 2nd paragraph
Provide justification for the location of the three (3) surface water samples analyzed for hexavalent chromium.
3. Page 3-21, Section 3.2.5, 2nd paragraph
Provide justification for the location of the three (3) sediment samples analyzed for hexavalent chromium.
4. Page 3-25, Section 3.2.6, End of paragraph
Provide justification for the location of the three (3) soil samples analyzed for hexavalent chromium.

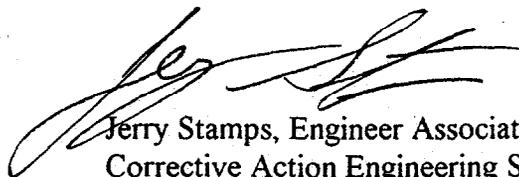
5. Page 3-25, Section 3.2.7, 2nd paragraph
Discuss why the groundwater sample from MW-02 was the only sample analyzed for Appendix IX constituents.
6. Page 3-29, Section 3.2.12, Holding Times
Explain why holding times for hexavalent chromium and cyanide were exceeded.
7. Table 4-1
The detection of organics in the background samples may be an indication that these sample locations have been impacted by waste management activities. It is possible that additional background samples will be necessary in order to determine true background conditions. Additionally, organic concentrations must be compared to RBCs rather than background concentrations.
8. General
Please incorporate the applicable screening criteria (MCLs, RBCs, etc..) into all applicable tables (i.e. summary of statistics tables).
9. Table 4-2
Please describe what is meant by the column heading "Range of Nondetects".
10. Page 4-15, paragraph 5
Describe why the ecological screening was based solely upon filtered sample results. The results from the unfiltered samples seem to be more representative of actual site conditions from which receptors would be exposed to contaminated media.
11. Page 4-16, Section 4.3.2, 2nd paragraph, 2nd sentence
The second reference to "1998" must be changed to "1988".
12. Table 5-1
Benzene is not a ketone. As such, benzene should be listed as a monocyclic aromatic compound.
13. Table 6-2
There are no footnotes indicating the meaning of values greater than 7 contained within parentheses. Additionally, mercury does not have an associated risk-based concentration (RBC) in the latest version of the RBC table dated 4/12/99. However, Table 6-2 includes an EPA Region III Screening value. Please state the source of this screening value.

14. Table 6-4
Phenanthrene can not be eliminated as a COPC based on the fact that no toxicity data exists for this compound. A surrogate compound must be used, along with justification for the selection of the surrogate, to estimate the risk associated with phenanthrene present in the surface water.
15. Table 6-8
Table 6-8 must be revised in accordance with comment 14.
16. Figure 6-2 and appropriate section of the HHRA
The adolescent recreational user should be included in the conceptual site model and addressed throughout the human health risk assessment. It is entirely possible for military personnel stationed on-base to bring children to the area as a source of recreation (i.e. fishing). Therefore, the inclusion of the adolescent recreational user is appropriate.
17. Page 6-31, Section 6.2.4; Table 6-9 and Figure 6-2
Recreational users (adult and adolescent) fishing from SWMU 3 may be exposed to surficial soils and sediments. Therefore, this exposure route should be evaluated in the HHRA.
18. Table 6-9, Figure 6-2
Regardless of the access control presently in place at Parris Island, it is possible for trespassers to enter the site on days for which a graduation ceremony is taking place. As access to the site is easily obtained during these times, the exposure of trespassers to surface soils, sediment, and surface water at SWMU 3 should be assessed in the HHRA.
19. Table 6-9
The human health risk assessment must evaluate the future land use scenario. There exists the possibility that Parris Island will cease to be a training site for marine corps recruits in the future and may become a residential area, during which time there will be absolutely no access restriction. Consequently, this scenario must be evaluated in the HHRA.
20. Table 6-10
The EPC for iron in surface water should be 1.1×10^5 ug/L based upon maximum concentration presented in Table 6-4
21. General
Include units in all tables.

22. Page 6-66, Section 6.5.2.1
Residential future land use must be assessed in the HHRA. The possibility that Parris Island will no longer be utilized as a training site in the future must be considered when conducting the HHRA.
23. Page 6-65, Section 6.5.1.5
Provide the rationale for the use of naphthalene as a surrogate for acenaphthalene, benzo(g,h,i)perylene, and phenanthrene.
24. Page 6-30
It is stated on several occasions that exposure to sediment and surface water are expected to be minimal due to the presence of alligators in the area. The Department agrees provided that signs are posted to alert workers and recreational users of the presence of alligators. Otherwise, more significant exposure to both surface water and sediment should be assessed for all potential receptors.
25. Page 7-3, 1st full paragraph
Provide justification for the statement "The use of the site by larger mammals is probably minimal."
26. Page 7-6, 1st full paragraph
Amphibians and reptiles should be included in the ecological risk assessment as potential receptors. It was previously stated that alligators tend to inhabit the area; therefore, it would seem reasonable to include them as receptors.
27. Section 7.3.10
Describe what criteria is used to determine potential risk to ecological receptors should NOAELs and LOAELs not be available for specific constituents.

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, TtNUS
Tim Harrington, MCRD Parris Island
Don Hargrove, Hydrogeology
Ken Lapierre, EPA Region IV
Tom Dillon, NOAA
Priscilla Wendt, SCDNR



2600 Bull Street
Columbia, SC 29201-1708

MEMORANDUM

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

FROM: Susan K. Byrd, Risk Assessor
Corrective Action Engineering Section
Division of Hazardous and Infectious Waste
Bureau of Land and Waste Management

DATE: May 13, 1999

RE: Marine Corp Recruit Depot
Parris Island, South Carolina

Document:
RCRA Facility Investigation / Remedial Investigation
SWMU 3 - Causeway Landfill
Volumes I and II
March 1999

The above referenced document by Tetrattech NUS, Inc. has been reviewed. The following comments pertain to the human health and ecological risk assessment.

1.) General Comment: SCDHEC acknowledges EPA's target risk range of $1E-04$ to $1E-06$; however, the department has selected to use the more conservative risk value of $1E-06$ in both residential and industrial scenarios. When risk falls above $1E-06$, the department may require corrective action. This risk management decision will be made on a site by site basis and will take into consideration various factors as well as the risk values.

2.) Page ES-4, Paragraph 1: The text states that chlorobenzene was not detected in surface water or sediment samples indicating that migration from the fill area was not significant. This statement is based on various assumptions. Sampling events are a "snapshot" in time, and contaminant migration could occur in the future. Also, based on the complicated nature of groundwater flow and tidal influence, groundwater to surface water discharge could occur at locations that were not sampled during this investigation. The text should be revised to state that the migration is not significant at this time or during this investigation.

- 3.) Page 6-20, Table 6-6: Heptachlor epoxide in the crab was detected above the EPA Region III screening level of 0.35. Please revise the table and any text as necessary.
- 4.) Page 6-21, Table 6-7: The average concentration of dibenzofuran in the fish tissue is listed as 0.279 which is greater than the maximum concentration of 0.136. Please revise the table as needed.
- 5.) Page 6-27, Figure 6-2: Please explain in more detail why the child trespasser or recreation scenario is not included as a human receptor in the CSM. It seems possible that children could come in contact with soil, sediment and surface water while on base for family functions such as graduation.
- 6.) Page 6-31, Paragraph 4: Please include and explain the selection of the exposure duration of 25 years for the maintenance worker as listed in table 6-16.
- 7.) Page 8-1, Paragraph 1: The text states that because of the presence of asphalt at the site, PAHs may or may not result from the disposal activities. Previous sections of the report indicate that the site is not covered with asphalt. Please clarify this statement.
- 8.) Page 8-1, Paragraph 2.0: See comment 2.

If you need any further information, feel free to contact me at (803)896-4188.