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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 SAMPLING AND ANALYSIS PLAN FOR SITE
INVESTIGATION AT EIGHT MUNITIONS SITES MCRD PARRIS ISLAND SC

11/6/2009

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

November 6, 2009

Commanding Officer
NAVFAC Southeast
ATTN: Mr. Charles Cook
PO Box 30
Ajax Street North, Bldg 135
Jacksonville, Florida 32212

RE: Comments to the UFP SAP for SI at Eight Munitions Sites
Marine Corp Recruit Depot (MCRD)
Parris Island
SC6 170 022 762

Dear Mr. Cook:

The Division of Waste Management of the South Carolina Department of Health and Environmental Control (Department) completed the review of the UFP SAP for SI at Eight Munitions Sites received September 14, 2009. Based on this review the Department provides the following engineering and hydrogeology comments.

The Department's comments are based on the information presented by MCRD to date; any information found to be contradictory may result in additional comments or require further action. The response to the review should consist of response to comments and revision pages. If you have any questions regarding this issue, please contact me at (803) 896-4218.

Sincerely,

Meredith Amick, Environmental Engineer Associate
Corrective Action Engineering Section
Division of Waste Management

cc:

Tim Harrington, MCRD Parris Island
Annie Gerry, Hydrogeology
Priscilla Wendt, SCDNR
Russell Berry, EQC Region 8, Beaufort

Lila Llamas, EPA Region 4
Tom Dillon, NOAA (via email)
Mark Sladic, TtNUS
Heber Pittman, MCRD Parris Island

ENGINEERING COMMENTS

Prepared by Meredith Amick

Marine Corps Recruit Depot (MCRD)

November 6, 2009

General Comments

1. Please note that all UXO boundaries should be revised to include their respective firing points and targets.
2. Please provide the rationale for not performing a full coverage sampling for all areas for MEC. Please note areas that are not investigated will require more stringent LUCs as part of the final remedy. Please see Comment # 20, better defining the range may assist in the explanation.
3. Please clarify how these 8 UXO sites were chosen from the Range Identification and Preliminary Range Assessment Report to become MRP Sites. Additionally please clarify the status of the other sites discussed in the Range Identification and Preliminary Range Assessment Report.
4. Please note that since the information regarding the exclusion of UXO 1 from this SI Work Plan will not be provided until the SI Report, the Department reserves their concurrence/non-concurrence until the SI Report is issued. If at the time the SI Report is issued the Department does not concur with the recommendation to exclude UXO 1, UXO 1 will proceed to an RI.
5. The background data must be proven to be applicable to each of the individual sites, prior to using them as screening values for that particular site.
6. As mentioned in the Range Identification and Preliminary Range Assessment Report, UXO 4 (Field Artillery West Main Range) was noted as being used for borrow material. Please discuss where this material was placed. The location of the placement of fill should be named a new SWMU and should be investigated.
7. Please depict where the dredge spoils are placed and where the borrow pit area is at UXO 2; additionally clarify if this dredge spoil site is part of Site 13. Also please discuss where the dredge spoils are coming from and where the borrow pit material is placed. If the waterway within the UXO 2 boundary has been dredged, please discuss where the fill was placed. Any place that received dredge spoils or borrow material from within the UXO 2 boundary should be named a new SWMU or included within the UXO 2 boundary and investigated. Additionally part of the LUCs for UXO 2 property will need to be notation that a portion of the range is a dredge spoils area. Discuss if any of the UXO 2 waterway area was dredged and added to the island east of the waterway. The

area of land east of the waterway that is included within the UXO 2 boundary should be investigated for munitions and munitions constituents.

8. Please provide a discussion of the depth that munitions at each site are expected to penetrate the ground, depth of fill placed on top of the munitions site and depth of penetration of the geophysical surveys to be performed. Note it appears that some geophysical surveys proposed are not adequate for the depth of munitions bgs because of the fill material placed on the UXO sites and/or penetration depth of the munition type. Either the technology used to screen for munitions should be changed to accommodate for this issue, or the UXO sites where this applies (UXO 4 Field Artillery West Main Range, UXO 7 Aerial Bombing Target at Golf Course, etc) can be closed as a landfill. If closed as a landfill, in addition to a notation in the Base Master Plan, etc additional LUCs will apply (i.e no unauthorized digging).
9. A dry dock was mentioned in the Conceptual Site Model of the Pre-Draft MRP SAP. Its location is now shown on Figure ES-2. Please discuss the type of activities that occurred at the dry dock.
10. In the Conceptual Site Model presented in Appendix B of the Pre-Draft SAP, tables were presented. Although the tables have been removed in the Draft SAP, the following comment still remains. Please clarify what Maximum Detection Depth means on the tables in Appendix B. If this is maximum detection depth of the geophysical equipment used to find MEC, the methods do not seem to be adequate to find the items, as their max penetration depth is much deeper than the max detection depth. (See general comment #9)

Because the Conceptual Site Model has been removed from this document, please describe which worksheets contain portions of the conceptual site model. Additionally Page 53 of the MEC SAP under Vertical Boundaries for Surveys at UXOs 4,5, and 6 references a CSM. Please correct the discrepancy.
11. Please note that part of the LUCs for UXO 3 will be to maintain the pavement over the currently paved area, since no MEC sweep of the area is planned.
12. No MC investigation is planned at UXO 3 (Aerial Bombing Target at Parade Deck) and UXO 7 (Aerial Bombing Target at Golf Course and UXO 8 (Aerial Bombing Target at Southern Tidal Flats). If MEC is found then they will present to the team and ask how to proceed.
13. Please provide the firing point location on the UXO 2 map.
14. Please discuss the reason for using the 0 to 6 inch bgs and 0 to 1 foot bgs as the MC sample interval. As previously stated some of the UXO sites have been covered by dredge fill. Additionally Dr. Alan Warren (USC-Beaufort) has presented data from active

Parris Island ranges that states bullets and bullet fragments sink rapidly in the marsh areas at the base.

15. Please discuss which buildings are located within the range fan for UXO 4.
16. In the data tables that will be provided in the report following this work, please provide all screening values for surface soil or sediment not just the lowest of the compared screening values. This will allow a quicker review time.
17. Please provide an explanation for limiting metals analysis to lead at UXO 3.
18. Please provide a thorough explanation of why and where sampling points are chosen (to include location of firing points, targets, definition and use of specific type of range, etc.). Additionally acreage for each range should be provided. The Department understands that this acreage will be refined throughout the SI process.

Specific Comments

1. Page 37 of 142 Worksheet #9 MC SAP

The Comments/Discussions section states, "SCDHEC stated its position with LUCs is that LUCs are not a property restriction. At a minimum, a LUC is a form of notification..." This statement is not completely accurate. Instead please reword to state, "The Department's intent with LUCs is not to prohibit the use of the property, but instead to ensure protection of future users. For munitions sites at a minimum, a LUC is a form of notification..."

2. Worksheet #15 MC SAP

- Please discuss whether the soil samples will be analyzed for pH.
- Please use the most recent screening values from the Regional Screening Level summary table instead of the Region 5 SSLs.
- Please discuss the difference in PAL and PQLG.

3. Worksheet #20 MC SAP

Note 3 to the table states, "Samples will only be analyzed for lead at UXO 6 if evidence of lead shot/shrapnel fragments is found in a sediment sample." Please provide rationale for this decision.

4. Page 75 of 135 Worksheet #17 MEC SAP

The MEC Disposal section states that, "The MCRD Parris Island will be notified and Military EOD will be contacted for treatment." Please note that MCRD PI should contact DHEC incase an emergency permit is needed for treatment.

5. Page 76 and 77 of 135 Worksheet #17 MEC SAP

In discussing the MEC investigation that is to be performed at UXO 4 and 5 the following statements were made, "There may have been instances when complete rounds/residue may have been discarded around the firing points after exercises. Hence, a 100-ft area around the former firing points in undeveloped areas will be investigated with a UXO detector-aided surface survey." Please discuss the reasons for not performing the same surface survey around the firing point(s) at UXO 2.

6. Worksheet 17 MEC SAP

The Department asked for a discussion of the effects of tide/saltwater on the geophysical survey technologies, and it was stated that these were discussed in Worksheet 17 of the MEC SAP. Please provide the page number where the discussion is provided.



C. Earl Hunter, Commissioner

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MEMORANDUM

TO: Meredith Amick, Engineering Associate
Corrective Action Engineering Section
Division of Waste Management
Bureau of Land and Waste Management

FROM: Annie Gerry, Hydrogeologist 
Federal Facilities Groundwater Section
Division of Waste Management
Bureau of Land and Waste Management

DATE: November 2, 2009

RE: Marine Corps Recruit Depot
SC6 170 022 762

Review of Draft for Sampling and Analysis Plan (SAP) for Munitions Response Program (MRP) Site Inspections at Eight Munitions Response Sites, Marine Corps Recruit Depot (MCRD), Parris Island, South Carolina, dated September 2009

The above referenced document has been reviewed with respect to the conditions of the Federal Facility Agreement (FFA) that the Department entered into with the Navy and EPA Region 4 in January 2005. The Navy has participated in numerous activities that involve explosives and munitions training. Munitions and explosives of concern (MEC) and munitions constituents (MC) may be present at sites at MCRD Parris Island. The Department of Defense (DoD) has established the MRP to address MC and MEC at closed ranges.

The Department formally issued comments in April 2009. The Navy responded to these comments informally (via email Sladic to Amick) in October 2009. The Federal Facility Groundwater Section (FFGW) agrees with all of the Response to Comments (RTCs) except Comment #3.

The Department's original comment 3

Groundwater, surface water, and sediment samples have not been proposed for this stage of investigation. However, it is likely that such samples will be necessary before the Department can concur that no further investigation is required for these sites. The number and locations of groundwater, surface water and/or sediment samples will be dependent on the findings of the proposed investigation.

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Navy Response

Surface soil and sediment samples are proposed for this SI. An investigation of additional medium is beyond the scope of this SI but may be required based on the results of the SI, during future investigations. The goal of the SI is to "narrow the footprint"/refine the site boundaries, to locate the source, target, and impact areas, and to help to define any follow-on or future RI field work.

Department Response

The Department understands that collection of surface and groundwater samples are not included in this Site Inspection (SI). However, collection of groundwater samples will be required in the Remedial Investigation (RI) at least these three sites (UXO 3- Aerial Bombing Target at the Parade Deck, UXO 4- Field Artillery Range, and UXO 7- Aerial Bombing Target at Golf Course) in order for these sites to be considered for no further investigation.

Should you have any questions regarding this memo, please contact me via email at GerryAM@dhec.sc.gov or by phone at (803) 896-4018.

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