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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 REMEDIAL INVESTIGATION WORK PLAN  
ADDENDUM FOR SITE 27 MCRD PARRIS ISLAND SC  
9/4/2008  
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

September 4, 2008

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

RE: Site 27 RI WP Addendum  
Marine Corp Recruit Depot  
Parris Island  
SC6 170 022 762

Dear Mr. Cook:

The Corrective Action Engineering Section and the Division of Hydrogeology of the South Carolina Department of Health and Environmental Control (Department) has completed the review of the above referenced document received July 21, 2008. Based on this review, the Department has comments. Please refer to the attached engineering and hydrogeology comments. These comments should be responded to in the RI Addendum Report. Base on the information presented to date, additional fieldwork will likely be necessary pending the Department review of the RI Report.

If you have any questions or concerns, please feel free to 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  
Sommer Barker, Hydrogeology  
Priscilla Wendt, SCDNR  
Russell Berry, EQC Region 8, Beaufort

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

ENGINEERING COMMENTS  
Prepared by Meredith Amick  
Marine Corps Recruit Depot (MCRD)  
August 19, 2008

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**General Comments**

1. Typically the Department does not review a document that is received without a Navy cover; however, the Department has concerns on the work proposed in the work plan, which has already been completed. In the future documents without official Navy cover will not be reviewed.
2. In the future please include Comment Responses in the document. The Department printed copies received electronically and added them to the document for their review.
3. A tag map should be provided in the RI Report with soil sample locations and data from both the RI WP and RI WP Addendum. Additionally the tabular data for soil samples from both the RI WP and RI WP Addendum should be presented in a reader friendly format including screening values, exceedences, detection limits, etc.
4. The background data set referenced in this document is not approved for Site 27, 9,16 and 55. Therefore, data should be provided to prove background metal contamination and anthropogenic background (pesticide application documentation and park lot run off sampling).
5. All figures provided should identify the marsh area that is discussed in the Response to Amick Comment #5.

**Specific Comments**

1. Response to Amick Comment #3

Both this comment and EPA's Comment 11 indicated concern over the analytical parameter list, which was not specified in the initial version of the RI WP Addendum. Because the site has not been completely delineated including the multiple source areas, the Department has concerns about the limited analyte list. It is understood that MCRD has completed the work discussed in this work plan at risk. Additional sampling will likely be required once the RI Report has been reviewed.

2. Response to Amick Comment #4

The Department disagrees with the Response to Comment. Until the site is completely delineated all exposure routes should be evaluated on the CSM (including the pathways discussed in the previous Amick's April 2008 Comment and groundwater to surface

water discharge). An updated CSM should be included in the RI Report.

3. Section 3.2

In order for the Department to determine the need for additional sampling, the rationale for limiting the analyte list should be included. This should include the rationale for eliminating SVOCs, PCBs, Inorganics, PAHs, non-chlorinated pesticides, herbicides, etc.

4. Section 3.2.2 Page 3-2

It should be noted that the Department prefers the use of a multi meter to a PID, because this instrument allows the user to detect a wider range of chemicals. Please provide rationale for using a PID.

5. Section 4.9

Please discuss the number of samples taken from the drums containing soil cuttings and the fate of the drums. Additionally provide the data from the sampling and disposal manifests.

6. Section 2.5.3 Page 2-12

Please note, the toxicity data used to calculate the Regional Screening Levels will be periodically updated, thus changing the screening values. The Navy should ensure the use of the most recent version of the Regional Screening Levels when writing the RI Report.

Comment [MSA1]: what do you think?

## **MEMORANDUM**

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

**FROM:** J. Sommer Streett, Hydrogeologist  
Federal Facilities Groundwater Section  
Division of Waste Management  
Bureau of Land and Waste Management

**DATE:** September 4, 2008

**RE:** Marine Corps Recruit Depot  
SC6 170 022 762

Review of the Remedial Investigation (RI) Work Plan Addendum for Equipment Parade Deck – Site 27, Marine Corps Recruit Depot, Parris Island, South Carolina dated March 24, 2008

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 purpose of this RI is to outline the requirements and describe the procedures for performing Phase II of the RI at Site 27. It should be noted that the work proposed in this RI has already been performed prior to the approval of this document. MCRD must understand the Division will likely request additional assessment based on the data generated by this field event.

Based on the review of this document the Division has the following comments.

### **COMMENTS**

#### **2.5.2 Decisions**

1. This document states: “If contaminant concentrations are such that lower concentrations exist at upgradient, sidegradient, and downgradient locations, the extent of contamination will have been defined.” This document should

be reworded to say that if concentrations are below screening values at upgradient, sidegradient, and downgradient locations, the extent of contamination will have been defined.

Figure 2-1 Site Layout and Previous Investigation Locations Map Sites 9, 16, 27, and 55

2. Page 2-4 states that three surface soil samples (PAI-27-SS-03-01, PAI-27-SS-04-01, and PAI-27-SS-05-01), three soil samples (PI-009-01(32), PI-009-02(33), and PI-009-03(34)), and two temporary monitoring wells (PAI-09-MW-01(S) and PAI-09-MW-02(S)) are shown on Figure 2-1. However, none of these locations are shown on Figure 2-1. MCRD should revise Figure 2-1 to show these samples locations with the appropriate labels.
3. Figure 2-1 has three symbols on the Legend (temporary monitoring well location (1999), surface soil sample location (1995), and surface soil sample location (1999)), which are not used on the map. The figure should be revised to show these symbols used on the map or removed from the legend.
4. Figure 2-1 shows red boxes on the map but does not label them on the Legend. MCRD should revise Figure 2-1's Legend to explain the definition of the red boxes.

Figure 2-2 Proposed Sample Locations and Pesticide Concentrations ( $\mu\text{g/L}$ ) in Groundwater Sites 27/55

5. Pesticide concentration contours for  $> 1 \mu\text{g/L}$  and  $> 10 \mu\text{g/L}$  overlap on the western side of the plume. These contours cannot overlap. MCRD should revise this figure to show correct contours for both concentrations.

Figure 2-3 Proposed Sample Location and VOC Concentrations ( $\mu\text{g/L}$ ) in Groundwater Sites 27/55

6. Chlorobenzene concentration contours for  $> 250 \mu\text{g/L}$  and  $> 1,000 \mu\text{g/L}$  overlap on the western and southern sides of the plume. These contours cannot overlap. MCRD should revise this figure to show correct contours for both concentrations.
7. Monitoring wells PAI-27-TW-27I, PI055MW08D, PI055MW12I, and PAI-55-FDP08 have a chlorobenzene level below the 250 and 1000  $\mu\text{g/L}$  chlorobenzene concentration contours (i.e. PAI-55-FDP08 of 61  $\mu\text{g/L}$ ). However these monitoring wells are located inside the  $> 250 \mu\text{g/L}$  and  $> 1,000 \mu\text{g/L}$  chlorobenzene contours. These contours should be revised to reflect these monitoring wells.

Figure's 2-2 and 2-3

8. Both Figures 2-2 and 2-3 have certain monitoring well names highlighted. MCRD should explain what this highlighting means.

9. The dates of the sampling event for both Figure 2-2 and 2-3 are needed and MCRD should revise these figures with this data.
10. Both Figures 2-2 and 2-3 show shallow and intermediate monitoring wells with their data. Separate plume maps for both shallow and intermediate data would be useful in better determining the extent of contamination. MCRD should submit separate plume maps for shallow and intermediate data with the revision of this document.
11. Both figures 2-2 and 2-3 do not illustrate a site boundary for Site 55. MCRD should revise these figures to show the site boundary for Site 55.

#### Figure 2-4 Soil Sampling Locations Sites 27 and 55

12. The Legend for Figure 2-4 shows a symbol for groundwater contours but these contours are not shown on the map. MCRD should revise Figure 2-4 to either show the groundwater contours or remove the symbol from the Legend.
13. Figure 2-4 has an orange dashed line on the map but this line is not defined on the Legend. MCRD should revise Figure 2-4's Legend to define the orange dashed line.
14. Figure 2-4 doesn't have a site boundary for Site 55. MCRD should revise Figure 2-4 to show Site 55's site boundary.

#### Figure 2-5 Potentiometric Surface Map Sites 9, 16, 27, and 55

15. Figure 2-5 shows three symbols on the Legend (surface soil samples location (1999), temporary monitoring well location (1999), and surface soil sample location (1995)), which are not used on the map. Figure 2-5's Legend should be revised with these symbols removed.

#### Figures 2-5, 2-6, and 2-7

16. Figures 2-5, 2-6, and 2-7 don't have a site boundary for Site 55. MCRD should revise these Figures to show Site 55's site boundary.

#### Figure 2-11 Surface Water Bodies Site 9, 16, 27, and 55

17. Figure 2-11 does not label any of the show surface water bodies. MCRD should revise this figure to show the water bodies labeled.
18. Figure 2-11 doesn't have a site boundary for Site 55. MCRD should revise these Figures to show Site 55's site boundary.

### 3.2 Investigation Summary

19. This document states that all samples will only be analyzed for VOCs and pesticides. The Division is not certain as to why SVOCs and metals are not being sampled. MCRD should explain the reasoning for not sampling SVOCs

or metals in the revise test. Based on this explanation the Division will then evaluate the sampling plan accordingly to determine if more sampling is necessary.

### 3.2.1 Groundwater Sampling

20. MCRD states, “Once the clay unit is encountered, a few continuous split-spoon samples will be taken to confirm the thickness of the clay unit.” MCRD should explain how many split-spoon samples will be taken from the clay unit. Likewise, MCRD should explain how the clay-confining unit will be sampled without causing cross-contamination into the confining unit and underlying layers? This document should be revised to explain the precautions MCRD will take to insure contamination does not breach the confining unit.

Should you have any questions regarding this review, you may contact me at (803) 896-6647 or by email at [barkerjs@dhec.sc.gov](mailto:barkerjs@dhec.sc.gov).