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MCRD PARRIS ISLAND  
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LETTER REGARDING SOUTH CAROLINA DEPARTMENT OF HEALTH AND  
ENVIRONMENTAL CONTROL CONDITIONAL APPROVAL OF THE REMEDIAL  
INVESTIGATION ADDENDUM AND FEASIBILITY STUDY FOR SITE 45 MCRD PARRIS  
ISLAND SC  
6/22/2012  
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

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June 22, 2012

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

and

Commanding General  
NREAO  
ATTN: Ms. Lisa Donohoe  
PO Box 5028  
Parris Island, SC 29905

RE: Conditional Approval of Site 45 RI Addendum and Feasibility Study  
Parris Island  
SC6 170 022 762

Dear Mr. Cook and Ms. Donohoe:

The Division of Waste Management of the South Carolina Department of Health and Environmental Control (Department) completed the review of *Site 45 RI Addendum and Feasibility Study* received May 11, 2012. The Department reviewed the document with respect to applicable sections of the South Carolina Hazardous Waste Management Regulations (SCHWMR). Based on this review the Department has determined the response to comments and the revised document do not sufficiently address the concerns. Please see attached the conditions of the approval.

The Department's review is based on the information presented by MCRD to date; any information found to be contradictory may require further action. If you have any questions regarding this issue, please contact me at (803) 896-4218.

Sincerely,

A handwritten signature in black ink, appearing to read "Meredith Amick". The signature is fluid and cursive, with the first name "Meredith" and the last name "Amick" clearly distinguishable.

Meredith Amick, P.E., Environmental Engineer  
Corrective Action Engineering Section  
Division of Waste Management

cc:

Lila Llamas, EPA Region 4  
Peggy Churchill, TtNUS  
Russell Berry, EQC Region 8, Beaufort

Annie Gerry, Hydrogeology  
Priscilla Wendt, SCDNR

Engineering Memo  
Prepared by Meredith Amick  
Marine Corp Recruit Depot (MCRD)  
June 18, 2012

1. It is the Department's understanding that the Navy is still pulling together information about the sewer line in relation to concern of plume discharge to the marsh through the sewer. Also the Department understands that the slip lining of the sewer is on hold. As stated in Section 1.2.6 of the FS, "contaminants are reaching Ballast Creek," which constitutes uncontrolled contaminated groundwater migration from Site 45. Therefore, a remedial action objective to mitigate uncontrolled releases of contaminated groundwater should be created as it pertains to the sewer line. Additionally remedial action alternatives should be evaluated and a preferred alternative proposed to mitigate uncontrolled releases entering the sewer line. These items should be submitted in an Addendum to the FS and this document should be approved prior to issuance of the Proposed Plan.
2. It is the Department's understanding that the ARARs in this document are not complete and are being finalized by the team in conference calls and emails. Change pages should be provided to respond to this comment only.
3. Provide the correct name and location of both Sites 32 and 45 on maps in the Proposed Plan.
4. The boundary of Site 45 should include the sewer line down to where contamination is below MCLs. This should be included in the Proposed Plan.
5. In the Remedial Design document discussion should be provided ensuring that injection material will not enter the sewer line and reach the marsh.
6. It should be noted that the arsenic background concentrations in this document are not team approved background values.
7. In reference to the horizontal and vertical extent of soil contamination not being delineated, the response to the Amick Comment #6 states, "All soil remedies will likely include pre-design sampling and post-remediation confirmation soil sampling. The plan for collecting those samples will be presented in the appropriate document for that phase of work. The text in the Draft Final FS will be revised to reflect this approach." The text discussing the confirmation soil sampling could not be found; however, the Department still expects for the sampling to be completed.

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Catherine B. Templeton, Director

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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 M. Gerry, Hydrogeologist  
Federal Facilities Groundwater Section  
Division of Waste Management  
Bureau of Land and Waste Management

**DATE:** June 22, 2012

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

**Review of Remedial Investigation (RI) Addendum and Feasibility Study (FS) Report for Site 45- Former Morale, Welfare and Recreation Dry Cleaning Facility, Marine Corps Recruit Depot (MCRD), Parris Island, South Carolina dated April 2012**

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. Site 45 is a former dry cleaner where in March 1994, a tetrachlorethene (PCE) spill of unknown quantity was released into soil near the above ground PCE storage tanks in the northern portion of Site 45. A new dry cleaning facility was constructed in 1997, and operations were switched to a non-hazardous hydrocarbon-based cleaner instead of using PCE. However, in 2005, a second groundwater plume of chlorinated solvents was discovered near the new dry cleaner. The two plumes of contaminated groundwater are intermingled. An RI Addendum for Site 45 has previously been submitted to the Department (January 2010) and comments to the Navy were submitted from the Department (3/22/2010). The Navy responded to these comments in the above referenced document (RI/FS dated April 2012).

The purpose of this RI Addendum is to provide more detail of Site 45 and then to provide the formulation and evaluation of remedial alternatives for contaminated soil and groundwater at Site 45 in the FS report.

Based on review of this document, the following conditions have been generated.

File # 50492

## CONDITIONS

1. Response to Comments (RTCs) #1C- This is the second time that the Navy's response to this comment did not address the Department's concerns and the Department is still expecting a response. The Department will not approve any proposed field work until the Department's concerns have been adequately addressed. Additional assessment is necessary to fully delineate the extent of groundwater contamination.
2. RTCs #2- The Department requested a comprehensive report that would be a stand-alone document that demonstrates the Navy/MCRD has fully investigated the nature and extent of contamination at Site 45 (with regards to pilot studies, plume movement and geometry, extent of contamination etc). Instead a Monitored Natural Attenuation (MNA) evaluation was placed in the FS on a CD in Appendix-A. In addition, this MNA evaluation did not discuss or summarize all the pilot studies that were done at this site. Please add this summary of pilot studies (i.e. what pilot studies were done, the year, the objective etc.) to the document and update the Appendix as necessary with this new information.
3. RTC #8-

### **The Department's original comment (March 2010)**

**In Appendix A- USGS Report: Source, Transport, and Fate of Groundwater Contamination at Site 45, Marine Corps Recruit Depot, Parris Island, South Carolina, Page 18, first paragraph, the text reads, " The source of the petroleum hydrocarbons is not known. Some of the benzene detections were slightly greater than the 5-µg/L MCL established by the USEPA."**

**Since BTEX compounds were detected in some of the samples (PAI-45-USGS-TW65 of 5.36 ppb and PAI-45-MW27-SL of 6.01 ppb) the source of these compounds is undefined. The source of the BTEX compounds must be determined as soon as possible**

*Navy Response (April 2012): There is not a defined source for BTEX at Site 45. As these detections are slightly above MCLs, the subject wells will be monitored for these compounds as part of the MNA component of the selected remedy or remedies.*

Based on discovery of BTEX, there is a possibility of a source area or areas that have yet to be determined. The source of BTEX contamination, either in the soil or groundwater, must be understood and defined in order to make appropriate future remedial action decisions. This response is unclear and did not adequately address the Department's comment/concern. The Navy must conduct additional assessment to determine the source of benzene detections in groundwater.

4. **Table 2-4 Cleanup Goals-Groundwater- Site 45 FS-** Please note that while cleanup goals for *Vapor Intrusion –Affected Areas* are listed in this table, the Department will require that all contaminants are cleaned up to the maximum contamination level (MCL).

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



Catherine B. Templeton, Director

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**MEMORANDUM**

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

FROM: Kent Krieg, Risk Assessor  
Corrective Action Engineering Section  
Division of Waste Management  
Bureau of Land and Waste Management

DATE: June 22, 2012

RE: Marine Corps Recruit Depot  
Parris Island, South Carolina

Document:  
*Remedial Investigation Addendum and Feasibility Study Report for  
Site 45 – Former MWR Dry Cleaning Facility  
Dated April 2012*

The above referenced document by Tetra Tech NUS, Inc. has been reviewed. The Department does not believe that the risk-related responses to comments were incorporated into the revised document.

Although the responses were not incorporated,

- comment #1 was adequately addressed through other discussions related to Site 14 and section 1.2.6.
- comment #2 was only a suggestion to the Navy. Any response would have been satisfactory.
- the Department does not disagree with the proposed target risk level presented in the document. SCDHEC would just like to reiterate that the state does not have a target risk level but follows the USEPA RAGS guidance as stated in the original Krieg Comment #3 dated August 8, 2011.
- comment #4 has been addressed since the cleanup goals are based on USEPA Regional Screening Levels and have been updated to May 2012 values.

The Department does not have any further risk related comments at this time.

If you need any further information, feel free to contact me at (803) 896-4262.

