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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 GROUNDWATER MONITORING REPORT
FOR SITE 3 CAUSEWAY LANDFILL MCRD PARRIS ISLAND SC

10/18/2010

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

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October 18, 2010

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

RE: Review of the Site 3 Groundwater Monitoring Report (Rev 0)
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 *Site 3 Groundwater Monitoring Report* received July 1, 2010. 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 provides the following comments. Please see attached hydrogeology comments.

The Department's comments are 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,

Meredith Amick, P.E., Environmental Engineer
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, P.E., TtNUS
Lisa Donohoe, MCRD Parris Island



C. Earl Hunter, Commissioner

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

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: October 15, 2010

RE: Marine Corps Recruit Depot

SC6170:022:762

Review of Groundwater Sampling Report (Revision 0) Long Term Groundwater
Monitoring at SWMU 3 (Causeway Landfill), Marine Corps Recruit Depot
(MCRD), Parris Island, South Carolina dated May 2010

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. Solid Waste Management Unit (SWMU)/Site 3 is an unused landfill located on Parris Island. Four monitoring wells were installed in 1998 to support a Remedial Investigation/Resource Conservation and Recovery Act (RCRA) Facility Investigation (RI/RFI). The wells were sampled in 1998 and then abandoned in preparation for an interim action at SWMU 3 in 2000. Four replacement monitoring wells were installed in December 2001 that are located within the landfill material.

Based on review of this report, the following comments have been generated.

Comments

1. As stated in the July 24, 2009 memorandum (Gerry to Amick) in reference to the 2009 Groundwater Sampling Report for Site 3, the Department specifically stated that the top of casing (TOC) elevations should be determined for monitoring wells, PAI-03-MW-01SR, PAI-03-MW-02DR, PAI-03-MW-03SR, and PAI-03-MW-04SR.

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On Page 3-1, Section 3.3 Ground Water Elevation Survey, the text reads: *"Top of casing elevations were not provided for generation of a groundwater potentiometric surface map, and therefore groundwater flow direction could not be determined."*

The Navy agreed to follow Standard operation procedures (SOPs) as quoted in the Groundwater Sampling Work Plan Rev 2- Long Term Groundwater Monitoring at the Aviation Gas Pipeline and SWMU 3 (Causeway Landfill), Marine Corp Recruit Depot, Parris Island, SC. Terranear March 2009. Establishing groundwater flow direction is a SOP in groundwater investigations. Determining TOC elevations is required to establish groundwater flow direction. Therefore, SOPs were not followed. The Department will not accept documents presenting data that were not produced using SOPs. To address this problem, the Navy must establish the TOC elevations, as previously instructed, to determine groundwater flow direction and include it in the revision to this report.

2. **On Page 4-1, Section 4.0 Analytical Results**, the text reads:

The detected constituents were compared to their respective USEPA and SCDHEC primary and secondary Maximum Contaminant Levels (MCLs). Note that several SVOCs were initially analyzed outside of their surrogate recovery control limits. The laboratory re-analyzed these samples within the limits, however by the time the samples were re-run, the holding time had been exceeded.

Based on this statement, the sample results were invalid because the holding times have been exceeded. Therefore, the MCRD must resample the monitoring wells and provide valid data to determine the nature and extent of contamination at SWMU/SITE 3. The Department cannot approve this report based on the invalid data. All monitoring wells on site must be resampled for the 2010 groundwater monitoring report.

In addition, the recollection of groundwater samples and resubmission of this report to the Department should be completed within 90 days of receiving this memorandum.

3. **On Page 4-1, Section 4.0 Analytical Results**, the text reads, *"A single VOC, carbon disulfide, was detected in both trip blanks collected during the sampling event. Accordingly, the carbon disulfide was blank qualified"*

This statement is unclear and needs clarification. Please provide a detailed explanation of the blank qualification to include a discussion of potential sources for the carbon disulfide detections.

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.