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MCRD PARRIS ISLAND
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LETTER REGARDING SOUTH CAROLINA DEPARTMENT OF HEALTH AND
ENVIRONMENTAL CONTROL APPROVAL OF FINAL TECHNOLOGY DEMONSTRATION
PLAN FOR TREATMENT OF CHLORINATED SOLVENT AREAS AT SITE 45 WITH
ATTACHMENTS MCRD PARRIS ISLAND SC
6/20/2006
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL



C. Earl Hunter, Commissioner

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

June 20, 2006

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

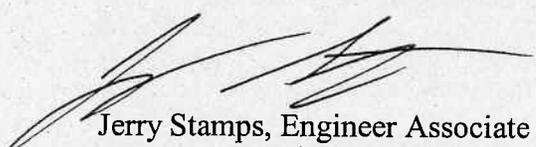
RE: Approval
Final Technology Demonstration Plan for Emulsified Zero-Valent Iron Treatment of Chlorinated Solvent DNAPL Source Areas at Site 45
Marine Corp Recruit Depot
Parris Island
SC6 170 022 762

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 via email on June 15, 2006. Based on this review, the Department has determined that all comments have been adequately addressed. Therefore, the above referenced document is deemed complete with respect to R.61-79 of the South Carolina Hazardous Waste Management Regulations and all applicable guidance documents. Please submit a hardcopy of this document for the administrative record.

If you have any questions or concerns, please feel free to contact me at (803) 896-4285.

Sincerely,



Jerry Stamps, Engineer Associate
Corrective Action Engineering Section
Division of Waste Management

Attachment:

Memorandum from Don Hargrove to Jerry Stamps dated November 16, 2005

cc:

Tim Harrington, MCRD Parris Island
Don Hargrove, Hydrogeology
Priscilla Wendt, SCDNR
Amanda Flake, EQC Region 8, Beaufort

Lila Koroma-Llamas, EPA Region 4
Tom Dillon, NOAA
Mark Sladic, TtNUS



2600 Bull Street
Columbia, SC 29201-1708

MEMORANDUM

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

FROM: Donald C. Hargrove, Hydrogeologist 
RCRA-Hazardous Waste Section I
Division of Hydrogeology
Bureau of Land and Waste Management

DATE: 15 June 2006

RE: Parris Island Marine Corps Recruit Depot (MCRD)
Parris Island, South Carolina
Beaufort County
SC6 170 022 767

FINAL Technology Demonstration Plan For Emulsified Zero-Valent Nano-Scale Iron
Treatment of Chlorinated Solvent DNAPL Source Areas
(June 2006)

The Division of Hydrogeology has reviewed the above referenced document. This work plan (dated 12 June 2006) was received by the Department electronically on 14 June 2006. This work plan describes the history of SWMU-45; it discusses the results of previous environmental investigations/remedial actions, and the status of the groundwater treatment system that is currently installed but not operational at SWMU-45. This document presents the scope of work proposed, to demonstrate the effectiveness and applicability of injection of Emulsified Zero-Valent Nano-Scale Iron (EZVI) aimed at remediation of groundwater contaminated with chlorinated solvents at SWMU-45. This FINAL document reflects revisions made in response to comments generated during reviews of the DRAFT version of this document.

This document was reviewed with respect to R.61-71 of the South Carolina Well Standards, R.61-79 of the South Carolina Hazardous Waste Management Regulations (SCHWMR), and appropriate guidance documents.

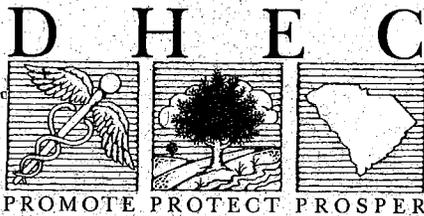
- 1) Based on this review, the Division of Hydrogeology has determined that all of the comments

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on the DRAFT version have been adequately addressed and incorporated into this FINAL version. It is therefore recommended that this document can be approved and implemented as written. Monitoring Well Approval # HW-06-042 has been written for the installation of the thirteen (13) monitoring wells, as proposed in this work plan (see attached). MCRD is reminded of the requirement to obtain the necessary injection permits prior to injecting at SWMU-45.

If you have any questions concerning this decision, please contact me at (803) 896-4033.

Attachment: MWA#HW-06-042



2600 Bull Street
Columbia, SC 29201-1708

MONITORING WELL APPROVAL

Approval is hereby granted to:

Commanding Officer
Department of the Navy
SOUTHNAVFACENGCOM
ATTN: Art Sanford (Code 1862)
2155 Eagle Drive
N. Charleston, SC 29406

Date of Issue: 15 June 2006
Approval Number: HW-06-042

Facility: Marine Corps Recruit Depot
Parris Island, South Carolina
Beaufort County
SC6 170 022 767

For the installation of six (6) permanent, fully screened monitoring wells at SWMU-45, and seven (7) multi-level permanent monitoring wells at SWMU-45 as follows:

- 1) Six (6) permanent, fully screened monitoring wells to be installed at the locations specified on Figure 3-6 (attached).
- 2) Seven (7) permanent multi-level monitoring wells, to be installed at the locations specified on Figure 3-6 (attached).
- 3) These monitoring wells are to be installed following all of the applicable requirements of R.61-71.

Conditions:

Please note that R.61-71 requires the following:

1. That the monitoring wells be installed by a well driller certified by the state of South Carolina. And that the certified well driller must be present during all phases of drilling, construction, and abandonment of these temporary monitoring wells.
2. That the latitude, longitude and actual construction details be submitted to the Department within 30 days after installation of the last monitoring well.
3. A minimum of (48) hours prior to initiation of drilling activities provide notice to Amanda Flake, at Region 8 (Lowcountry) EQC Office (843) 846-1030, and Donald C.

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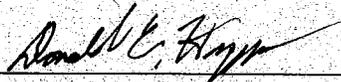
1 of 3

Hargrove, at the Division of Hydrogeology (803) 896-4033.

- 4) A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to Donald C. Hargrove, Division of Hydrogeology, SCDHEC within 30 days after well completion or abandonment unless another schedule has been approved by the Department. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
- 5) That investigation derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water, be managed properly and in compliance with all applicable requirements. If containerized, each vessel shall be clearly labeled with regard to contents, source, and date of activity.
- 6) That the latitude, longitude and actual construction details be submitted to the Department within 30 days after installation of the last monitoring well.
- 7) A minimum of (48) hours prior to initiation of drilling activities, provide notice to Amanda Flake, at Region 8 (Lowcountry) EQC Office (843) 522-9097, and Donald C. Hargrove, at the Division of Hydrogeology (803) 896-4033.
- 8) All analytical data and water levels obtained from each monitoring well shall be submitted to (Donald C. Hargrove, Division of Hydrogeology), SCDHEC within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
- 9) If any of the information provided to the Department changes, the Author (Donald C. Hargrove) shall be notified a minimum of twenty-four hours prior to well construction as required by R.61-71.H.1.a.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and the Department of Environmental Control's Regulation R.61-71.

Approval granted by:


Donald C. Hargrove, Hydrogeologist
Division of Hydrogeology
Bureau of Land and Waste Management
South Carolina Department of Health and
Environmental Control

Attachment: Figure 3-6, Conceptual Layout of Pilot Test Wells

cc: Jerry Stamps, Corrective Action Engineering
 Amanda Flake, Region 8 EQC, Beaufort
 Lila Koroma-Llamas, Federal Facilities Section, USEPA Region IV

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