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LETTER OF TRANSMITTAL AND MONITORING WELL APPROVAL FOR TEMPORARY AND
PERMANENT WELLS AT SITE 45 DRY CLEANING FACILITY SPILL AREA MCRD PARRIS
ISLAND SC
2/18/2005
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL



2600 Bull Street
Columbia, SC 29201-1708

February 18, 2005

FIRST CLASS MAIL

United States Marine Corps Air Station
Commanding Officer
Attention: NREAO (Mr. Tim Harrington)
P.O. Box 5028
Parris Island, SC 29905

RE: Marine Corps Recruit Depot (MCRD)
Parris Island, South Carolina
SC 6170022762

Monitoring Well Request (Sladic to Danielsen)
Dated February 17, 2005
SWMU 45

Dear Mr. Harrington:

The above referenced request has been reviewed with respect to R.61-71 of the South Carolina Well Standards and Regulations and other appropriate regulation/guidance. This request is for the installation of 15 shallow temporary monitoring wells, and 58 membrane interface wells (MIP) to evaluate groundwater quality in order to place 24 shallow/deep nested permanent monitoring wells and 5 deep permanent monitoring wells at various locations at SWMU 45.

In addition, the request is for the abandonment of a one-pump drinking water well located at SWMU 12.

The Division of Hydrogeology will approve the monitoring well request. Please find the monitoring well approval attached. The Department should be kept apprised of the ongoing fieldwork prior to the placement of the permanent monitoring wells.

The abandonment of the one-pump water well at SWMU 12 should be abandoned during the field effort at SWMU 45. Please note that a DHEC 1903 form must be completed for all abandoned wells

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and abandonment should follow all applicable requirements of R.61-71.

All temporary monitoring wells/MIPs will be installed in the surficial aquifer and will be installed by direct push technology (DPT) drilling methods. The temporary wells are expected to be completed to a maximum depth of 15 feet below ground surface (bgs).

All temporary monitoring wells must be grouted upon termination of lithologic studies and/or sampling starting from the bottom of the boring and continuously pressure grouted to the ground surface with neat cement, bentonite-cement, or 20% high solids sodium bentonite grout through a tremie pipe.

All permanent monitoring wells will be installed in the surficial aquifer, will have 0.01 inch slotted screens and will be installed by hollow stem auger drilling methods. These permanent monitoring wells will be finished as flush mounted wells. The shallow permanent monitoring wells will be installed with 10-foot screens. The shallow screens will be placed across the top of the water table where possible. The shallow wells are anticipated to be completed to a maximum depth of approximately 15 feet bgs.

The deep permanent monitoring wells will be installed as double-cased wells with 10-foot screens below the confining unit. The deep screens will be placed approximately 30 to 40 feet below ground surface. The deep monitoring wells are anticipated to be completed to a maximum depth of approximately 42 feet bgs.

The boring and/or geologist logs for each permanent monitoring well should be submitted to the Department within two weeks of completion of the last bore hole.

All sampling should follow the methods described in the November 2001 EPA EISOPQAM.

The boring and/or geologist logs for each monitoring well/soil boring should be submitted to the Division of Hydrogeology, attention Michael Danielsen within 30 days of completion of the last bore hole.

All well construction and sampling derived wastes, including but not limited to, drill cuttings, drilling fluids, development and purge water, must be managed properly and in accordance with all applicable state and federal requirements. If containerized, each vessel shall be clearly labeled with regard to contents, source, and date of activity.

Field equipment (including sampling probes) must be decontaminated by steam cleaning, or other approved method, before use and between sampling locations. Well screens and casing must be decontaminated before installation or must be certified clean by the manufacturer.

Attached, please find a Monitoring Well Approval Form and a copy of the proposed monitoring well locations. A copy of this monitoring well approval form should be on site during drilling operations.

The April 26, 2002 South Carolina Well Standards Regulation R.61-71 apply to the monitoring well installations for the above referenced sites.

Please be advised, additional assessment may be required at this site. Should there be any questions, please contact me at (803) 896-4194 or danielmw@dhec.sc.gov .

Respectfully,

A handwritten signature in cursive script, reading "Michael W. Danielsen". The signature is written in black ink and is positioned above a horizontal line that extends to the right.

Michael W. Danielsen, Hydrogeologist
RCRA Hydrogeology I Section
Division of Hydrogeology
Bureau of Land and Waste Management

Enclosure
MWA: HW-05-005

CC: Russell Berry, Low-Country EQC
Leon Fulmer, Corrective Action Engineering Section
Art Sanford, Southern Division, Charleston
Mark Sladic, TetraTech Nus, Inc.
MCRD Bureau File #50492



2600 Bull Street
Columbia, SC 29201-1708

Monitoring Well Approval for Temporary And Permanent Wells

Approval is hereby granted to: Tim Harrington
Marine Corps Recruit Depot
EPA ID # SC6170022762
Beaufort County

Facility: Marine Corps Recruit Depot
SWMU 45
Beaufort County

This approval is for the installation of 15 shallow temporary monitoring wells, 58 membrane interface wells (MIP), 24 shallow/deep permanent monitoring wells, and 5 deep permanent monitoring wells. The MIPs/temporary monitoring wells are to be installed in the locations as proposed in the construction details provided in the February 17, 2005 correspondence Sladic to Danielsen. The monitoring wells are to be installed following all of the applicable requirements of R.61-71.

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

1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department 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
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department 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.

4. All temporary monitoring wells shall be abandoned within 5 days of borehole completion using appropriate methods as required by R.61-71.H.4.c.
5. All permanent monitoring wells shall be labeled as required by R.61-71.H.2.c.
6. If any of the information provided to the Department changes, Michael W. Danielsen 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 R.61-71 of the South Carolina Well Standards and Regulations, dated April 26, 2002.

Date of Issuance: 2-18-2005

Approval #: HW-05-005

A handwritten signature in black ink, appearing to read "Michael W. Danielsen", with a long horizontal line extending to the right.

Michael W. Danielsen, Hydrogeologist
RCRA Hydrogeology I Section
Division of Hydrogeology
Bureau of Land & Waste Management