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PERMANENT MONITORING WELL REQUEST FOR AREA OF CONCERN 561 (AOC 561)
ZONE E CNC CHARLESTON SC
2/26/2001
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL



2600 Bull Street
Columbia, SC 29201-1708

February 26, 2001

CERTIFIED MAIL

Ms. Amy Daniell, Environmental Engineer
Caretakers Site Office 1895, Avenue F
Naval Facilities Engineering Command, Southern Division
Charleston Naval Base
Charleston, SC 29405

RE: Naval Base Station Charleston (CNAV)
Charleston, South Carolina
SC0-170-022-560

Permanent Monitoring Well Request for AOC 561 Zone E

Dear Ms. Amy Daniell

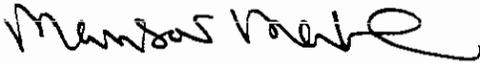
The above referenced request has been reviewed with respect to R.61-79.265 Subpart F of the South Carolina Hazardous Waste Management Regulations and R.61-71 of the South Carolina Well Standards and Regulations. This request is for the installation of three (03) new permanent monitoring wells northeast, southeast, and east of the newly installed well E561GW002. The purpose of installing these wells is to better define the nature of groundwater in the vicinity of AOC 561 by screening them across the water table. These permanent wells should be completed to a maximum depth of approximately 10 to 18 feet.

Attached, please find a Monitoring Well Approval Form, a copy of the proposed well locations, and a copy of Water Well Record (HDI Nov-2000). A copy of this monitoring well approval form should be on site during drilling operations. Please be advised, additional assessment may be required at this site.

Should there be any questions, please contact Paul Bergstrand at (803) 896-4016 Email Paulm@dhec.state.sc.us or Mansour Malik at (803) 896-4169 or E-mail at malikmn@dhec.state.sc.

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Respectfully,



Mansour Malik,
Project Hydrogeologist.
Hazardous Waste Section
Division of Hydrogeology

Enclosures:

MWA: HW-02-020

CC: David Scaturo, SC-DHEC Manager.
Jerry Stamps, SC-DHEC Project Manager
Paul Bergstrand, SC-DHEC Project Manager.
Christine Sanford-Coker, SCDHEC-Trident District EQC.
Tony Hunt, Southern Division, Charleston
Joel Badgett, SCDHEC, BOW
Michael Bishop, SCDHEC UST Program
Tom Beisel, CH2M Hill, 115 Perimeter Center Place NE, Suite 700, Atlanta, GA.



2600 Bull Street
Columbia, SC 29201-1708

Division of Hydrogeology
2600 Bull Street
Columbia, SC 29201
Telephone (803) 896-4010
Fax (803) 896-4002

Permanent Well Installation Approval

Approval is hereby granted to:

Naval Base Charleston
Attention: Ms. Amy Daniell

Facility: Zone E, AOC 561
Naval Base Complex
SC 01 70 022 560
Charleston

For the installation of three (03) permanent monitoring wells at the locations specified and in accordance with the construction plans and specifications in the monitoring well electronic approval request # (158814.ZF.PR.12) from Tom Beisel to Paul Bergstrand, dated (02/22/2002) {A hard copy will be delivered by mail via mail}.

These permanent monitoring wells (E561GW003, E561GW004, E561GW005, are to be installed and screened within the surficial aquifer/unit to the depth of approximately 10-18 feet below the ground surface, for the purpose of better defining the nature of groundwater on the site.

Conditions:

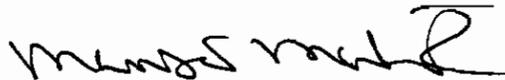
1. A driller certified to operate in the State of South Carolina must install the wells.
2. That the latitude and longitude, surveyed elevations, boring and/or geologist logs, and actual (as built) construction details for each permanent monitoring well be submitted to the Department within 30 days after installation of the last well point. GPS is highly recommended.
3. All monitoring wells must be properly developed until clear, sediment-free water samples are obtained. Specific conductance, temperature, turbidity, and pH measurements should be taken during development. A log recording the values of these parameters should be maintained during development of the wells. This log should be submitted along with the "as built" construction details required by Condition 2 above.

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4. 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.
5. That all sampling points will be abandoned as outlined in R.61-71.10.B.
6. Field equipment (including sampling probes) must be decontaminated by steam cleaning before use and between sampling locations. Well screens and casing must be decontaminated before installation.
7. That notice be given to the Christine Sanford-Coker, Charleston District EOC Hydrogeologist, during normal business hours at (803) 740-1590, a minimum of forty-eight hours prior to the initiation of drilling activities.

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 June 2, 1985.

Date of Issuance: 02/26/2002
Approval #: HW-01-068



Mansour N. Malik
Project Hydrogeologist
Hazardous Waste Section
Division of Hydrogeology
Bureau of Land and Waste Management

TABLE 1
 Monitoring Well Installation Information Summary
 AOC 561, Zone E, Charleston Naval Complex

Well Identification	Well Diameter (Inches) (Notes)	Method of Drilling	Screen Depth (ft. dia)	Screen Length (ft)	Screen Mesh/Slot Size	Expected Total Depth of Well (ft. dia)	Material of Well Construction	Analysis Parameters	Development (e.g. low flow, surging, etc.)	Grout (Type, Mix, etc.)	Finish Type	Purpose for Well	Other/Comments
E561GW003	2-inch (Notes)	Hollow Stem Auger	5 to 15	10 feet	0.01	10 to 15	Schedule 40 PVC	VOC/SVOC	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flange mount	Groundwater monitoring	
E561GW004	2-inch (Notes)	Hollow Stem Auger	5 to 15	10 feet	0.01	10 to 15	Schedule 40 PVC	VOC/SVOC	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flange mount	Groundwater monitoring	
E561GW005	2-inch (Notes)	Hollow Stem Auger	5 to 15	10 feet	0.01	10 to 15	Schedule 40 PVC	VOC/SVOC	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flange mount	Groundwater monitoring	

