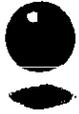


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REQUEST FOR INSTALLATION OF 5 GROUNDWATER MONITOR WELLS AT AREA OF  
CONCERN (AOC 617) ZONE F CNC CHARLESTON SC  
10/14/2002  
CH2MHILL



**CH2MHILL**  
Constructors, Inc.

**CH2M HILL**  
115 Perimeter Center Place NE  
Suite 700  
Atlanta, GA  
30346-1278  
Tel 770.604.9095  
Fax 770.604.9282

October 14, 2002

158814.ZF.EX.06

Mr. Paul Bergstrand, P.G.  
Hydrogeologist  
South Carolina Department of Health and Environmental Control  
Bureau of Land & Waste Management  
Division of Hydrogeology  
8901 Farrow Road  
Columbia, SC 29203

Subject: Request for Installation of Five Groundwater Monitor Wells at AOC 617, Zone F  
Charleston Naval Complex, North Charleston, South Carolina

Dear Paul:

On behalf of the U.S. Navy Southern Division Naval Facilities Engineering Command, CH2M-Jones requests a permit for the installation of five (5) groundwater monitor wells.

The purpose of the new wells is to gain additional information on the nature and extent of the zinc plume and also add additional monitoring locations for a 72-hour pump test. The need for and location of the wells requested are outlined in the AOC 617 Sampling and Analysis Plan (Attached).

The three (3) new shallow monitor wells will be constructed to fully penetrate the upper flow zone of the surficial aquifer. The deeper wells will be installed just above the top of the Ashley Formation to screen the deeper flow zones of the surficial aquifer. Well installation will be performed in accordance with the South Carolina Well Standards and Regulations (R.61-71).

Figure 1 presents the location of the proposed monitoring wells. Table 1 presents the required detailed information for monitoring well installation approval. We are anticipating that this work will begin toward the end of October, 2002.

If you have any questions, comments, or require additional information please do not hesitate to contact us.

Mr. Paul Bergstrand, P.G.

Page 2

October 14, 2002

158814.ZF.EX.06

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read "Tom Beisel". The signature is fluid and cursive, with a large loop at the end.

Tom Beisel, P.G.

Project Geologist

(770) 604-9182 ext 367

enclosures

cc:

Tony Hunt, P.E./SOUTHDIV

Rob Harrell/SOUTHDIV

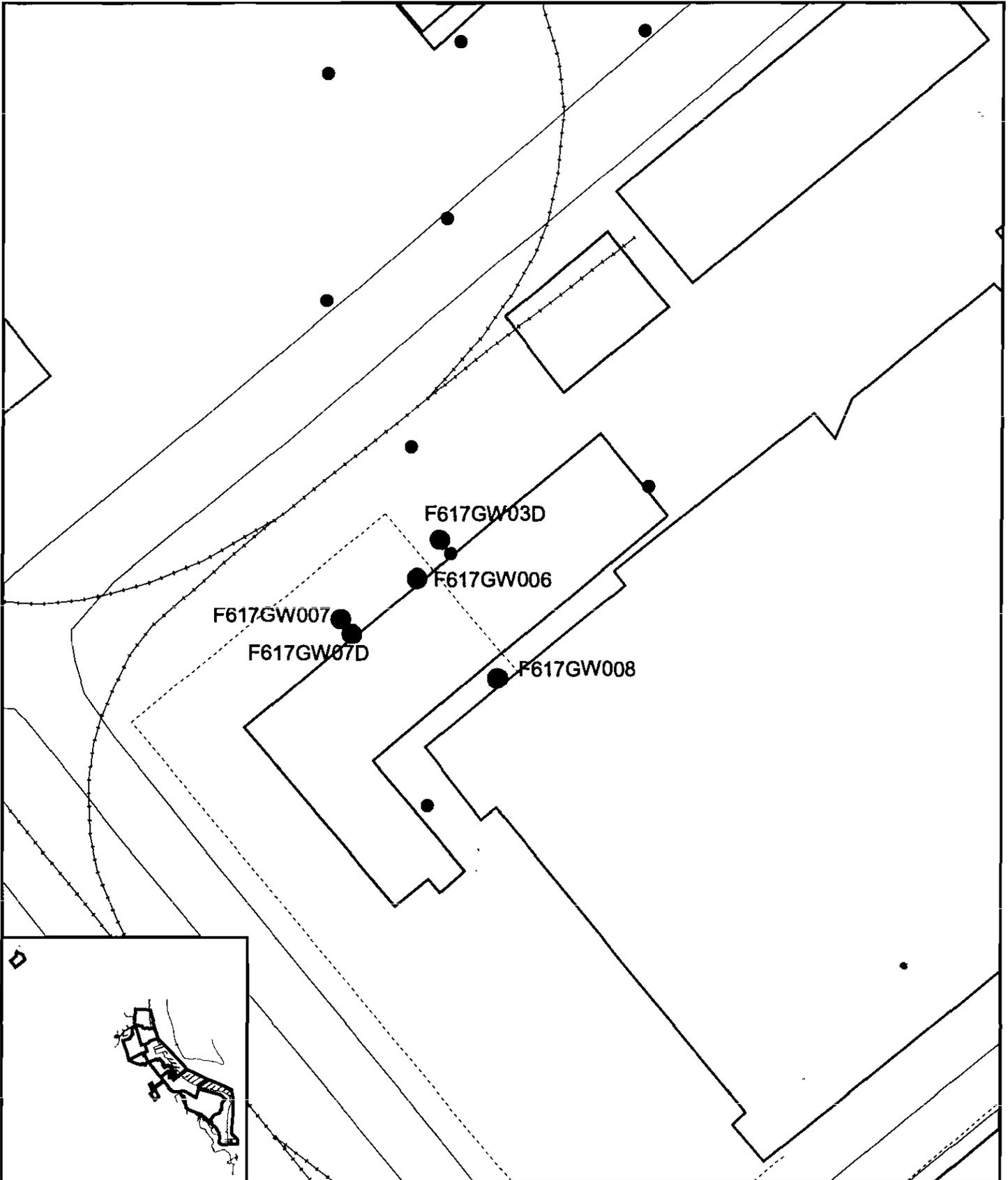
Dean Williamson, P.E./CH2M HILL/GNV

**TABLE 1**

Monitoring Well Installation Information Summary  
 AOC 617, Zones F, Charleston Naval Complex

Well Identification	Well Diameter (Inner & Outer)	Method of Drilling	Screen Depth (ft bis)	Screen Length (ft)	Screen Mesh/ Slot Size	Expected Total Depth of Well (ft bis)	Material of Well Construction	Analysis Parameters	Development (e.g., low flow, baller, etc.)	Grout (Type, Mixture Ratio, etc.)	Finish Type	Purpose for Well	Other/ Comments
F617GW03D	4-inch (inner)	Hollow Stem Auger (HAS)	20-30	10 feet	0.01	30	4-inch Schedule 40 PVC	Metals	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Pumping well/groundwater quality monitoring	
F617GW006	4-inch (inner)	HAS	5 – 15	10 feet	0.01	15	4-inch Schedule 40 PVC	Metals	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Pumping well/groundwater quality monitoring	
F617GW007	4-inch (inner)	HAS	5 – 15	10 feet	0.01	15	4-inch Schedule 40 PVC	Metals	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Pumping well/groundwater quality monitoring	
F617GW07D	4-inch (inner)	HAS	20-30	10 feet	0.01	30	4-inch Schedule 40 PVC	Metals	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Pumping well/groundwater quality monitoring	
F617GW008	4-inch (inner)	HAS	5 – 15	10 feet	0.01	15	4-inch Schedule 40 PVC	Metals	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Pumping well/groundwater quality monitoring	

NOTE: Original figure created in color



- Groundwater Well
- ∧ Roads - Lines
- AOC Boundary
- SWMU Boundary
- Buildings



0 50 100 Feet

1 inch = 59.2808 feet

**Figure 1**  
New Well Locations  
AOC 617, Zone F  
Charleston Naval Complex

**CH2MHILL**