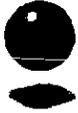


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REQUEST FOR INSTALLATION OF GROUNDWATER MONITOR WELLS NEAR AREA OF
CONCERN 563 (AOC 563) ZONE E CNC CHARLESTON SC
10/31/2002
CH2MHILL



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 31, 2002

158814.ZE.PR.07

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 Groundwater Monitor Wells near AOC 563, Zone E
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 the installation of six shallow groundwater monitoring wells and two deep groundwater monitoring wells around AOC 563 in the vicinity of Building 177 in Zone E, CNC. Figure 1 rev. 1 shows the site map with the locations of the proposed six wells.

The purpose of these new wells is to verify the presence of trichloroethylene (TCE) in the shallow groundwater around AOC 563 which has historically shown low-level detections of TCE above its MCL.

The depth to groundwater at the site is approximately 4-5 ft below land surface (bls).

Well installations will be performed in accordance with the South Carolina Well Standards and Regulations (R.61-71).

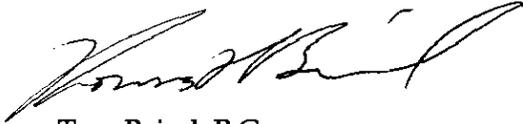
Table 1 rev.1 presents the detailed information required for monitoring well installation approval.

CH2M-Jones has scheduled to complete this work during the first week of November 2002, coinciding with the completion of well installations at AOC 617. 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 31, 2002

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read "Tom Beisel", written in a cursive style.

Tom Beisel, P.G.
Project Geologist
(770) 604-9182 ext 367

enclosures

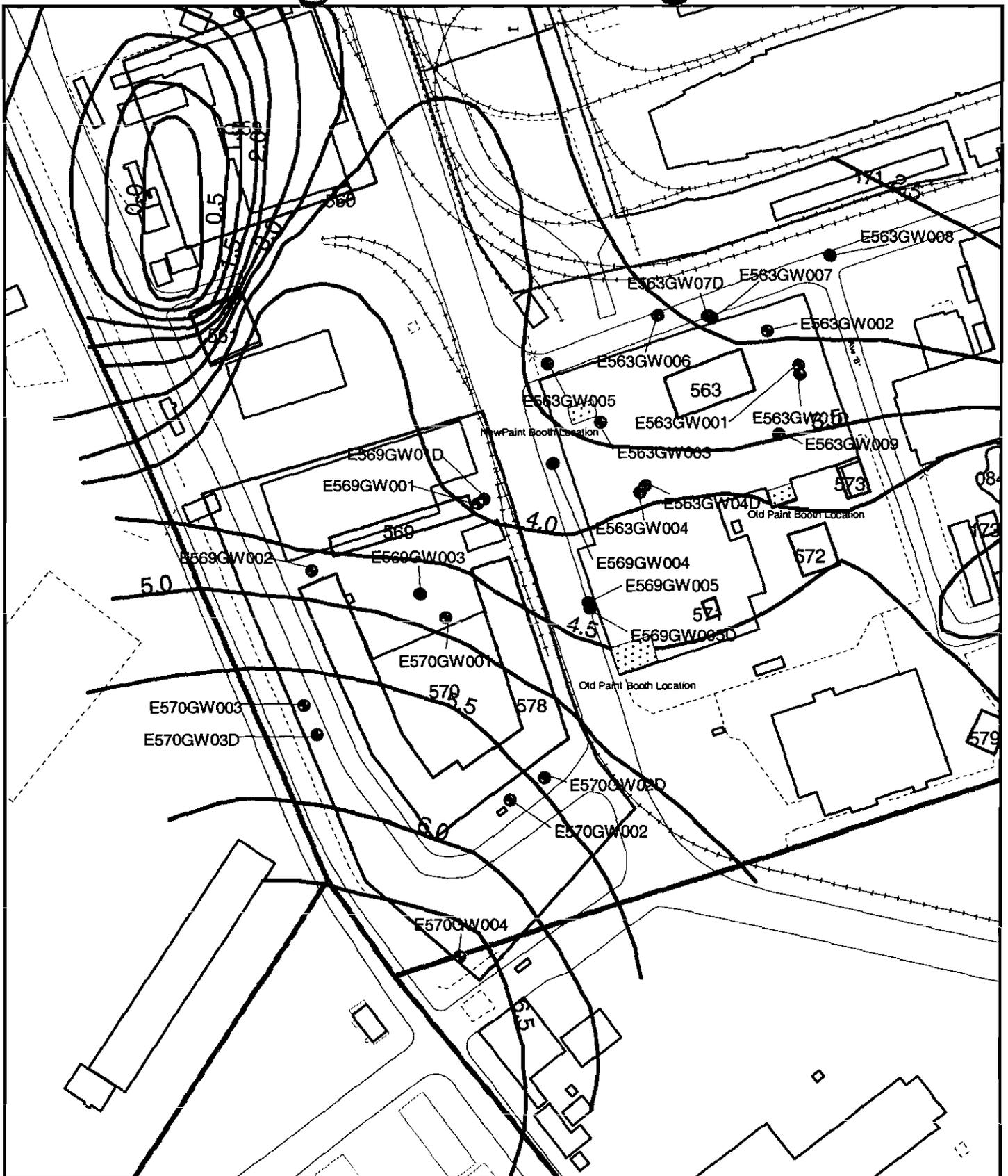
cc:

Tony Hunt, P.E./SOUTHDIV
Rob Harrell/SOUTHDIV
Dean Williamson, P.E./CH2M HILL/GNV

TABLE 1 REV.1

Monitoring Well Installation Information Summary
AOC 563 Area, Zone E, Charleston Naval Complex

Well Identification	Well Diameter (Inner & Outer)	Method of Drilling	Screen Depth (ft bls)	Screen Length (ft)	Screen Mesh/ Slot Size	Expected Total Depth of Well (ft bls)	Material of Well Construction	Analysis Parameters*	Development (e.g., low flow, bailer, etc.)	Grout (Type, Mixture Ratio, etc.)	Finish Type	Purpose for Well	Other/ Comments
E563GW004	2-inch (inner)	Hollow Stem Auger	3-13	10	0.01	13	Schedule 40 PVC	VOCs, Fe, ORP, DO, Mn, pH, Temp, Cond.	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Groundwater monitoring	
E563GW005	2-inch (inner)	Hollow Stem Auger	3-13	10	0.01	13	Schedule 40 PVC	VOCs, Fe, ORP, DO, Mn, pH, Temp, Cond.	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Groundwater monitoring	
E563GW006	2-inch (inner)	Hollow Stem Auger	3-13	10	0.01	13	Schedule 40 PVC	VOCs, Fe, ORP, DO, Mn, pH, Temp, Cond.	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Groundwater monitoring	
E563GW007	2-inch (inner)	Hollow Stem Auger	3-13	10	0.01	13	Schedule 40 PVC	VOCs, Fe, ORP, DO, Mn, pH, Temp, Cond.	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Groundwater monitoring	
E563GW008	2-inch (inner)	Hollow Stem Auger	3-13	10	0.01	13	Schedule 40 PVC	VOCs, Fe, ORP, DO, Mn, pH, Temp, Cond.	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Groundwater monitoring	
E563GW009	2-inch (inner)	Hollow Stem Auger	3-13	10	0.01	13	Schedule 40 PVC	VOCs, Fe, ORP, DO, Mn, pH, Temp, Cond.	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Groundwater monitoring	
E563GW04D	2-inch (inner)	Hollow Stem Auger	22-32	10	0.01	32	Schedule 40 PVC	VOCs, Fe, ORP, DO, Mn, pH, Temp, Cond.	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Groundwater monitoring	
E563GW07D	2-inch (inner)	Hollow Stem Auger	22-32	10	0.01	32	Schedule 40 PVC	VOCs, Fe, ORP, DO, Mn, pH, Temp, Cond.	Low Flow Pump with surge block	Portland Type II with 5% Bentonite	flush-mount	Groundwater monitoring	



<ul style="list-style-type: none"> ● Groundwater Monitoring Well ● Groundwater Monitoring Well (installed March 2002) ● Proposed Groundwater Monitoring Well 4.0 Shallow Groundwater Elevation (ft. above msl) — Fence — Railroads — Roads 	<ul style="list-style-type: none"> ▭ Zone Boundary ▭ SWMU Boundary ▭ AOC Boundary ▭ Buildings 	<p>N</p> <p>0 100 200 Feet</p> <p>1 inch = 150 feet</p>	<p>Figure 1 rev. 1 Proposed New Groundwater Sampling Locations AOCs 563, 569, 570, and 578, Zone E Charleston Naval Complex</p>
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