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CNC CHARLESTON
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REVIEW OF SAMPLING AND ANALYSIS PLAN DATED 19 MAY 1997 AND MONITORING
WELL INSTALLATION APPROVAL FOR BUILDING NS-200 CNC CHARLESTON SC
07/17/1997
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL



2600 Bull Street
Columbia, SC 29201-1708

Mr. Gabriel L. Magwood
Southern Division NFEC
P.O. Box 190010
2155 Eagle Drive
North Charleston, South Carolina 29419-9010

Re: Sampling and Analysis Plan/Assessment Plan dated May 19, 1997
Charleston Naval Base Building NS 200 (CSC Bldg. # 2)
(Site Identification # 17624)
Charleston Naval Complex/Charleston Naval Base
Charleston, SC
Charleston County

Date: July 17, 1997

Dear Mr. Magwood:

The author has completed technical review of the referenced document. Previous information submitted to the Department indicated elevated levels of naphthalene (volatile organic analysis) and cadmium (total analysis) were detected in samples obtained during closure activities. As submitted, the Sampling and Analysis/Assessment Plan provides a narrative of proposed activities for the environmental characterization of the suspected release from the referenced underground storage tank system. By reference, technical specifications and protocols are provided in the RCRA Facility Investigation (RFI) Final Comprehensive Sampling and Analysis Plan (CSAP) dated August 1994. It is recognized that the initial tasks (i.e., soil borings, temporary monitoring wells) are "generically" designed to provide for field modifications, as necessary. In this regard, the following comments are offered:

- With consideration to the contaminant source, groundwater sampling should incorporate all appropriate constituents utilizing approved analytical methodologies and detection limits sufficient to demonstrate compliance/non-compliance with the State's Water Classifications and Standards and Primary Drinking Water Standards. Soil sampling should incorporate all appropriate constituents utilizing approved analytical methodologies and detection limits sufficient to demonstrate a reasonable delineation of the extent and severity (if any) of contamination and potential contribution to groundwater contamination (if any).
- Decisions regarding the appropriate number and locations of permanent monitoring wells will be made subsequent to review of the Final Assessment Report.

With appropriate consideration to the above comments, the proposal to perform soil borings, temporary monitoring well installation and appropriate sampling is approved for implementation. As noted above, the installation of permanent monitoring wells is not approved at this time, with the following exception:

- In the presence of free phase petroleum product and/or significant dissolved phase contamination temporary monitoring wells may be converted to permanent monitoring wells at the time of installation, as appropriate.

Additional soil borings and temporary monitoring wells are proposed in the event the initial assessment does not sufficiently define the extent of contamination. In the presence of free phase petroleum product and/or significant dissolved phase residual contamination the facility may employ best professional judgement to install additional soil



2600 Bull Street
Columbia, SC 29201-1708

Monitoring Well Installation Approval Form

Date of Issue: July 17, 1997
Approval No: 8563

Approval is hereby granted to: Department of the Navy
(on behalf of): Charleston Naval Complex/Naval Base
Site Identification #: 17624
County: Charleston

This approval is for the construction of seven (7) temporary monitoring wells designated (no designation) in accordance with the construction plans and technical specifications submitted to the Department on May 19, 1997. The temporary monitoring wells are to be constructed within the surficial aquifer for the intended purpose of monitoring groundwater quality and/or water level(s) at the referenced facility. Approval is provided with the following conditions:

1. The latitude and longitude, surveyed elevations, boring and/or geologist logs and actual (as built) construction details for each well be submitted to Paul L. Bristol within thirty (30) days of completion (of last well(s) installed). (to be submitted with the Final Assessment Report)
2. Each well shall be labeled with an identification plate constructed of a durable material affixed to the casing or surface pad where it is readily visible. The plate shall provide monitoring well I.D.#, date of construction, static water level, and driller name and state certification #. (waived)
3. Well construction and sampling derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regard to contents, source, and date of activity.
4. A minimum of forty-eight (48) hours prior to initiation of drilling activities, please provide notice to Ms. Christine Sanford-Coker, Trident District EQC Office (803-740-1590).
5. Please provide ground-water quality analytical data (chemical analysis and/or water level(s)) associated measurements (i.e., in-situ field measurements) to Paul L. Bristol within thirty (30) days of receipt from laboratory. (to be submitted with the Final Assessment Report)
6. Monitoring wells shall be installed by a well driller certified by the State of South Carolina.

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

Approved by: _____

Paul L. Bristol
Paul L. Bristol, Hydrogeologist, P.G.
Groundwater Assessment & Development Section
Bureau of Water

cc: Trident District EQC



DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 190010
2155 EAGLE DRIVE
NORTH CHARLESTON, S.C. 29419-9010

Li 5.29.97
Lo 7.16.97

5090
Code 1849
22 May 1997

RECEIVED
MAY 29 1997

Groundwater Assessment
and Development Section

Mr. Paul Bristol
South Carolina Department of Health
and Environmental Control
Ground-Water Protection Division
2600 Bull Street
Columbia, SC 29201

**SAMPLING AND ANALYSIS PLAN FOR ADDITIONAL ASSESSMENT
AT UST NS200 (GWPD ID #17624)**

Dear Mr. Bristol:

Attached is the Sampling and Analysis Plan (SAP) for additional assessment at UST NS200 (GWPD ID # 17624) located at the former Naval Base, Charleston, SC. The Comprehensive Sampling and Analysis Plan (CSAP) previously submitted will be followed during the additional assessment.

If you have any questions regarding the SAP feel free to contact me at (803)820-7307.

Sincerely,


GABRIEL L. MAGWOOD
Petroleum/UST Branch

Commissioner: Douglas E. Bryant

Board: John H. Burriss, Chairman
William M. Hull, Jr., MD, Vice Chairman
Roger Leaks, Jr., Secretary

Promoting Health, Protecting the Environment

Richard E. Jabbour, DDS
Cyndi C. Mosteller
Brian K. Smith
Rodney L. Grandy

Mr. Gabriel L. Magwood
Southern Division NFEC
P.O. Box 190010
2155 Eagle Drive
North Charleston, South Carolina 29419-9010

Re: Assessment Report dated September 30, 1996
Charleston Naval Base Building NS 200 (CSC Bldg. # 2)
(GWPD 17624)
Charleston County

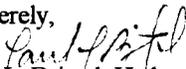
Date: November 12, 1996

Dear Mr. Magwood:

The author has completed technical review of the referenced document. As submitted, the report provides analytical results of environmental sampling conducted to determine if releases have occurred from operation of the referenced underground storage tank system. The results presented indicate elevated levels of naphthalene (volatile organic analysis) and cadmium (total analysis) were detected in areas of the tank pit. These results appear to necessitate additional endeavors for remedial actions (soils removal) and contamination characterization (assessment activities, including groundwater investigations), as appropriate. In this regard, assessment/corrective action activities provided in the Tank Management Plan (dated October 18, 1996) should be implemented in an appropriate and timely manner. Please be reminded that groundwater sampling (if necessary) will require construction of sampling points and will need to be submitted for prior review and approval, as appropriate.

Should you have any questions, please contact me at (803) 734-5328.

Sincerely,



Paul L. Bristol, Hydrogeologist
Groundwater Assessment and Development Section
Bureau of Water

cc: Trident District EQC



DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 190010
2155 EAGLE DRIVE
NORTH CHARLESTON, S.C. 29419-9010

LI 10.25.96
LO 11.12.96
PLW

UST NS200
GWPD 17624
5090
Code 1849
30 Sept 1996

Mr. Paul Bristol
South Carolina Department of Health
and Environmental Control
Ground-Water Protection Division
2600 Bull Street
Columbia, SC 29201

UST ASSESSMENT REPORT FOR: ⁽⁴⁾ UST 56, ⁽²⁾ UST 1346, ⁽³⁾ UST NS 200, ⁽¹⁾ UST 6A
AND UST 6B CHARLESTON NAVAL COMPLEX, CHARLESTON, SC

Dear Mr. Bristol:

Enclosed are the Assessment Reports for the closure of underground storage tanks 56, 1346, NS 200, 6A and 6B located at the Charleston Naval Complex, Charleston, SC.

If you have any questions, please contact me at 803-820-7307.

Sincerely,

Gabriel L. Magwood
GABRIEL L. MAGWOOD
Petroleum/UST

Encl:
(1) Assessment Reports

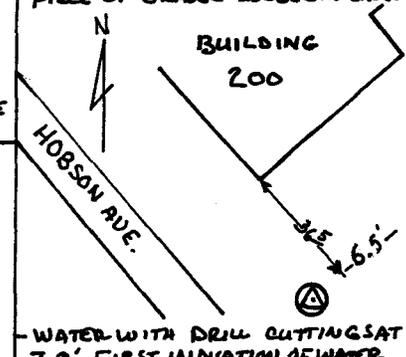
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OCT 2 1996

Groundwater Protection
Division

DRILLING LOG	DIVISION SOUTH ATLANTIC	INSTALLATION CHARLESTON NAVAL BASE (FORMER)	SHEET 1 OF 2 SHEETS
1. PROJECT INSTALLATION OF MONITORING WELLS AT BUILDING 200, FORMER LST SITE		10. SIZE AND TYPE OF BIT 4 1/2" ID HOLLOW STEM AUGER, 1 3/4"	
2. LOCATION (Coordinates or Station) SEE REMARKS COLUMN (9)		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) ID SPLITSPOON	
3. DRILLING AGENCY CHARLESTON ENVIRONMENTAL DETACHMENT TASK SECT.		12. MANUFACTURER'S DESIGNATION OF DRILL SIM CO 2400 SR-1	
4. HOLE NO. (As shown on drawing title and file number) NBCT-200-TW-03		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 2
5. NAME OF DRILLER		UNDISTURBED NONE	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		14. TOTAL NUMBER CORE BOXES NONE	
7. THICKNESS OF OVERBURDEN > 17.0'		15. ELEVATION GROUND WATER NOT DETERMINED	
8. DEPTH DRILLED INTO ROCK N/A		16. DATE HOLE	STARTED 17 JUN 98
9. TOTAL DEPTH OF HOLE 17.0'		COMPLETED 17 JUN 98	
		17. ELEVATION TOP OF HOLE NOT DETERMINED	
		18. TOTAL CORE RECOVERY FOR BORING N/A %	
		19. SIGNATURE OF INSPECTOR James O. Biddu GEOLOGIST	

ELEVATION a	DEPTH 0' b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0'		(SM) BROWN, FINE SILTY SAND LIGHT BROWN			WATER LEVEL DURING DRILLING: 7.0'
	2'		YELLOWISH-BROWN, 10% CLAY			WATER LEVEL AFTER 1 HOUR 6.42'
	4'		DARK BROWN, ORGANIC TEXTURE, APPEARANCE			NOTE: EXCEPT FOR SPLITSPOON SAMPLE INTERVALS, DEPTHS FOR CHANGE OF MATERIALS ARE APPROXIMATIONS BASED ON SOIL CUTTINGS AND SON ON AUGER ON WITH DRAWAL
	4.6'		(SP) LIGHT BROWN AND YELLOW-ORANGE F. POORLY GRADED SAND WITH 15% SILT		TW 03-1 (4') SAMPLE	FIRST PUSH DID NOT PRODUCE SAMPLE. ONE 2" DIAMETER PIECE OF GRAVEL LODGED IN SHOE.
	5.7'		(SC) MEDIUM GRAYISH-BROWN, FINE CLAYEY SAND			
	6'		(SP) MEDIUM BROWN, FINE TO MEDIUM GRAINED, POORLY GRADED SAND			
	8'		(SC) DARK GREENISH-BROWN, FINE TO MEDIUM CLAYEY SAND		TW 03-2 (8) SAMPLE	
	10'					
	12'					



CONTINUED ON SHEET NO. 2

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

PROJECT **INSTALLATION OF MONITORING WELLS AT BUILDING 200 FORMER U ST SITE** INSTALLATION **FORMER CHARLESTON NAVAL BASE** SHEET **2** OF **2** SHEETS

ELEVATION a	DEPTH 12' b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
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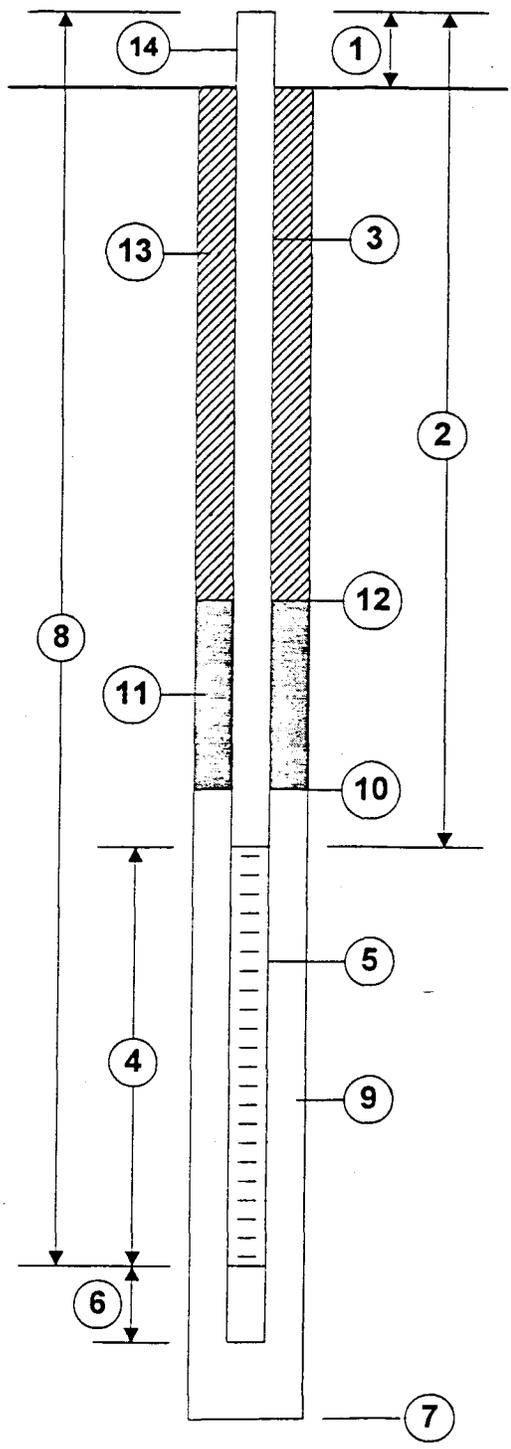
			(SC) CONTINUED FROM SHEET NO. 1			STRONG HYDROGEN SULFIDE ODOUR
	14		(OL/OH) DARK GRAY, HIGH LIQUID LIMIT ORGANIC SILT, SEMI-PLASTIC			
	16		(OH) DARK GRAY, HIGH LIQUID LIMIT ORGANIC CLAY, PLASTIC			

	17'		BORING TERMINATED AT 7.0'.			
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WELL CONSTRUCTION DETAILS

FORMER CHARLESTON NAVAL BASE BUILDING 200 FORMER UST SITE INVESTIGATION

WELL NUMBER NBCT-200-TV-03
 DATE OF INSTALLATION 06/17/98
 INSTALLED BY CHARLES SAJ ENVIRONMENTAL
DETACHMENT TANK SECTION / J. BIDDLE



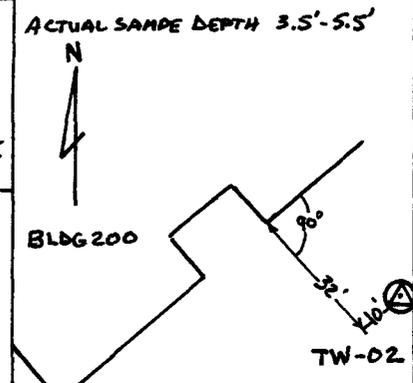
1. Height of Casing above ground 1.40'
2. Total length of Riser pipe 5.9'
2" ID SCHEDULE 40 FLUSH
3. Type of Riser pipe THREAD PVC
4. Length of Screen 10.0'
2" ID SCHEDULE 40 PVC
5. Type of Screen 0.010" SLOTTED
6. Length of Sump PORTION OF SCREEN
7. Depth of Boring 17.0'
Diameter of Boring 7.75" NOMINAL
8. Depth to Bottom of Screen 14.5'
"DRILLERS SERVICES" No. 2
9. Type of filter pack FILTER SAND.
Quantity Used 400 LBS
Size 10-30 SCREEN SIZE
10. Depth to Top of Filter Pack 2.1'
"SHUR PEL" 1/2" BENTONITE
11. Type of Seal PELLETS
Quantity Used 60 LBS.
12. Depth to Top of Seal 0.5'
13. Type of Grout NONE
Grout Mixture N/A
Method of Placement N/A
14. Type of Well Protection NONE AT THIS TIME

COMMENTS:
 WATER LEVEL, 1 HOUR AFTER INSTALLATION:
6.42'.

jb 6/18/98

DRILLING LOG	DIVISION SOUTH ATLANTIC	INSTALLATION FORMER CHARLESTON NAVAL BASE	SHEET 1 OF 2 SHEETS
1. PROJECT INSTALLATION OF TEMPORARY MONITORING WELLS AT BUILDING 200 FORMER US SITE		10. SIZE AND TYPE OF BIT 4 1/4" ID HSA, 1 3/8" SPLITSPOON	
2. LOCATION (Coordinates or Station) SEE REMARKS COLUMN (9)		11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	
3. DRILLING AGENCY CHARLESTON ENVIRONMENTAL DETACHMENT		12. MANUFACTURER'S DESIGNATION OF DRILL SIMCO 2400 SR-1	
4. HOLE NO. (As shown on drawing title and file number) NBCT-200-TW-02		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 2 UNDISTURBED NONE
5. NAME OF DRILLER		14. TOTAL NUMBER CORE BOXES NONE	
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER NOT DETERMINED	
7. THICKNESS OF OVERBURDEN > 15.0'		16. DATE HOLE STARTED 17 JUN 98 COMPLETED 17 JUN 98	
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE NOT DETERMINED	
9. TOTAL DEPTH OF HOLE 15.0'		18. TOTAL CORE RECOVERY FOR BORING NA %	
		19. SIGNATURE OF INSPECTOR James A. Biddle GEOLOGIST	

ELEVATION a	DEPTH 0' b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
0.45			ASPHALT			WATER LEVEL DURING DRILLING NOT DETERMINED
	2'		(SM) LIGHT BROWN AND BROWN, FINE TO MEDIUM SILTY SAND WITH A TRACE OF FINE GRAVEL.			WATER LEVEL @ 2 HOURS 6.63' IN WELL CASING
			FINE, NO GRAVEL			
			YELLOWISH-BROWN. W/A TRACE OF COARSE			
4'	4.2'		(OL) DARK BROWN, BLACK CLAYEY ORGANIC SILT			
			(CL) YELLOWISH-BROWN AND MEDIUM GRAY SANDY, LEAN CLAY WITH 10-15% SILT		TW 02-1 (4') SAMPLE	ACTUAL SAMPLE DEPTH 3.5'-5.5'
5.3'	6'		(SP) GRAY, FINE TO MEDIUM, POORLY GRADED SAND WITH MINOR SHELL CONTENT			
			(CL) YELLOWISH-BROWN, SILTY/SANDY LEAN CLAY, VERY LOW PLASTICITY		TW 02-2 (8') SAMPLE	
			(SP) GRAY, FINE TO COARSE, POORLY GRADED SAND WITH 20% SHELL CONTENT, FIRST INDICATION OF WATER.			



CONTINUED ON SHEET No. 2

NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

DRILLING LOG (Cont Sheet)

ELEVATION TOP OF HOLE
NOT DETERMINED

Hole No. **NBCT-200-TW-02**

PROJECT **INSTALLATION OF TEMPORARY MONITORING WELLS AT BLDG. 200 FORMER UST SITE**

INSTALLATION **FORMER CHARLESTON NAVAL BASE**

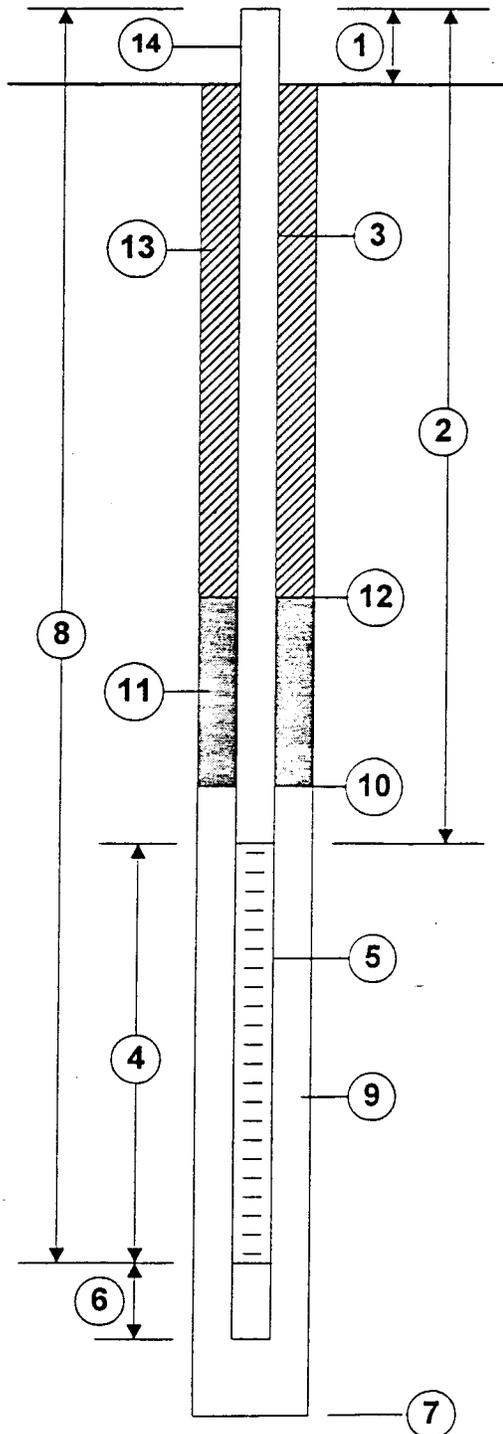
SHEET **2**
OF **2** SHEETS

ELEVATION a	DEPTH 10' b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	12'		(SP) CONTINUED FROM SHEET No 1			
	14'		(CL) YELLOWISH-BROWN AND GRAY SANDY/SILTY LEAN CLAY, TRACE OF FINE GRAVEL			
	15'		BORING TERMINATED AT 15.0'			

WELL CONSTRUCTION DETAILS

FORMER CHARLESTON NAVAL BASE BUILDING 200 FORMER UST SITE INVESTIGATION

WELL NUMBER NBCT-200-TW-02
 DATE OF INSTALLATION 06/17/98
 INSTALLED BY CHARLESTON ENVIRONMENTAL
DET. TANKSECT / J. BIDDLE



1. Height of Casing above ground 1.85'
2. Total length of Riser pipe 6.65'
3. Type of Riser pipe 2" ID SCHEDULE 40 FLUSH THREAD PVC.
4. Length of Screen 10.0'
5. Type of Screen 2" ID SCHEDULE 40 PVC. FLUSH THREAD. 0.010" SLOT SIZE
6. Length of Sump 0.5' (0.3' UNSLOTTED PORTION OF SCREEN)
7. Depth of Boring 15.0'
Diameter of Boring 7.75" NOMINAL
8. Depth to Bottom of Screen 14.8'
"DRILLERS SERVICES"
9. Type of filter pack NO. 2 FILTER PACK SAND
Quantity Used 325 LBS.
Size 10-30 SCREEN SIZE
10. Depth to Top of Filter Pack 2.5'
"SHUR PEL" 1/2" BENTONITE
11. Type of Seal PELLETS
Quantity Used 75 LBS.
12. Depth to Top of Seal 0.6'
13. Type of Grout NONE
Grout Mixture N/A
Method of Placement N/A
14. Type of Well Protection NONE AT THIS TIME
Concrete Cap to be poured to Asphalt
SURFACE.

COMMENTS:

Water level at 2 Hours: 6.63' bgs.
 Secured w/ Locking well cap.

jb 6/18/98

DRILLING LOG		DIVISION SOUTH ATLANTIC (USACE)	INSTALLATION FORMER CHARLESTON NAVAL BASE	SHEET 1 OF 2 SHEETS
1. PROJECT INSTALLATION OF TEMPORARY MONITORING WELLS AT BUILDING 200 FORMER UST SITE		10. SIZE AND TYPE OF BIT 4 1/2" ID HOLLOW STEM AUGER, 1 3/8"		
2. LOCATION (Coordinates or Station) SEE REMARKS COLUMN (9)		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) ID SPLITSPOON		
3. DRILLING AGENCY CHARLESTON ENVIRONMENTAL DETACHMENT (TANK SECT)		12. MANUFACTURER'S DESIGNATION OF DRILL SIMCO 2400-SR-1		
4. HOLE NO. (As shown on drawing title and file number) NBCT-200-TW-01		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 2	UNDISTURBED NONE
5. NAME OF DRILLER		14. TOTAL NUMBER CORE BOXES NO		
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER NOT DETERMINED		
7. THICKNESS OF OVERBURDEN > 17.0'		16. DATE HOLE	STARTED 17 JUN 98	COMPLETED 17 JUN 98
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE NOT DETERMINED		
9. TOTAL DEPTH OF HOLE 17.0'		18. TOTAL CORE RECOVERY FOR BORING N/A %	19. SIGNATURE OF INSPECTOR James G Biddle GEOLOGIST	

ELEVATION a	DEPTH 0' b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0.35'		ASPHALT			WATER LEVEL @ 8.0' DURING DRILLING. WATER LEVEL @ 7.00' AFTER 2 HOURS. (IN WELL CASING) NOTE: AT 1.0' PID READS 1 PPM.
	2'		(SM/SP) FINE TO MEDIUM SILTY SAND WITH SOME SILT, CLAY AND FINE GRAVEL, TAN TO LIGHT BROWN. VARIES TO POORLY GRADED SAND. APPEARS TO BE FILL MATERIAL			
	3.05'		(SM) DARK BROWN, FINE, SILTY SAND WITH ORGANIC TEXTURE AND APPEARANCE			
	3.6'		(SP) DARK GRAY, FINE, POORLY GRADED SAND WITH 10% SILT		TW 01-1 (4')	
	4'		(CL) LIGHT BROWN, SANDY LEAN CLAY, FINE SAND FRACTION 15%.			
	6'		W/ TRACES OF MEDIUM AND COARSE SAND			
	10'		(SP) GRAY, FINE TO MEDIUM, POORLY GRADED SAND WITH 15% SILT, SHELL FRAGMENTS, SATURATED			WATED DO: 8.0' SLIGHT FUEL ODOR NOTE: EXCEPT FOR SPLITSPOON SAMPLE INTERVAL, DEPTHS FOR CHANGES OF MATERIAL ARE APPROXIMATIONS BASED ON DRILL CUTTINGS AND SOIL ON AUGER ON WITH DRAWAL FROM BORING.
	10.5'		(OL/OH) DARK BROWNISH-GRAY, HIGH LIQUID LIMIT ORGANIC SILT/CLAY, MEDIUM PLASTICITY		TW 01-2 (8') SAMPLE	
	12.0'					

CONTINUED ON SHEET No. 2

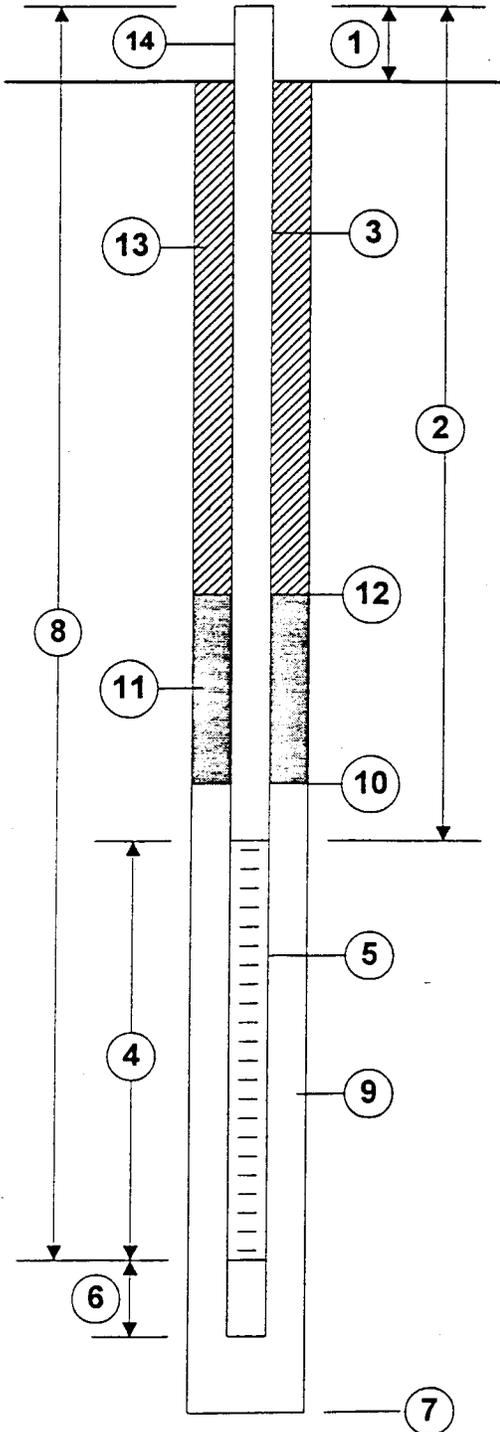
NOTE: SOILS VISUALLY FIELD CLASSIFIED IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.

DRILLING LOG (Cont Sheet)			ELEVATION TOP OF HOLE NOT DETERMINED		Hole No. NBCT-200-TW-01	
PROJECT TEMPORARY MONITORING WELLS AT BUILDING 200 FORMER UST SITE			INSTALLATION FORMER CHARLESTON NAVAL BASE		SHEET 2 OF 2 SHEETS	
ELEVATION a	DEPTH 12' b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	12' 14' 16' 17'		(OL/04) (CONTINUED FROM PREVIOUS SHEET) DARK BROWNISH-GRAY ORGANIC SILT AND CLAY.			BORING ORIGINALLY 4 BOARDS TO 15.0'. OVER BORED TO 17.0' DUE TO EXCESSIVE MATERIAL IN HOLLOW STEM AUGER.
			BORING TERMINATED AT 17.0'			

WELL CONSTRUCTION DETAILS

FORMER CHARLESTON NAVAL BASE BUILDING 200 FORMER UST INVESTIGATION

WELL NUMBER NBCT-200-TW-01
 DATE OF INSTALLATION 06/17/98
 INSTALLED BY CHARLESTON ENVIRONMENTAL DET.
TANK SECTION / J. BIDDLE



1. Height of Casing above ground 2.58'
2. Total length of Riser pipe 7.68'
2" ID SCHEDULE 40
3. Type of Riser pipe FLUSH THREAD PVC
4. Length of Screen 10.0'
5. Type of Screen 2" ID SCHEDULE 40
FLUSH THREAD PVC. 0.010" SLOT
6. Length of Sump 0.5' (INCLUDES 0.3' UNSLOTTED
PORTION OF SCREEN.)
7. Depth of Boring 17.0'
Diameter of Boring 7.75" NOMINAL
8. Depth to Bottom of Screen 15.1'
"DRILLERS SERVICES" No. 2
9. Type of filter pack FILTER SAND
Quantity Used 375 Lbs
Size 10-30 SCREEN SIZE
10. Depth to Top of Filter Pack 3.0'
"SHUR PAL" 1/2" BENTONITE
PELLETS
11. Type of Seal PELLETS
Quantity Used 75 Lbs.
12. Depth to Top of Seal 0.4'
13. Type of Grout NONE
Grout Mixture N/A
Method of Placement N/A
14. Type of Well Protection NONE AT INSTALLATION
CONCRETE CAP TO BE POURED TO ASPHALT SURFACE.

COMMENTS:

Water Level 7.00' bgs @ 2 hours
after well installation.

Secured with Locking well cap.

jb 6/18/98



DEPARTMENT OF THE NAVY
SUPERVISOR OF SHIPBUILDING, CONVERSION AND REPAIR, USN
PORTSMOUTH, VIRGINIA, DETACHMENT ENVIRONMENTAL CHARLESTON
1899 NORTH HOBSON AVENUE, BUILDING 30
NORTH CHARLESTON, SOUTH CAROLINA 29405-2106

L: 9.19.97
Lo 9.19.97

IN REPLY REFER TO:

Ser 827
August 1, 1997

South Carolina Department of Health
and Environmental Control
Bureau of Water
Groundwater Assessment and Development Section
2600 Bull Street
Columbia, South Carolina 29201
Attn: Paul L. Bristol

RECEIVED

AUG 06 1997

Groundwater Assessment
and Development Section

Re: Telecom on Monitoring Well Installation
and Final Assessment Report Submittal Dates.

Dear Mr. Bristol:

This letter is being sent as confirmation and record of our August 1, 1997 telephone conversation regarding reporting deadlines for UST Site Sampling and Analysis/Assessment Plans. The Monitoring Well Installation Approval Form, Site Identification # 17624, dated July 17, 1997 requested that well installation records be submitted with the Final Assessment Report within 30 days of our receipt of laboratory data from the site investigation. In our conversation I requested and you affirmed that the reporting dates for Final Assessment Reports be extended to 45 days. The extension request is based on the anticipation that Charleston Environmental Detachment will be performing several assessments and the extra time will be needed to coordinate the work and meet reporting expectations.

If there are any questions or if more information is needed, please contact me at (803) 743-6777 ext. 217.

Sincerely,

Jack Amey
UST Project Manager
Supervisor of Shipbuilding, Conversion and Repair, USN,
Portsmouth VA, Environmental Detachment Charleston, SC

cc: Gabriel Magwood, Southern Division
J. N. K. Tunstall, SPORTENVDETHASN