April 29, 2005

Mr. Ken Lucas
Remedial Project Manager
U.S. Environmental Protection Agency, Region IV
North Remedial Branch
61 Forsyth Street, Suite 9T25
Atlanta, Georgia 30303-8909

Re: Operable Unit #2 - Intermediate Groundwater
Implementation of Remedial Action Work Plan
Constituent Mass Estimates
SCANA Services, Inc.
Calhoun Park Area Site – Charleston, South Carolina

Dear Mr. Lucas:

Preliminary field activities associated with the implementation of the Remedial Action Work Plan (RAWP) for Intermediate Groundwater were recently completed at the Calhoun Park Area (CPA) site located in Charleston, South Carolina. This initial work consisted of installing injectors in various off-site areas for the planned treatment of intermediate groundwater using Fenton's Reagent in an *In-Situ* Chemical Oxidation (ISCO) process. This letter will provide a concise summary of the recent field work and resulting analytical information used to calculate the appropriate amount of Fenton's Reagent that will be injected during the implementation phase.

Summary

Summary Table 1 was developed to present a brief comparison of how the two most critical components of the ISCO process (i.e., the number of injectors and the quantity of hydrogen peroxide to be injected) have evolved throughout the design and field-implementation process. Columns 1 and 2 of the table represent the original "Design" values for these two important variables. The design values were established in the approved Remedial Design documents (Final RD, dated May 2004 and the RAWP, dated January 2005). Columns 3 and 4 represent the "Actual" or field-installed conditions for the number of injectors and the estimated peroxide mass as re-calculated by the ISCO vendor, GeoCleanse International, Inc. (GCI). In summary, the following statements can be made:

- The total number of injectors has increased approximately 33 % (from 34 to 45); and
- The amount of hydrogen peroxide to be injected has increased by a factor of approximately 2.5 (from 45,142 pounds to 108,000 pounds).

As described in the attached letter, the constituent mass estimates and corresponding hydrogen peroxide quantity calculations were performed by the ISCO vendor, GCI, and have been reviewed and approved by the IQAT Team (SCANA, MTR, and Ish Inc.).

Detailed Information by Sector

As set forth in the approved RAWP, soil samples were collected at various intervals while the injectors were being installed. The analytical results of those soil samples were then used to more accurately estimate the constituent mass in each Sector, which in turn was used to revise the amount of peroxide necessary for the destruction of this mass. Two appendices are attached to summarize information for each Sector:

- Appendix A contains the April 26, 2005 letter from GCI, which explains how the calculations were performed. Separate tables are attached for each Sector which provide the screened interval for each injector, analytical data (totals) used in the mass calculations (stated in terms of TPH), and the revised recommended amount of peroxide to be injected at each injector; and
- Appendix B contains summary tables (prepared by MTR and provided to GCI) with soil analytical results for individual constituents, the soil boring logs, and figures showing approximate injector locations (not yet surveyed).

SCE&G is providing this information in accordance with the approved RAWP.

Regarding scheduling issues, SCE&G is continuing to move forward with other field activities as described in the RAWP. As such, the baseline intermediate groundwater sampling work is currently being completed and the PermeOx injection activities are scheduled to be initiated in mid-May. Based on a request from one of the off-site property owner's, the Fenton's injection activities are tentatively scheduled to begin in August 2005.

Should you have any questions or wish to discuss these issues further, please don't hesitate to contact me at (803) 217-9367.

Sincerely,

T. N. Effinger

Thomas N. Effinger, P.E.
SCANA Services, Inc.
Environmental Services

Enclosures

cc: S. Wilson – SCDHEC (three copies)
T. Adams - SCDHEC
W. Motorwalla - SCANA
I. Murarka – Ish Inc.
J. Wilson/MariKay Fish - GeoCleanse International
R. Contrael, M. Ferlin and B. Zeli - MTR

TABLE 1

SUMMARY OF ESTIMATED 50% PEROXIDE MASS

SCE&G Calhoun Park Area Site
Charleston, South Carolina

UPPER INTERMEDIATE SAND UNIT

Remediation Sectors	DESIGN 1 Number of Injectors	DESIGN 2 Estimated 50% Peroxide Mass per Injector (pounds)	ACTUAL 3 Number of Injectors	ACTUAL 4 Estimated 50% Peroxide Mass per Injector (pounds)
Sector 5 (Rabin's)	5	2,981	5	2,000*
Sector 9 (East Bay)	4	2,461	6	2,000*
Total Upper Intermediate Sand	**9**	**24,749**	**11**	**22,000**

MIDDLE INTERMEDIATE SAND UNIT

Remediation Sectors	DESIGN 1 Number of Injectors	DESIGN 2 Estimated 50% Peroxide Mass per Injector (pounds)	ACTUAL 3 Number of Injectors	ACTUAL 4 Estimated 50% Peroxide Mass per Injector (pounds)
Sector 5 (Rabin's)	10	429	10	2,000*
Sector 9 (East Bay)	12	429	14	2,000*
Sector 12 (Luden's North)	3	3,649	10	3,800**
Total Middle Intermediate Sand	**25**	**20,385**	**34**	**86,000**
TOTALS	**34**	**45,134**	**45**	**108,000**

Summary by Area	Number of Injectors	50% Peroxide Mass Per Injector (pounds)
Rabin's	15	30,000
East Bay	20	40,000
Luden's	10	38,000
	45	108,000

Notes:

Columns 1 and 2 were based on the Remedial Design (May 2004) and the Remedial Action Work Plan (January 2005).

Column 3 represents the actual number of injectors installed during recently completed field activities.

Column 4 lists the amount of hydrogen peroxide to be injected at each location and was provided by Geo-Cleanse International, Inc. (GCI), based on recent analytical data.

* - The 2,000 pounds (lb.) of 50% hydrogen peroxide is a minimum amount that must be injected at each injector location based on the GCI process.

** - Represents an average value per injector for this area only. See GCI's mass calculations for actual amounts per each injector.

APPENDIX A

Geo-Cleanse®
INTERNATIONAL, INC.

April 26, 2005

Mr. Tom Effinger
SCANA Services, Inc.
Palmetto Center
1426 Main Street
Columbia, SC 29201

Re: In-Situ Chemical Oxidation Treatment Program – Mass Calculations
South Carolina Electric and Gas Co. – CPA Site
Charleston, South Carolina

Dear Tom:

Geo-Cleanse International, Inc. (GCI) is pleased to present the following mass calculations for the in-situ chemical oxidation (ISCO) treatment program scheduled to take place at the South Carolina Electric and Gas Co. – CPA site in Charleston, South Carolina. These mass calculations were derived from the analytical from soil samples taken during the injector installation phase of the ISCO treatment program. The injectors were installed into the three areas on-site that are designated for ISCO treatment, Sector 5 – Rabin's Property, Sector 9 – East Bay Property and Sector 12 – Luden's Property in March 2005. During the injector installation, soil samples were obtained from the screened intervals of select injector locations in each of the three areas and analyzed for benzene, toluene, ethylbenzene and xylene (BTEX) and semi-volatile organic compounds (SVOCs) via standard EPA methods.

GCI has used the analytical results to calculate an amount of mass per treatment area and come up with a corresponding quantity of hydrogen peroxide that is required to oxidize this mass. This was done using the following steps:

1) For each of the treatment layers in each of the areas, injectors were installed and screened to specifically target a single treatment depth interval. For example, in Sector 5 – Rabin's property, injectors were installed and screened in the Upper Sand Layer, Middle Sand Layer (Upper) and the Middle Sand (Basal).
2) A sum of the total amount of BTEX and SVOCs is calculated to come up with a concentration of total petroleum hydrocarbons (TPH) in milligrams per kilogram (mg/ kg) per injector location.
3) It is then assumed that the concentration of TPH for the injector is a representative of a 15 ft by 15 ft area surrounding each of the injectors spanning the thickness of the aquifer layer. Next, this number is calculated into pounds of TPH per injector.
4) The number of pounds of TPH per injector is then multiplied by a ratio of 25 lbs of peroxide per pound of TPH per injector to come up with the amount of peroxide to be injected per location.

4 Mark Road • Suite C • Kenilworth • New Jersey • 07033
Telephone (908) 206-1250 • Fax (908) 206-1251 • www.geocleanse.com

5) Amount of peroxide per injector location based on mass is then compared to the amount of peroxide required to establish an effective radius of influence from each injector location and the higher of the two values is selected.

GCI has attached a table detailing the calculations for each of the injectors for each of the three areas.

If you have any questions regarding the calculations, please feel free to contact me at 908-206-1250.

Sincerely,

MariKay Fish
Director of Operations/ Project Manager
Geo-Cleanse International, Inc.

South Carolina Electric and Gas Co. - CPA Site
Sector 5 - Rabin's Property

Mass Calculations by Injector Location								
Injector Location	Aquifer Layer	Injector Screened Interval	BTEX (mg/kg)	SVOC (mg/kg)	Total TPH (mg/kg) per Injector	Total TPH (lb) per Injector	50% H_2O_2 Required (lb)	50% H_2O_2 Required (lb) - Adjusted
S5-1	Upper Sand	27.9' - 32.9'	0.010	0.220 U	0.23	0.04	0.88	2,000
	Middle Sand (Upper)	40.8' - 45.8'	0.086	0.220 U	0.31	0.08	2.03	2,000
	Middle Sand (Basal)	51.3' - 56.3'	0.505	0.220 U	0.73	0.15	3.85	2,000
S5-2*	Upper Sand	28.4' - 33.4'	NS	NS	276.34	42.14	1053.55	2,000
	Middle Sand (Upper)	41.1' - 46.1'	NS	NS	1.22	0.32	8.08	2,000
	Middle Sand (Basal)	47.9' - 52.9'	NS	NS	1.11	0.24	5.89	2,000
S5-3*	Upper Sand	27.6' - 32.6'	NS	NS	15.94	2.43	60.78	2,000
	Middle Sand (Upper)	40.7' - 45.7'	NS	NS	0.33	0.09	2.16	2,000
	Middle Sand (Basal)	48' - 53'	NS	NS	1.51	0.32	8.02	2,000
S5-4	Upper Sand	25.5' - 30.5'	2.443	13.500	15.94	2.43	60.78	2,000
	Middle Sand (Upper)	40.8' - 45.8'	0.116	0.210 U	0.33	0.09	2.16	2,000
	Middle Sand (Basal)	47.8' - 52.8'	0.609	0.900	1.51	0.32	8.02	2,000
S5-5	Upper Sand	27.1' - 32.1'	17.840	258.500	276.34	42.14	1053.55	2,000
	Middle Sand (Upper)	38.7' - 43.7'	1.009	0.210 U	1.22	0.32	8.08	2,000
	Middle Sand (Basal)	47.8' - 52.8'	0.899	0.210 U	1.11	0.24	5.89	2,000
						Total H_2O_2 Required (lb)		30,000

Total TPH (lb) per injector - Based on a 15' x 15' Area and Layer Thickness
* Calculations extrapolated with no sampling analytical taken

Geo-Cleanse®
International, Inc.

South Carolina Electric and Gas Co. - CPA Site
Sector 9 - East Bay Property

Mass Calculations by Injector Location								
Injector Location	Aquifer Layer	Injector Screened Interval	BTEX (mg/kg)	SVOC (mg/kg)	Total TPH (mg/kg) per Injector	Total TPH (lb) per Injector	50% H_2O_2 Required (lb)	50% H_2O_2 Required (lb) - Adjusted
S9-1	Upper Sand (Upper)	16.6' - 21.6'	0.011	0.210 U	0.22	0.02	0.43	2,000
	Upper Sand (Basal)	26.5' - 31.5'	13.410	3.060	16.47	2.31	57.65	2,000
	Middle Sand (Upper)	34.4' - 39.4'	5.730	0.230 U	5.96	1.00	24.96	2,000
	Middle Sand (Basal)	41.1' - 46.1'	NS	NS	-	-	-	2,000
S9-2*	Upper Sand (Upper)	18' - 23'	NS	NS	0.22	0.02	0.43	2,000
	Upper Sand (Basal)	26.9' - 31.9'	NS	NS	16.47	2.31	57.65	2,000
	Middle Sand (Upper)	37.8' - 42.8'	NS	NS	5.96	1.00	24.96	2,000
S9-3	Upper Sand (Upper)	17.2' - 22.2'	7.210	0.210 U	7.42	0.58	14.38	2,000
	Upper Sand (Basal)	26.5' - 31.5'	8.490	7.910	16.40	2.30	57.40	2,000
	Middle Sand (Upper)	36' - 41'	0.990	0.210 U	1.20	0.20	5.03	2,000
	Middle Sand (Basal)	43.8' - 48.8'	0.078	0.210 U	0.29	0.06	1.46	2,000
S9-4*	Upper Sand (Upper)	17.1' - 22.1'	NS	NS	1.71	0.13	3.31	2,000
	Upper Sand (Basal)	27.6' - 32.6'	NS	NS	235.09	32.91	822.82	2,000
	Middle Sand (Upper)	39.1' - 44.1'	NS	NS	2.21	0.37	9.27	2,000
S9-5*	Upper Sand (Upper)	16.8' - 21.8'	NS	NS	1.71	0.13	3.31	2,000
	Upper Sand (Basal)	26.7' - 31.7'	NS	NS	235.09	32.91	822.82	2,000
	Middle Sand (Upper)	37.9' - 42.9'	NS	NS	2.21	0.37	9.27	2,000
S9-6	Upper Sand (Upper)	17.6' - 22.6'	1.500	0.210 U	1.71	0.13	3.31	2,000
	Upper Sand (Basal)	26.9' - 31.9'	74.400	160.690 U	235.09	32.91	822.82	2,000
	Middle Sand (Upper)	38.9' - 43.9'	2.003	0.210	2.21	0.37	9.27	2,000
						Total H_2O_2 Required (lb)		40,000

Total TPH (lb) per injector - Based on a 15' x 15' Area and Layer Thickness
* Calculations extrapolated with no sampling analytical taken

Geo-Cleanse®
International, Inc.

South Carolina Electric and Gas Co. - CPA Site
Sector 12 - Luden's Property

Mass Calculations by Injector Location								
Injector Location	Aquifer Layer	Injector Screened Interval	BTEX (mg/kg)	SVOC (mg/kg)	Total TPH (mg/kg) per Injector	Total TPH (lb) per Injector	50% H_2O_2 Required (lb)	50% H_2O_2 Required (lb) Adjusted
S12-1	Middle Sand (Upper)	25.7' - 30.7'	2.566	2.470	5.04	0.83	20.77	2,000
	Middle Sand	32.8' - 37.8'	0.396	0.210 U	0.61	0.10	2.50	2,000
S12-2	Middle Sand (Upper)	21.8' - 26.8'	532.000	59.690	591.69	97.63	2440.72	2,441
	Middle Sand	31.5' - 36.5'	71.500	2,489.100	2560.60	422.50	10562.48	10,562
S12-3*	Middle Sand (Upper)	25.5' - 30.5'	NS	NS	591.69	97.63	2440.72	2,441
	Middle Sand	32.5' - 37.5'	NS	NS	2560.60	422.50	10562.48	10,562
S12-4*	Middle Sand (Upper)	23.9' - 28.9'	NS	NS	0.92	0.15	3.79	2,000
	Middle Sand	30' - 35'	NS	NS	5.70	0.94	23.51	2,000
S12-5	Middle Sand (Upper)	21.9' - 26.9'	0.914	0.005 U	0.92	0.15	3.79	2,000
	Middle Sand	30.9' - 35.9'	5.480	0.220 U	5.70	0.94	23.51	2,000
						Total H_2O_2 Required (lb)		38,006

Total TPH (lb) per injector - Based on a 15' x 15' Area and Layer Thickness
* Calculations extrapolated with no sampling analytical taken

Geo-Cleanse®
International, Inc.

APPENDIX B

SECTOR 5

RABIN'S

TABLE 1

INJECTOR BORING SOIL ANALYTICAL RESULTS
SECTOR 5 - RABIN'S

South Carolina Electric and Gas Co. - CPA Site
Charleston, South Carolina

	Injector Boring	S5-1			S5-4		
	Depth Interval (ft.)	28-32.75	42-47	53-58	27-32	42-47	48-53
	Sand Unit	Upper Sand	M. Sand (Upper)	M. Sand (Basal)	Upper Sand	M. Sand (Upper)	M. Sand (Basal)
PARAMETER	Date	2/14/2005	2/14/2005	2/14/2005	2/15/2005	2/15/2005	2/15/2005
Volatiles	UNITS						
Benzene	ug/kg	10	74	380	1,900	96	410 J
Ethylbenzene	ug/kg	4.4 U	12	55	350	20	100
Toluene	ug/kg	4.4 U	4.8 U	38	30	5 U	40
Total Xylenes	ug/kg	4.4 U	4.8 U	32	163	5 U	59
Total BTEX	**ug/kg**	**10**	**86**	**505**	**2,443**	**116**	**609**
	mg/kg	**0.01**	**0.086**	**0.505**	**2.443**	**0.116**	**0.609**
Semi-Volatiles							
2,4-Dimethylphenol	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
2-Methylnaphthalene	ug/kg	220 U	220 U	220 U	1,500	210 U	210 U
Acenaphthene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Acenaphthylene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Anthracene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Benzo(a)anthracene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Benzo(a)pyrene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Benzo(b)fluoranthene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Benzo(g,h,i)perylene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Benzo(k)fuoranthene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Carbazole	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Chrysene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Dibenz(a,h)anthracene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Dibenzofuran	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Fluoranthene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Fluorene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Indeno(1,2,3-cd)pyrene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Naphthalene	ug/kg	220 U	220 U	220 U	12,000	210 U	900
Phenanthrene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Pyrene	ug/kg	220 U	220 U	220 U	220 U	210 U	210 U
Total Semi-Volatiles	**ug/kg**	**220 U**	**220 U**	**220 U**	**13,500**	**210 U**	**900**
	mg/kg	**0.22 U**	**0.22 U**	**0.22 U**	**13.50**	**0.21 U**	**0.90**
Conventional							
Percent Moisture	wt %	23	24	22	22	18	20

Notes:
U - Not detected above the reporting limit
NS - Not sampled

TABLE 1

INJECTOR BORING SOIL ANALYTICAL RESULTS
SECTOR 5 - RABIN'S

South Carolina Electric and Gas Co. - CPA Site
Charleston, South Carolina

	Injector Boring	S5-5			
	Depth Interval (ft.)	28-33	29	40-45	49.5-54.5
	Sand Unit	Upper Sand	Upper Sand	M. Sand (Upper)	M. Sand (Basal)
PARAMETER	Date	2/16/2005	2/16/2005	2/16/2005	2/16/2005
Volatiles	UNITS				
Benzene	ug/kg	11,000	8,200	810	590
Ethylbenzene	ug/kg	2,300	2,700	110	160
Toluene	ug/kg	2,300	2,200	37	60
Total Xylenes	ug/kg	2,780	4,200	52	89
Total BTEX	**ug/kg**	**18,380**	**17,300**	**1,009**	**899**
	mg/kg	**18.38**	**17.30**	**1.009**	**0.899**
Semi-Volatiles					
2,4-Dimethylphenol	ug/kg	2,200 U	NS	210 U	210 U
2-Methylnaphthalene	ug/kg	59,000	NS	210 U	210 U
Acenaphthene	ug/kg	2,200 U	NS	210 U	210 U
Acenaphthylene	ug/kg	2,200 U	NS	210 U	210 U
Anthracene	ug/kg	2,200 U	NS	210 U	210 U
Benzo(a)anthracene	ug/kg	2,200 U	NS	210 U	210 U
Benzo(a)pyrene	ug/kg	2,200 U	NS	210 U	210 U
Benzo(b)fluoranthene	ug/kg	2,200 U	NS	210 U	210 U
Benzo(g,h,i)perylene	ug/kg	2,200 U	NS	210 U	210 U
Benzo(k)fuoranthene	ug/kg	2,200 U	NS	210 U	210 U
Carbazole	ug/kg	2,200 U	NS	210 U	210 U
Chrysene	ug/kg	2,200 U	NS	210 U	210 U
Dibenz(a,h)anthracene	ug/kg	2,200 U	NS	210 U	210 U
Dibenzofuran	ug/kg	2,200 U	NS	210 U	210 U
Fluoranthene	ug/kg	4,200	NS	210 U	210 U
Fluorene	ug/kg	2,300	NS	210 U	210 U
Indeno(1,2,3-cd)pyrene	ug/kg	2,200 U	NS	210 U	210 U
Naphthalene	ug/kg	180,000	NS	210 U	210 U
Phenanthrene	ug/kg	9,000	NS	210 U	210 U
Pyrene	ug/kg	4,000	NS	210 U	210 U
Total Semi-Volatiles	**ug/kg**	**258,500**		**210 U**	**210 U**
	mg/kg	**258.50**		**0.21 U**	**0.21 U**
Conventional					
Percent Moisture	wt %	22	24	18	19

Notes:
U - Not detected above the reporting limit
NS - Not sampled

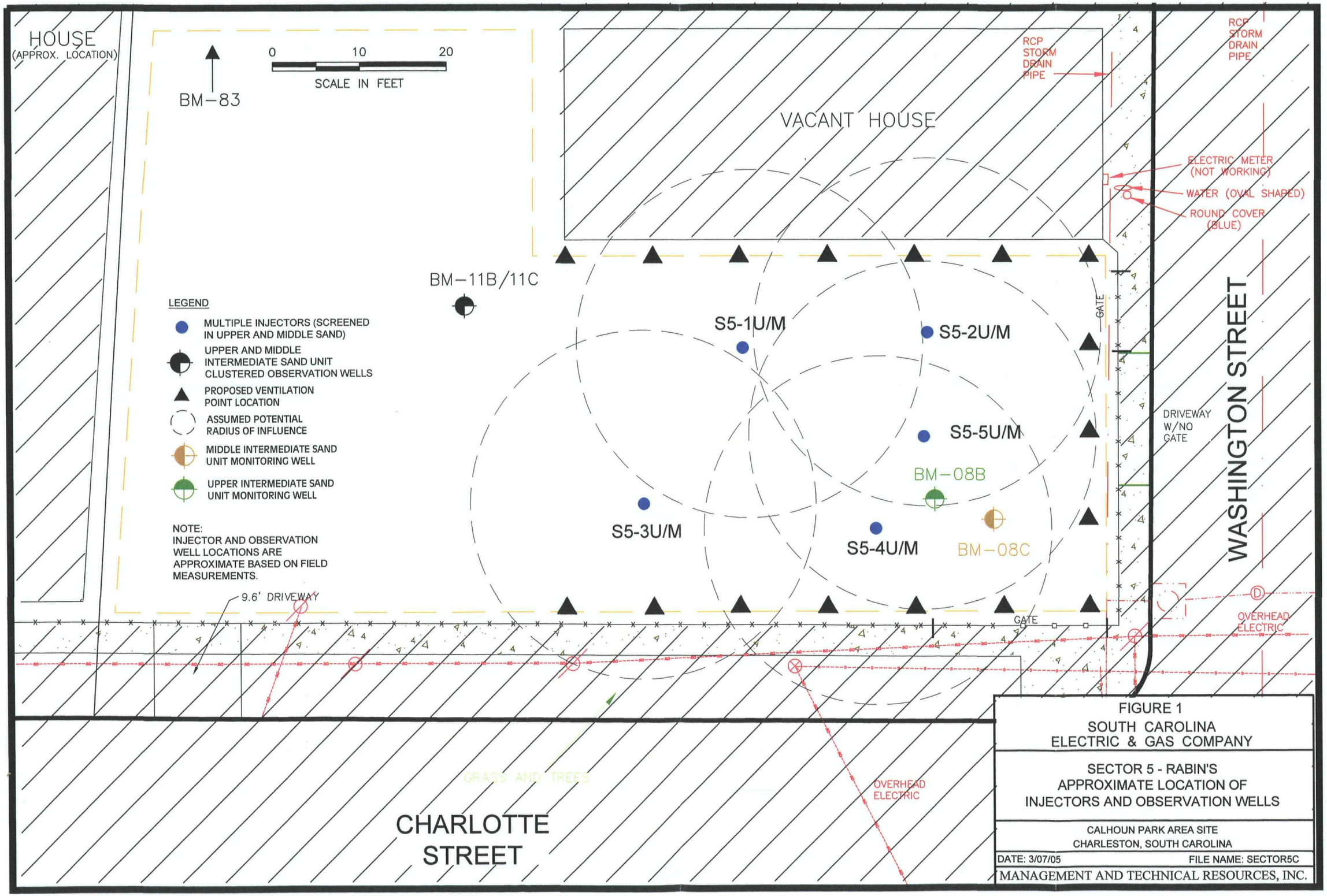


FIGURE 1
SOUTH CAROLINA ELECTRIC & GAS COMPANY

SECTOR 5 - RABIN'S
APPROXIMATE LOCATION OF INJECTORS AND OBSERVATION WELLS

CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA

DATE: 3/07/05 FILE NAME: SECTOR5C

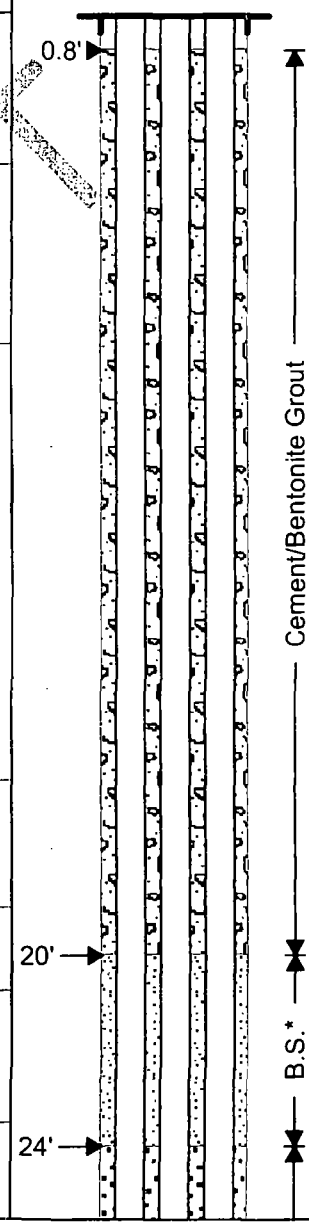
MANAGEMENT AND TECHNICAL RESOURCES, INC.

Injectors: S5-1 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/14/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/14/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **62**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
2	-3.20	3.5			0-3.2 ft: Fill, gravel, sand, and wood	
4					3.2-7 ft: Tan to orange, fine sand 3.5 ft: Wet	0 to 7 ft: no odor, no visual
6	-7.00					
8		10	0		7-16.3 ft: Gray fine to medium sand becoming tan in color with depth	
10			0			
12						
14			0			
16	-16.30					
18	-19.00		0		16.3-19 ft: Gray stiff clay	16.3 to 19 ft: no odor, no visual
20	-20.75				19-20.75 ft:Tan to gray, fine to medium sand, some clay	
22	-23.50	NR			20.75-23.5 ft: Gray to brown, fine to medium sand, trace silt	19 to 23.5 ft: no odor, no visual
24	-25.00		0		23.5-28.2 ft: Gray-brown and blue-gray, stiff clay	

Injector Diagram



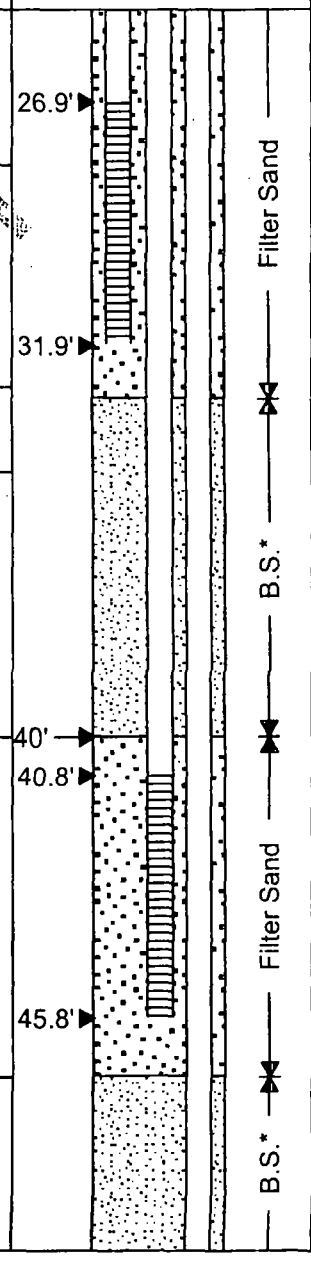
DRAFT

MTR

Injectors: S5-1 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/14/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/14/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **62**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
27	-28.20				25.5-27 ft: shell fragments	23.5 to 28.2 ft: no odor, no visual
29, 31	-32.75	10	0		28.2-32.75 ft: Brown to gray, fine to medium sand, with shell fragments, some silt	28.2 to 32.75 ft slight to moderate odor, no visual
33	-34.50				32.75-34.5 ft: Gray clay with trace silt	32.75 to 34 ft: slight odor, no visual
35, 37			18.1		34.5-40 ft: Gray fine to very fine sand, some silt	34.5 to 40 ft: slight odor, no visual
39	-40.00					
41, 43, 45		NR	1.8		40-47 ft: Gray, fine to medium sand	40 to 47 ft: moderate to strong odor, no visual
47	-47.00		1.8			
49					47-57 ft: Gray, fine to coarse sand	



DRAFT

MTR

Injectors: S5-1 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/14/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/14/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **62**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
52, 54, 56	-57.00	7.5				51.3', 56.3', Filter Sand	47 to 57 ft: moderate to strong odors, no visual
58	-58.00				57-58 ft: Blue-gray sand, with shell fragments, trace clay		58 to 59 ft: very slight to slight odor, no visual
60, 62	-62.00	NR			58-62 ft: Blue-gray clay, with some sand and shell fragments	B.S.*	59 to 62 ft : no odor, no visual
64, 66, 68, 70, 72, 74						Boring total depth: 62 ft *B.S. = Barrier Sand NM= Not measured	

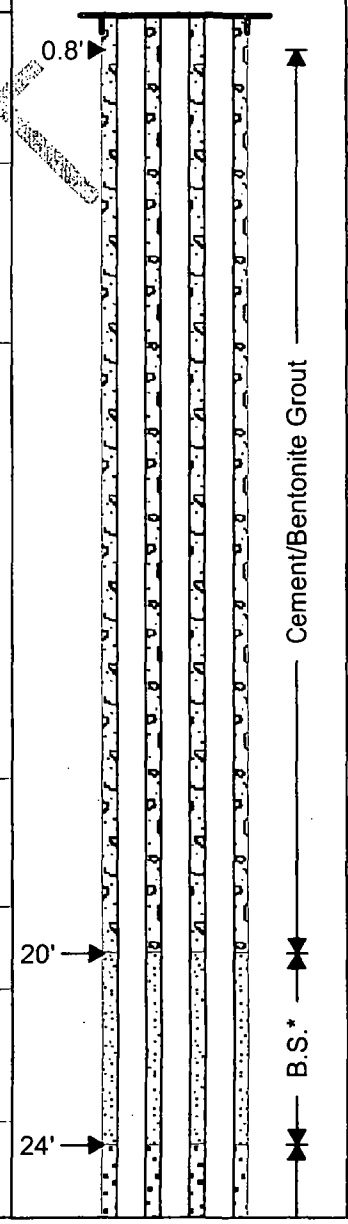
DRAFT

MTR

Injectors: S5-1 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/14/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/14/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **62**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
2	-3.20	3.5			0-3.2 ft: Fill, gravel, sand, and wood	
4					3.2-7 ft: Tan to orange fine sand 3.5 f: Wet	0 to 7 ft: no odor, no visual
6	-7.00					
8		10	0		7-16.3 ft: Gray fine to medium sand becoming tan in color with depth	
10			0			
12						
14			0			
16	-16.30					
18	-19.00		0		16.3-19 ft: Gray stiff clay	16.3 to 19 ft: no odor, no visual
20	-20.75				19-20.75 ft:Tan to gray, fine to medium sand, some clay	
22	-23.50	NR			20.75-23.5 ft: Gray to brown, fine to medium sand, trace silt	19 to 23.5 ft: no odor, no visual
24	-25.00		0		23.5-28.2 ft: Gray-brown an blue-gray stiff clay	



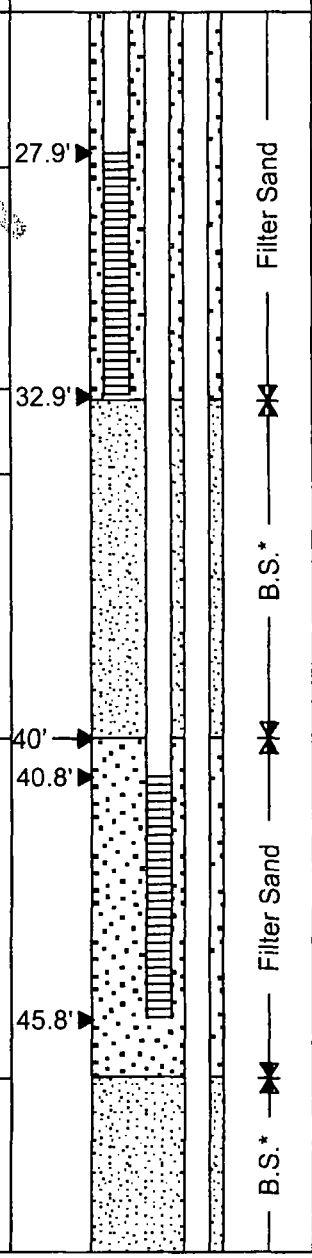
DRAFT

MTR

Injectors: S5-1 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/14/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/14/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **62**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
27	-28.20	10	0		25.5-27 ft: shell fragments	23.5 to 28.2 ft: no odor, no visual
29, 31	-32.75				28.2-32.75 ft: Brown to gray, fine to medium sand, with shell fragments, some silt	28.2 to 32.75 ft: slight to moderate odor, no visual
33	-34.50				32.75-34.5 ft: Gray clay with trace silt	32.75 to 34 ft: slight odor, no visual
35, 37	-40.00		18.1		34.5-40 ft: Gray fine to very fine sand, some silt	34.5 to 40 ft: slight odor, no visual
41, 43, 45	-47.00	NR	1.8 1.8		40-47 ft: Gray, fine to medium sand	40 to 47 ft: moderate to strong odor, no visual
47, 49					47-57 ft: Gray, fine to coarse sand	



DRAFT

MTR

Injectors: S5-1 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/14/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/14/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **62**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
52, 54, 56	-57.00	7.5				51.3', 56.3', Filter Sand	47 to 57 ft: moderate to strong odors, no visual
58	-58.00				57-58 ft: Blue-gray sand, with shell fragments, trace clay		58 to 59 ft: very slight to slight odor, no visual
60, 62	-62.00	NR			58-62 ft: Blue-gray clay, with some sand and shell fragments	B.S.*	59 to 62 ft : no odor, no visual
64, 66, 68, 70, 72, 74						Boring total depth: 62 ft *B.S. = Barrier Sand NM= Not measured	

DRAFT

MTR

Monitoring Well: S5-2

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (Rabins)**	***Top of Casing Elevation (Ft.):***
Date Started: **2/16/2005**	***Northing:***
Date Completed: **2/16/2005**	***Easting:***
Logged by: **M. Ferlin**	***Total Well Depth (Ft.):*** **57**
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface		
					Drilled through, no recovery	0.5'	
2							
4							
6							
8							
10						Grout	
12							
14							
16							
	-17.00						
18			0		Tan to gray, fine to medium sand, with some silt		From 17 to 20.75 feet: no odor, no visual
20	-20.75					20'	
			0		Gray to black, stiff clay		
22						B.S.*	
24			0				
	-25.00						From 24 to 25 feet: slight odor

DRAFT

MTR

Monitoring Well: S5-2

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (Rabins)**	***Top of Casing Elevation (Ft.):***
Date Started: **2/16/2005**	***Northing:***
Date Completed: **2/16/2005**	***Easting:***
Logged by: **M. Ferlin**	***Total Well Depth (Ft.):*** **57**
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
					Green clay, shell fragments	26'	From 25 to 27 feet: no odor, no visual
27	-27.00		0		Lite brown to olive brown, fine to medium sand, some silt and shell fragments, peat at 31.5 and 33 ft bgs	28'	
29			6.3				
31			35.5				From 31.5 to 33 feet: slight to moderate odor
33	-33.00				Gray clay, with trace to some sand	33'	From 33 to 34.4 feet: moderate odor, no visual
	-34.50		49.8				
35					Gray fine sand with some silt, wood at 36 ft bgs, shell fragments in deeper section of interval, trace clay		From 34.4 to 37 feet: strong odor
37			41.4				
			28.2				
39	-40.30					40'	From 37 to 40.3 feet: slight to moderate odor
41			37.1		Gray, fine to medium sand, at 45 pick up coarse sand	42'	
43			15.9				From 40.3 to 47 feet: moderate odor, no visual
45							
47	-47.00		2.5		Tan to gray, coarse to very coarse sand	47'	
			4.2			48'	
49						49.5'	

Filter sand
B.S.*
Filter sand
B.S.*

DRAFT

MTR

Monitoring Well: S5-2

Client: SCANA Services, Inc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (Rabins)	*Top of Casing Elevation (Ft.):*
Date Started: 2/16/2005	*Northing:*
Date Completed: 2/16/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 57
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
	-51.70		9.5				From 47 to 54.2 feet: slight to moderate odor
52					Gray clay, coarse sand layers 0.1 ft thick at 52.5 and 53.4 ft bgs		
54	-54.20		4.4		Brown very coarse sand	54.5' Filter Sand B.S.*	
56					Gray stiff clay, with some shell fragments		From 55 to 57 feet: no odor, no visual
	-57.00		2.0			Well bottom 57' *B.S. = Barrier sand	
58							
60							
62							
64							
66							
68							
70							
72							
74							

DRAFT

MTR

Injectors: S5-2 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/16/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/16/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
0	0.00				Ground Surface		
2, 4, 6, 8, 10, 12, 14, 16					0-17 ft: Drilled through interval	0.94'	
	-17.00						
18			0		17-20.75 ft:Tan to gray, fine to medium sand, with some silt		17 to 20.75 ft: no odor, no visual
20	-20.75					20'	
22		NR	0		20.75-27 ft: Gray to black, stiff clay		20.75 to 27 ft: no odor, no visual, except at 24 ft very slight odor
24			0		25-27 ft: Color change to green, with shell fragments		

Cement/Bentonite Grout

B.S.*

DRAFT

MTR

Injectors: S5-2 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/16/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/16/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
27	-27.00		0		27-33 ft: Lite brown to olive brown, fine to medium sand, some silt and shell fragments	26' 28.4' Filter sand	27 to 33 ft: slight to moderate odor, no visual
29			6.3				
31		10	35.5		31.5 and 33 ft: Peat		
33	-33.00				33-34.5 ft:Gray clay, with trace to some sand	33.4'	33 to 34.5 ft: moderate odor, no visual
	-34.50		49.8				
35					34.5-40.3 ft: Gray fine sand with some silt	B.S.*	34.4 to 37 ft: strong odor, no visual
37			41.4		36 ft: Wood		
39			28.2		37-40.3 ft:Trace shell fragments and trace clay		37 to 40.3 ft: slight to moderate odor, no visual
	-40.30					40'	
41		10	37.1		*40.3-47 ft: Gray, fine to medium sand*	41.1' Filter sand	
43					*45 ft: Coarse sand*		
45			15.9				40.3 to 47 ft: moderate odor, no visual
	-47.00					46.1'	
47			2.5		47-51.7 ft: Tan to gray, coarse to very coarse sand	47.9' B.S.*	47 to 51.7 ft: slight to moderate odor, no visual
			4.2				
49							

MTR

Injectors: S5-2 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/16/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/16/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
52	-51.70	10	9.5		51.7-54.2 ft: Gray clay 52.5 and 53.4 ft: 0.1 ft thick coarse sand layers	52.9' Filter Sand B.S.* Boring total depth: 57 ft. *B.S. = Barrier sand NR= Not recorded	51.7 to 54.2 ft: slight to moderate odor, no visual
54	-54.20		4.4		54.2-54.6 ft: Brown very coarse sand		54.2 to 54.6 ft: moderate odor, no visual
56	-57.00		2.0		54.6-57 ft: Gray stiff clay with some shell fragments		56 and 57 ft: slight odor, no visual
58							
60							
62							
64							
66							
68							
70							
72							
74							

DRAFT

MTR

Monitoring Well: S5-3

Client: SCANA Services, Inc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (Rabin's)	*Top of Casing Elevation (Ft.):*
Date Started: 2/15/2005	*Northing:*
Date Completed: 2/15/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 57
Drilled by: Prosonic	*Drilling Method:* Rotosonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface		
	-1.50				Fill, silt, gravel	0.5'	
2					Tan to orange, fine sand, some silt, wet at 3.5 ft bgs		
4	-4.00				Tan to gray, fine sand, with some silt and clay		From 4 to 7 ft bgs: no odor, no visual
6	-7.00						
8					Gray grading to orange fine to medium sand, trace silt at 7.0 to 7.5 ft bgs		
10						Grout	
12							From 16.25 to 17 ft bgs: no odor, no visual
14							
16	-16.25						
	-17.00				Gray to brown, stiff clay		From 16.25 to 17 ft bgs: no odor, no visual
	-18.00				Brown, fine to medium sand		
18					Gray, stiff clay		
	-19.75						
20					Brown, green, tan, fine to medium sand, with some silt	20'	
22						B.S.*	From 19.75 to 23.25: no odor, no visual
24							

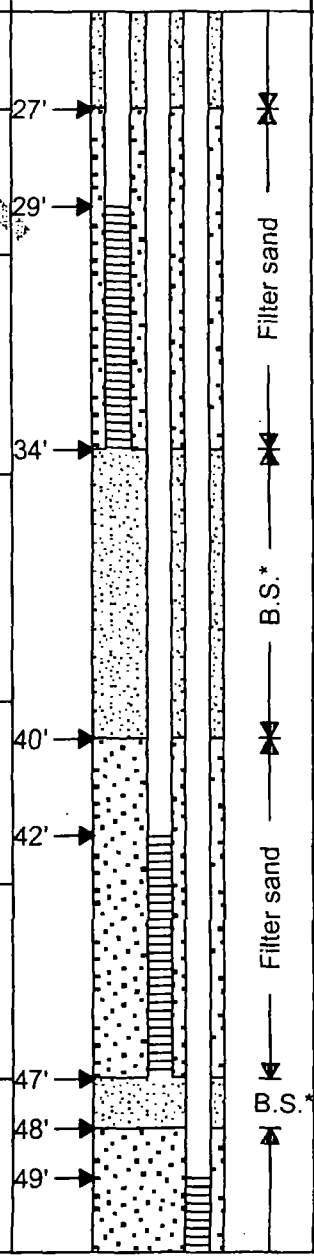
DRAFT

MTR

Monitoring Well: S5-3

Client: SCANA Services, Inc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (Rabin's)	*Top of Casing Elevation (Ft.):*
Date Started: 2/15/2005	*Northing:*
Date Completed: 2/15/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 57
Drilled by: Prosonic	*Drilling Method:* Rotosonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
27	-27.00				Gray, fine to medium sand, with broken shell fragments, trace silt	From 27 to 30 ft bgs: slight odor, no visual
29	-30.00				Brown, fine to medium sand, large shell fragments, trace to some silt	From 30 to 34.5 ft bgs: slight to moderate odor
31						
33	-34.50				Gray fine to medium sand, with trace to some clay	
35						
37			3.4			From 37 to 39.25 ft bgs: slight odor
39	-39.25				gray, fine sand	
41						
43	-43.00		7.5		Gray,medium sand	From 39.25 to 47 ft bgs: slight to moderate odor
45						
47	-47.00				Gray, coarse sand	From 47 to 52.75 ft bgs: slight to moderate odor
49			3.0			



DRAFT

MTR

Monitoring Well: S5-3

Client: SCANA Services, Inc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (Rabin's)	*Top of Casing Elevation (Ft.):*
Date Started: 2/15/2005	*Northing:*
Date Completed: 2/15/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 57
Drilled by: Prosonic	*Drilling Method:* Rotosonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
52	-52.75		6.3		Gray clay		From 52.75 to 54.25 ft bgs: slight odor
54			0		Fine to coarse sand, with some silt and clay	54'	
					Gray clay		From 54.25 to 57 ft bgs: no odor, no visual
56	-57.00		0		Fine to medium sand, with shell fragments, fragments are small to large, some silt	Filter sand; B.S.*	
58						Well bottom 57'; * B.S. = Barrier sand	
60							
62							
64							
66							
68							
70							
72							
74							

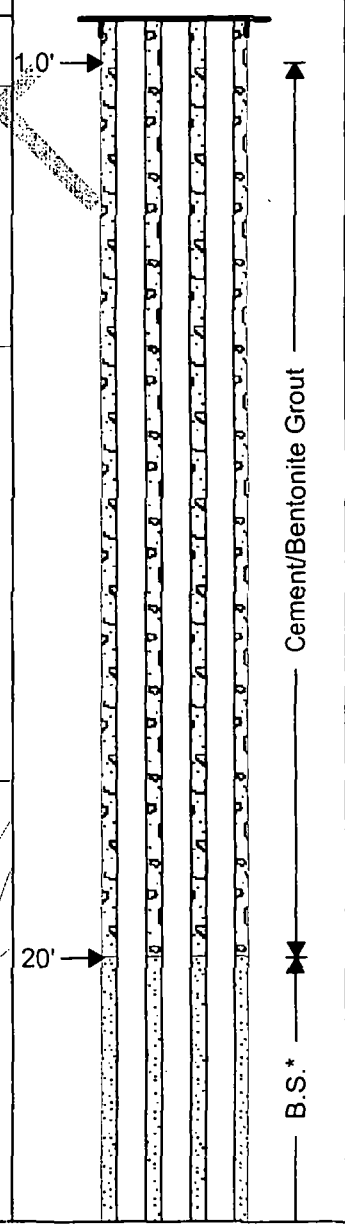
DRAFT

MTR

Injectors: S5-3 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site, Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/15/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/15/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
	-1.50				0-1.5ft: Fill	0 to 1.5 ft: no odor, no visual
2–6	-7.00	6.5			1.5-7 ft: Tan-orange to gray, fine sand, some silt 3.5ft: wet 4-7 ft: some clay	1.5 to 7 ft: no odor, no visual
8–16	-16.25	10			7 -16.25 ft: Gray grading to orange fine to medium sand 7.0-7.5 ft: Trace silt	7 to 17 ft: no odor, no visual
	-17.00				16.25-17 ft: Gray to brown, stiff clay	
	-18.00				17-18 ft:Brown, fine to medium sand	
	-19.75				18-19.75 ft: Gray, stiff clay	
20–24		6.5			19.75-27 ft: Brown, green, tan, fine to medium sand, with some silt	17 to 27 ft: no odor, no visual



DRAFT

MTR

Injectors: S5-3 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site, Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/15/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/15/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
27	-27.00						
27–34.5		10			27-34.5 ft: Gray to brown, fine to medium sand, with broken shell fragments, trace silt 30-34.5 ft: Large shell fragments, some silt	27' 27.6' 32.6'	27 to 30 ft: slight odor, no visual 30 to 34.5 ft: slight to moderate odor, no visual
34.5–39.25	-34.50		3.4		34.5-39.25 ft: Gray, fine sand, with clay to some clay		37 to 39.25 ft: slight odor, no visual
39.25–47	-39.25	10	7.5		39.25-43 ft: Gray, fine to medium sand 43 ft: coarse sand	40.7' 45.7'	39.25 to 47 ft: slight to moderate odor, no visual
47–52.75	-47.00		3.0		47-52.75 ft: Gray, coarse sand	48'	47 to 52.75 ft: slight to moderate odor, no visual

Injector Diagram: Filter sand; B.S.*; Filter sand; B.S.*

DRAFT

Injectors: S5-3 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site, Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/15/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/15/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
52	-52.75	10	6.3		52.75-53.25 ft: Gray clay	53' → Filter sand; B.S.*	52.75 to 54.25 ft: slight to moderate odor,no visual
54			0		53.25-53.75 ft: Fine to coarse sand, with some silt and clay		
56	-57.00		0		53.75-54.25 ft: Gray clay		54.25 to 57 ft: no odor, no visual
58					54.25-57 ft: Fine to medium sand and shell fragments(small to large), some silt	Boring total depth: 57 ft	
60						* B.S. = Barrier sand	
62							
64							
66							
68							
70							
72							
74							

DRAFT

MTR

Monitoring Well: S5-4

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (Rabin's)**	***Top of Casing Elevation (Ft.):***
Date Started: **2/15/05**	***Northing:***
Date Completed: **2/15/05**	***Easting:***
Logged by: **M. Ferlin**	***Total Well Depth (Ft.):*** **57**
Drilled by: **Prosonic**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface		
	-1.30				Fill, gravel, concrete, roots	0.5'	
2, 4, 6	-7.00				Tan to gray sand, some silt from 3 to 7 ft bgs		From 1.3 to 7.0 ft bgs: no odor, no visual
8, 10, 12, 14, 16	-16.25				Tan to orange, fine to medium sand, from 13.75 to 16.25 some silt	Grout	From 7.0 to 17.0 ft bgs: no odor, no visual
	-17.75				Light gray clay		
18, 20	-22.25				Tan to light gray, fine to medium sand, with some silt	20'	
22, 24					Blue-gray clay, with trace sand, shell fragments present at 22.77 ft bgs	B.S.* 25'	

DRAFT

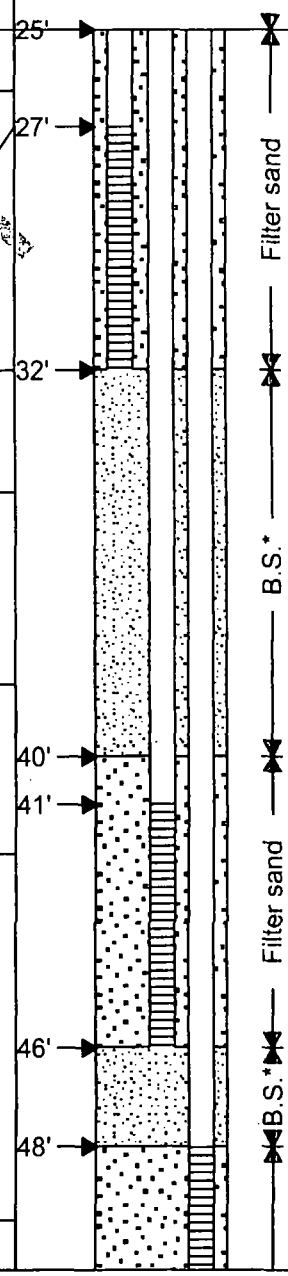
MTR

Monitoring Well: S5-4

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (Rabin's)**	***Top of Casing Elevation (Ft.):***
Date Started: **2/15/05**	***Northing:***
Date Completed: **2/15/05**	***Easting:***
Logged by: **M. Ferlin**	***Total Well Depth (Ft.):*** **57**
Drilled by: **Prosonic**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
	-26.25					
27	-27.00				Shell fragments in a matrix of blue clay	From 25.75 to 27.0 ft bgs: very slight odor, no visual
29			1.9		Olive green, fine to medium sand, with shell fragments, some silt	From 27.0 to 32.0 ft bgs: slight increasing to strong odor
31	-32.00		5.3		Blue-gray clay with trace to some sand, slight shell fragments	
33	-34.50					
35			0		Gray, fine to medium sand, trace to some silt	From 34.5 to 37 ft bgs: slight to moderate odor
37	-38.50		7.2			
39			16.6		Gray, fine sand	From 37.0 to 38.5 ft bgs: slight to moderate odor
41	-42.00		14.5			
43			10.6		Gray, fine to coarse sand	
45						From 42.0 to 47.0 ft bgs: slight to moderate odor, no visual
47			0.7			
49	-49.50					

Well Diagram



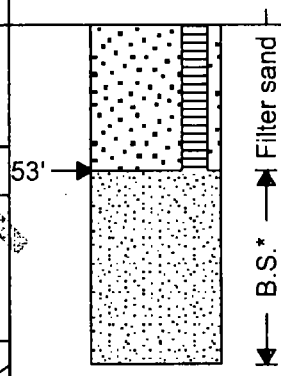
DRAFT

MTR

Monitoring Well: S5-4

Client: SCANA Services, Inc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (Rabin's)	*Top of Casing Elevation (Ft.):*
Date Started: 2/15/05	*Northing:*
Date Completed: 2/15/05	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 57
Drilled by: Prosonic	*Drilling Method:* Rotosonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
			4.7		Gray, fine to coarse sand, trace silt and clay		
52	-52.50						
	-53.50				Gray clay, trace sand	53'	
54			1.7		Gray, fine to medium sand, some silt, broken shell fragments		From 53.5 to 56.5 ft bgs: no odor, no visual
56	-56.50						
	-57.00		0		Gray clay, shell fragments	Well Bottom 57'	
58							
60							
62							
64							
66							
68							
70							
72							
74							



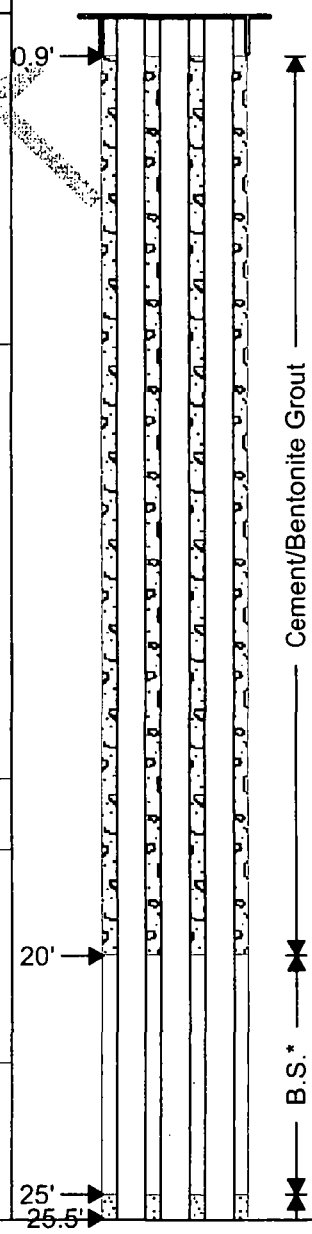
DRAFT

MTR

Injectors: S5-4 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/15/05**	***Northing:*** **Not Surveyed**
Date Completed: **2/15/05**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):***
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
	-1.30				0-3 ft: Fill, gravel, concrete, roots	
2		4.5			1.3-7 ft: Tan to gray sand 3-7 ft: some silt	1.3 to 7.0 ft: no odor, no visual
4						
6	-7.00					
8		10			7-16.25 ft: Tan to orange, fine to medium sand	
10						7.0 to 17.0 ft: no odor, no visual
12						
14					13.75-16.25 ft: some silt	
16	-16.25					
	-17.75				16.25-17.75 ft: Light gray clay	
18		10			17.75-22.25 ft: Tan to light gray, fine to medium sand, with some silt	
20						
22	-22.25				22.25-26.25 ft: Blue-gray clay, with trace sand	
24	-25.00					



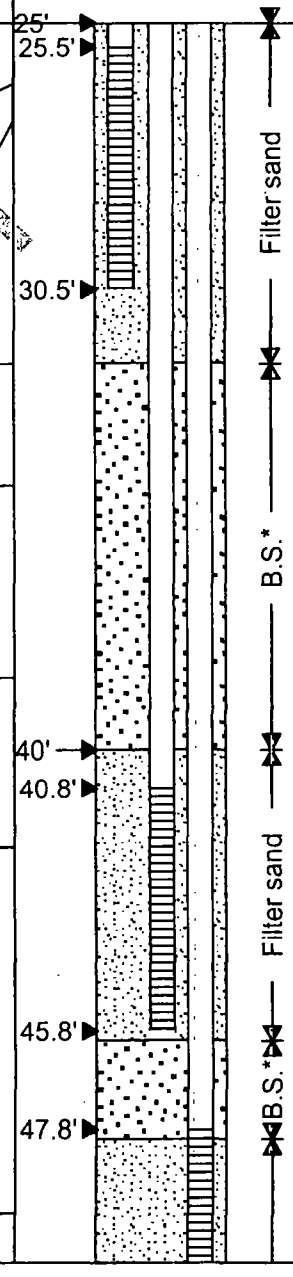
DRAFT

MTR

Injectors: S5-4 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/15/05**	***Northing:*** **Not Surveyed**
Date Completed: **2/15/05**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):***
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
	-26.25				22.75 ft: Shell fragments,~0.1 ft thick	25.75 to 27.0 ft very slight odor, no visual
	-27.00				26.25-27 ft: Shell fragments in a matrix of blue clay	
27			1.9		27-32 ft: Olive green, fine to medium sand, with shell fragments, some silt	27.0 to 32.0 ft: slight to strong odor, no visual
29						
31						
	-32.00	10	5.3		32-34.5 ft: Blue-gray, clay with trace to some sand, trace shell fragments	
33						
	-34.50					
35			0		34.5-38.5 ft: Gray, fine to medium sand, trace to some silt	34.5 to 38.5 ft: slight to moderate odor, no visual
37						
	-38.50		7.2		38.5-42 ft: Gray, fine sand	
39			16.6			38.5 to 42: slight to moderate odor, no visual
41			14.5			
	-42.00	10			42-49.5 ft: Gray, fine to coarse sand	
43			10.6			42.0 to 49.5 ft: slight to moderate odor, no visual
45						
47			0.7			
49	-49.50					



DRAFT

MTR

Injectors: S5-4 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/15/05**	***Northing:*** **Not Surveyed**
Date Completed: **2/15/05**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):***
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
52	-52.50	10	4.7		49.5-52.5 ft; Gray, fine to coarse sand, trace silt and clay		
	-53.50				52.5-53.5 ft: Gray clay, trace sand	52.8' ▶ Filter sand	52.5 to 53.5 ft: slight odor, no visual
54			1.7		53.5-56.5 ft: Gray, fine to medium sand, some silt, broken shell fragments	B.S.*	53.5 to 57 ft: no odor, no visual
56	-56.50						
	-57.00		0		56.5-57 ft: Gray clay, shell fragments	Well Bottom 57' *B.S.= Barrier sand	
58							
60							
62							
64							
66							
68							
70							
72							
74							

DRAFT

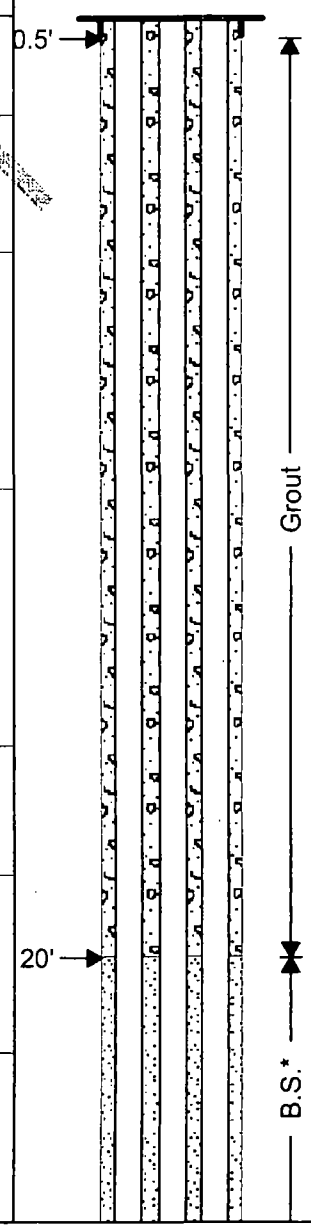
MTR

Monitoring Well: S5-5

Client: **SCANA Services**	***Ground Elevation (Ft.):***
Site Location: **CPA Site**	***Top of Casing Elevation (Ft.):***
Date Started: **2/16/2005**	***Northing:***
Date Completed: **2/16/2005**	***Easting:***
Logged by: **M. Ferlin**	***Total Well Depth (Ft.):*** **62**
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
					Fill, gravel, brick, cobbles	
2	-2.10				Tan, fine to medium sand, some silt	From 0 to 7 ft bgs: no odor, no visual
4	-5.00				Tan to orange, fine sand, with some silt and clay, wet	
6						
8						
10	-10.00				Tan to orange, fine to medium sand	
12						From 7 to 18.25 ft bgs: no odor, no visual
14						
16	-15.50				Lite gray, stiff clay	
18	-18.25		0		Green-gray to brown, fine to medium sand, with some silt and clay	
20			0			
22	-22.00				Brown-gray, stiff clay	
24			3.8			From 22 to 26 ft bgs: moderate odor, no visual

Well Diagram



DRAFT

MTR

Monitoring Well: S5-5

Client: **SCANA Services**	***Ground Elevation (Ft.):***
Site Location: **CPA Site**	***Top of Casing Elevation (Ft.):***
Date Started: **2/16/2005**	***Northing:***
Date Completed: **2/16/2005**	***Easting:***
Logged by: **M. Ferlin**	***Total Well Depth (Ft.):*** **62**
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
	-26.00					26'	
27	-27.50		55.5		Clay and sand, shell fragments		
			43.4		Brown, fine to medium sand, with shell fragments, some silt	28'	From 26 to 32 ft bgs: strong odor, no visual
29							DNAPL blebs noted at 29 and 30 ft bgs
31	-32.00		63.0				
33	-33.00				Dark gray, fine to medium sand, shell fragments	33'	
	-34.50		13.9		Dark gray, clay, with trace fine sand		
35					Gray, fine sand, with some clay		From 32 to 37 ft bgs: strong odor, no visual
37			34.1				
			16.6			38'	
39	-39.30				Gray, fine to medium sand, coarsening downwards	40'	
41			24.2				
43							
			2.0				
45	-45.00				Gray, coarse sand	45'	From 39 to 50.5 ft bgs: moderate odor, no visual
47			0			47.5'	
			1.1				
49						49.5'	
	-50.50						

Filter sand — B.S.* — Filter sand — B.S.*

MTR

Monitoring Well: S5-5

Client: **SCANA Services**	***Ground Elevation (Ft.):***
Site Location: **CPA Site**	***Top of Casing Elevation (Ft.):***
Date Started: **2/16/2005**	***Northing:***
Date Completed: **2/16/2005**	***Easting:***
Logged by: **M. Ferlin**	***Total Well Depth (Ft.):*** **62**
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
52	-53.00		2.0		Gray, fine to coarse sand, with some silt		From 50.5 to 52 ft bgs: slight to moderate odor
54	-54.75		8.7		Gray, fine to medium sand, with some silt	54.5' Filter sand	
	-55.50				Gray clay, with some sand		
56	-57.00		6.4		Dark gray, fine to coarse sand, trace silt		From 52 to 59 ft bgs: slight to moderate odor, no visual
58	-59.00		2.2		Green, clay and sand, shell fragments present	B.S.*	
60	-61.00				Green clay, with some shell fragments		From 59 to 62 feet: no odor, no visual
62	-62.00		0		Sand and shells, with slight clay	Well bottom 62'	
64						*B.S. = Barrier sand	
66							
68							
70							
72							
74							

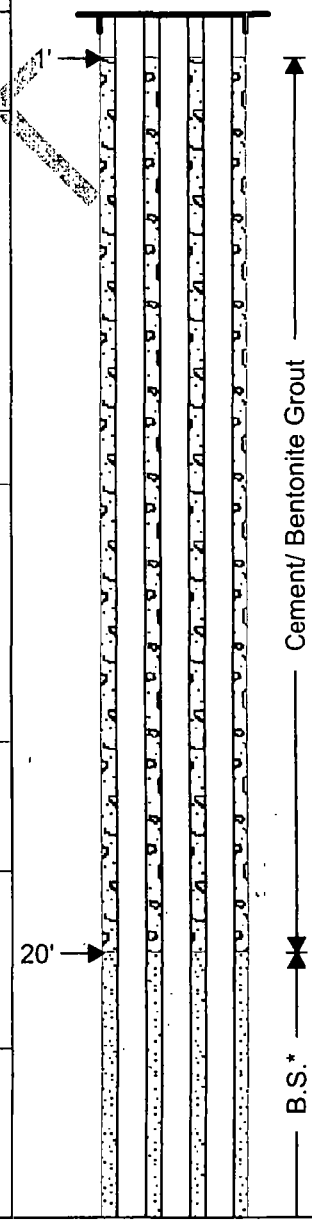
MTR

Injectors: S5-5 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/16/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/16/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **62**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
	-2.10				0-2.1 ft: Fill, gravel, brick, cobbles	
2–10	-10.00	7			2.1-10 ft: Tan to orange, fine to medium sand, some silt 7-10 ft: some silt, wet	0 to 10 ft: no odor, no visual
10–15	-15.50	10			10-15.5 ft: Tan to orange, fine to medium sand	10 to 15.5 ft: no odor, no visual
15–18	-18.25		0		15.5-18.25 ft: Lite gray, stiff clay	15.5 to 18.25 ft: no odor, no visual
18–22	-22.00	NR	0		18.25-22 ft: Green-gray to brown, fine to medium sand, with some silt and clay	18.25 to 22 ft: no odor, no visual
22–24			3.8		22-26 ft: Brown-gray, stiff clay	22 to 26 ft: moderate odor, no visual

Injector Diagram



DRAFT

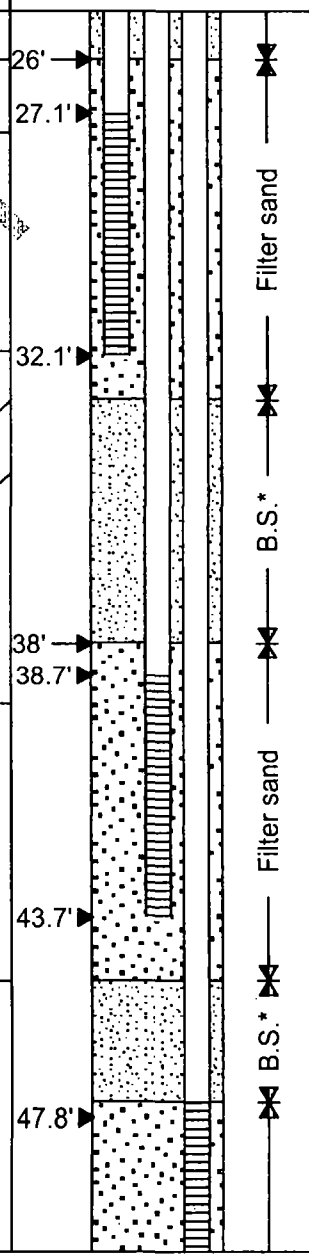
MTR

Injectors: S5-5 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/16/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/16/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **62**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
	-26.00					
27	-27.50		55.5		26-27.5 ft: Clay and sand, shell fragments	
			43.4		27.5- 32 ft: Brown, fine to medium sand, with shell fragments, some silt	26 to 32 ft: strong odor, DNAPL blebs at 29 and 30 ft
29						
31			63.0			
	-32.00	10				
33	-33.00				32-33 ft: Dark gray, fine to medium sand, shell fragments	32 to 33 ft: strong odor, no visual
	-34.50		13.9		33-34.5 ft: Dark gray, clay, with trace to some fine sand	
35					34.5-39.3 ft: Gray, fine sand, with some clay	
37			34.1			34.5 to 39.3 ft: strong odor, no visual
			16.6			
39	-39.30				39.3-45 ft: Gray, fine to medium sand, coarsening downwards	
41			24.2			
		NR				
43			2.0			
	-45.00					
45					45-50.5 ft: Gray, coarse sand	39.3 to 50.5 ft: odors, no visual
47			0			
			1.1			
49						
	-50.50					

Injector Diagram



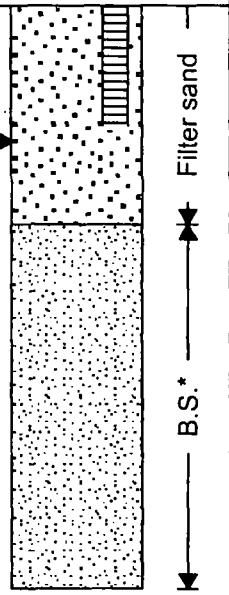
MTR

Injectors: S5-5 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/16/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/16/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **62**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
52	-53.00	NR	2.0		50.5-53 ft: Gray, fine to coarse sand, with some silt	50.5 to 53 ft: slight to moderate odor, no visual
54	-54.75		8.7		53-54.75 ft: Gray, fine to medium sand, with some silt	53 to 55.5 ft: odors, no visual
	-55.50				54.75-55.5 ft: Gray clay, with some sand	
56	-57.00		6.4		55.5-57 ft:Dark gray, fine to coarse sand, trace silt	
58	-59.00	5	2.2		57-59 ft: Green clay, sand, and shell fragments	57 to 59 ft: slight odors, no visual
60	-61.00				59-61 ft: Green clay, with some shell fragments	
	-62.00				61-62 ft: Sand and shells, with trace clay	59 to 62 ft: no odor, no visual
62			0			
64						
66						
68						
70						
72						
74						

Injector Diagram



Boring total depth: 62 ft

*B.S. = Barrier sand

NR= Not recorded

MTR

SECTOR 9

EAST BAY

TABLE 2

INJECTOR BORING SOIL ANALYTICAL RESULTS
SECTOR 9 - EAST BAY

South Carolina Electric and Gas Co. - CPA Site
Charleston, South Carolina

	Injector Boring	S9-1			S9-3			
	Depth Interval (ft.)	17.5-21	27.5-32	37-42	19.5-22.1	27-32	39-44	47-49.7
	Sand Unit	U. Sand (Upper)	U. Sand (Basal)	M. Sand (Upper)	U. Sand (Upper)	U. Sand (Basal)	M. Sand (Upper)	M. Sand (Basal)
PARAMETER	Date	2/23/2005	2/23/2005	2/18/2005	2/18/2005	2/18/2005	2/18/2005	2/18/2005
Volatiles (BTEX)	Units							
Benzene	ug/kg	11	8,900	5,400	6,000	3,900	990	63
Ethylbenzene	ug/kg	4.6 U	1,300	330	840	970	260 U	7
Toluene	ug/kg	4.6 U	1,700	250 U	260 U	1,600	260 U	5 U
Total Xylenes	ug/kg	4.6 U	1,510	250 U	370	2,020	260 U	8
Total BTEX	**ug/kg**	**11**	**13,410**	**5,730**	**7,210**	**8,490**	**990**	**78**
	mg/kg	**0.011**	**13.41**	**5.73**	**7.21**	**8.49**	**0.99**	**0.078**
Semi-Volatiles								
2,4-Dimethylphenol	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
2-Methylnaphthalene	ug/kg	210 U	360	230 U	210 U	910	210 U	210 U
Acenaphthene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Acenaphthylene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Anthracene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Benzo(a)anthracene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Benzo(a)pyrene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Benzo(b)fluoranthene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Benzo(g,h,i)perylene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Benzo(k)fluoranthene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Carbazole	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Chrysene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Dibenz(a,h)anthracene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Dibenzofuran	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Fluoranthene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Fluorene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Indeno(1,2,3-cd)pyrene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Naphthalene	ug/kg	210 U	2,700	230 U	210 U	7,000	210 U	210 U
Phenanthrene	ug/kg	210 U	220 U	230 U	210 U	220 U	210 U	210 U
Pyrene	ug/kg	210 UJ	220 UJ	230 UJ	210 U	220 U	210 U	210 U
Total Semi-Volatiles	**ug/kg**	**210 U**	**3,060**	**230 U**	**210 U**	**7,910**	**210 U**	**210 U**
	mg/kg	**0.21 U**	**3.06**	**0.23 U**	**0.21 U**	**7.91**	**0.21 U**	**0.21 U**
Conventional								
Percent Moisture	wt %	19	23	25	20	24	19	18

Notes:
U - Not detected above the reporting limit
NA - Not Available

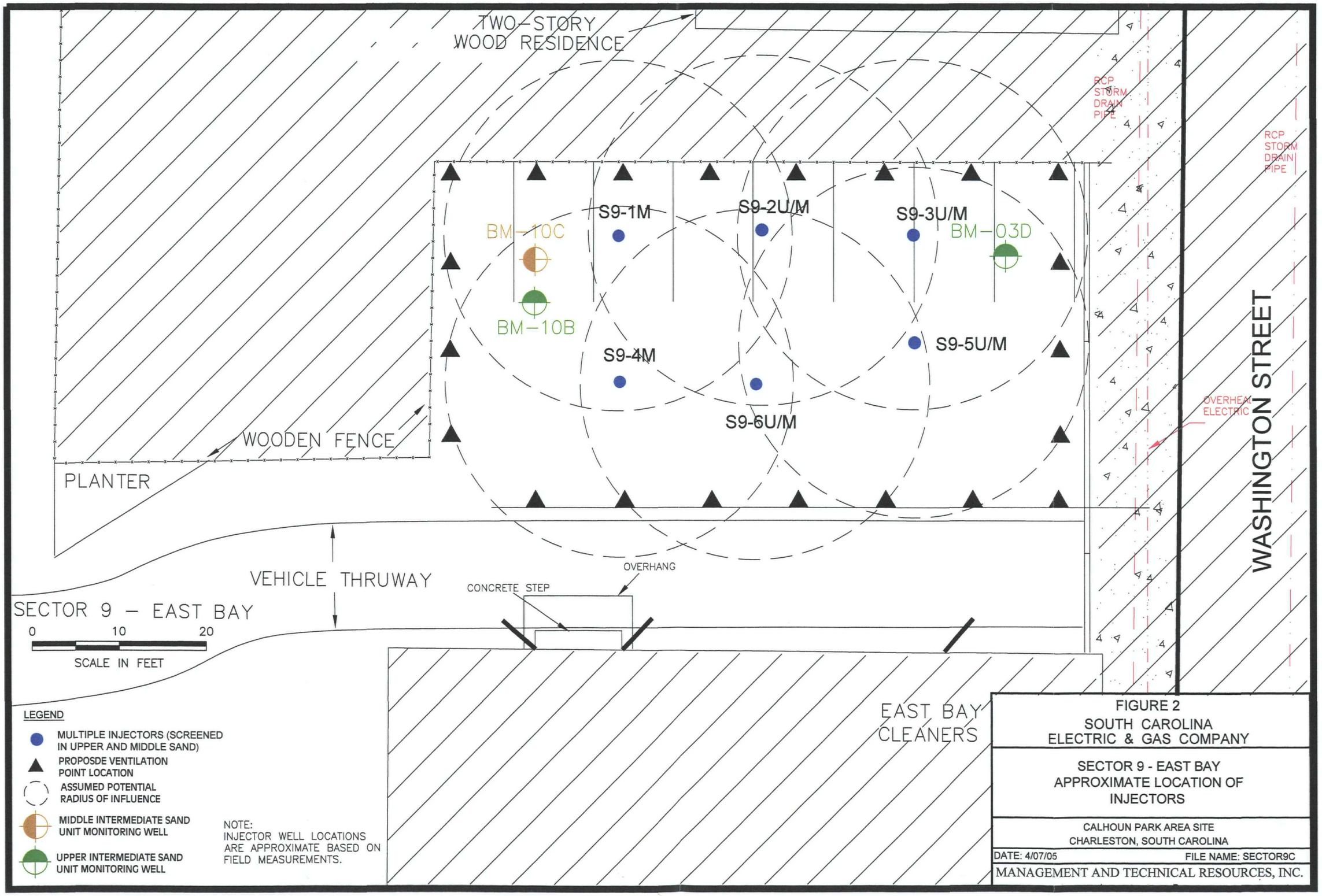
TABLE 2

INJECTOR BORING SOIL ANALYTICAL RESULTS
SECTOR 9 - EAST BAY

South Carolina Electric and Gas Co. - CPA Site
Charleston, South Carolina

	Injector Boring	S9-6			
	Depth Interval (ft.)	17.5-20.5	27-32	39-44	49-54
	Sand Unit	U.Sand (Upper)	U.Sand (Basal)	M. Sand (Upper)	Dup. of 39-44
PARAMETER	Date	2/24/2005	2/24/2005	2/24/2005	2/24/2005
Volatiles (BTEX)	**Units**				
Benzene	ug/kg	1500	8,400	690	2,600
Ethylbenzene	ug/kg	220 U	17,000	160	160
Toluene	ug/kg	220 U	15,000	44	52
Total Xylenes	ug/kg	220 U	34,000	151	149
Total BTEX	**ug/kg**	**1,500**	**74,400**	**1,045**	**2,961**
	mg/kg	**1.50**	**74.40**	**1.045**	**2.961**
Semi-Volatiles					
2,4-Dimethylphenol	ug/kg	210 U	220 U	210 U	220 U
2-Methylnaphthalene	ug/kg	210 U	30,000	210 U	220 U
Acenaphthene	ug/kg	210 U	640	210 U	220 U
Acenaphthylene	ug/kg	210 U	5,100	210 U	220 U
Anthracene	ug/kg	210 U	2,500	210 U	220 U
Benzo(a)anthracene	ug/kg	210 U	1,500	210 U	220 U
Benzo(a)pyrene	ug/kg	210 U	1,100	210 U	220 U
Benzo(b)fluoranthene	ug/kg	210 U	1,000	210 U	220 U
Benzo(g,h,i)perylene	ug/kg	210 U	290	210 U	220 U
Benzo(k)fluoranthene	ug/kg	210 U	470	210 U	220 U
Carbazole	ug/kg	210 U	220 U	210 U	220 U
Chrysene	ug/kg	210 U	1,900	210 U	220 U
Dibenz(a,h)anthracene	ug/kg	210 U	220 U	210 U	220 U
Dibenzofuran	ug/kg	210 U	480	210 U	220 U
Fluoranthene	ug/kg	210 U	3,800	210 U	220 U
Fluorene	ug/kg	210 U	3,300	210 U	220 U
Indeno(1,2,3-cd)pyrene	ug/kg	210 U	310	210 U	220 U
Naphthalene	ug/kg	210 U	91,000	210 U	220 U
Phenanthrene	ug/kg	210 U	13,000	210 U	220 U
Pyrene	ug/kg	210 U	4,300	210 U	220 U
Total Semi-Volatiles	**ug/kg**	**210 U**	**160,690**	**210 U**	**220 U**
	mg/kg	**0.21 U**	**160.69**	**0.21 U**	**0.22 U**
Conventional					
Percent Moisture	wt %	20	24	19	21

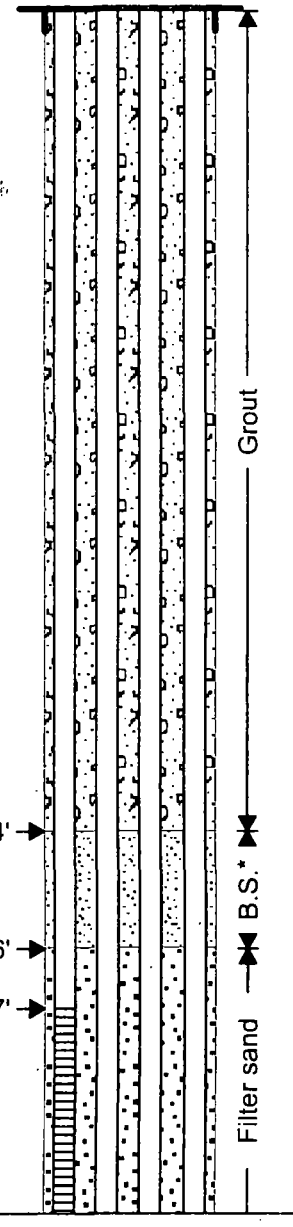
Notes:
U - Not detected above the reporting limit
NA - Not Available


TWO-STORY
WOOD RESIDENCE
RCP
STORM
DRAIN
PIPE
RCP
STORM
DRAIN
PIPE
S9-1M
S9-2U/M
S9-3U/M
BM-10C
BM-03D
BM-10B
S9-4M
S9-5U/M
S9-6U/M
OVERHEAD
ELECTRIC
WASHINGTON STREET
WOODEN FENCE
PLANTER
VEHICLE THRUWAY
OVERHANG
CONCRETE STEP
SECTOR 9 – EAST BAY
0
10
20
SCALE IN FEET
EAST BAY
CLEANERS
LEGEND
MULTIPLE INJECTORS (SCREENED IN UPPER AND MIDDLE SAND)
PROPOSDE VENTILATION POINT LOCATION
ASSUMED POTENTIAL RADIUS OF INFLUENCE
MIDDLE INTERMEDIATE SAND UNIT MONITORING WELL
UPPER INTERMEDIATE SAND UNIT MONITORING WELL
NOTE:
INJECTOR WELL LOCATIONS ARE APPROXIMATE BASED ON FIELD MEASUREMENTS.
FIGURE 2
SOUTH CAROLINA
ELECTRIC & GAS COMPANY
SECTOR 9 - EAST BAY
APPROXIMATE LOCATION OF
INJECTORS
CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA
DATE: 4/07/05
FILE NAME: SECTOR9C
MANAGEMENT AND TECHNICAL RESOURCES, INC.

Monitoring Well: S9-1

Client: SCANA Services	*Ground Elevation (Ft.):*
Site Location: CPA Site (East Bay)	*Top of Casing Elevation (Ft.):*
Date Started: 2/23/2005	*Northing:*
Date Completed: 2/24/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 57
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface		
	-0.75				Orange brown, very fine sand		
2, 4, 6	-7.00				Orange, with some gray, very fine sand, with some clay, clay content decreasing with depth to only fine sand		
8			0		Orange to gray tan, medium sand		
10			0				
12							
14			0			14'	
	-15.90						
16					Gray stiff clay, with trace of sand at 16.5 to 17 ft bgs	16'	
	-17.50		0			17'	
18			0		Brown, fine to medium sand, some silt		
20							



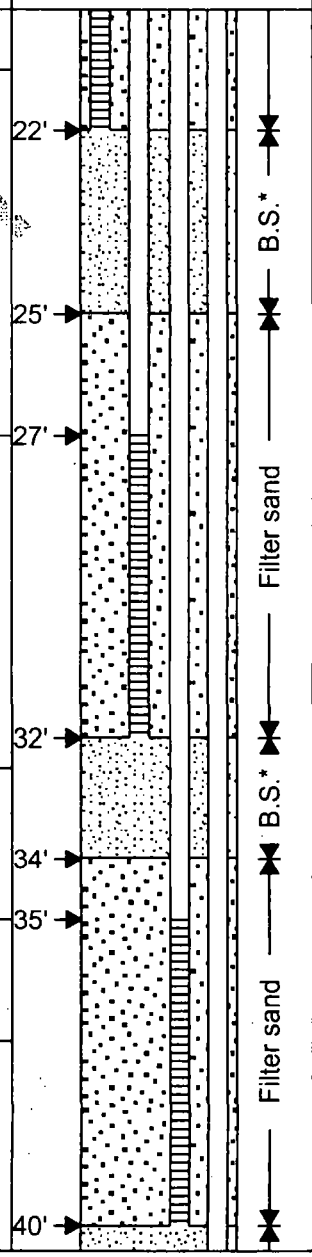
DRAFT

MTR

Monitoring Well: S9-1

Client: **SCANA Services**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (East Bay)**	***Top of Casing Elevation (Ft.):***
Date Started: **2/23/2005**	***Northing:***
Date Completed: **2/24/2005**	***Easting:***
Logged by: **M. Ferlin**	***Total Well Depth (Ft.):*** **57**
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Well Diagram	Observations
	-21.00		0		Gray-green, stiff clay, trace fine sand, shell fragments from 16.9 to 17 ft bgs		
22						22'	
24			0				
						25'	
26							
	-27.00		0			27'	
28			5.8		Brown grading to gray, fine to medium sand, with shell fragments, and some silt, clayey at 32 to 32.5 ft bgs		
30							
			13.8				
32	-32.50					32'	
					Gray, stiff clay, trace sand to no sand		
34			1.6			34'	
	-35.00					35'	
					Gray clay and fine sand		
36							
	-37.00		6.6				
38			16.0		Gray, fine to coarse sand, coarsening with depth, some peat from 45 to 47 ft bgs		
40			28.8			40'	



DRAFT

MTR

Monitoring Well: S9-1

Client: SCANA Services	*Ground Elevation (Ft.):*
Site Location: CPA Site (East Bay)	*Top of Casing Elevation (Ft.):*
Date Started: 2/23/2005	*Northing:*
Date Completed: 2/24/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 57
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Well Diagram	Observations
42						40' B.S.*	
						41'	
						42'	
44			17.8			Filter sand	
46							
	-47.00		11.2		Stiff gray clay, trace silt and sand	47'	
48							
50	-50.00				Gray, fine sand, silt, and clay, shell fragments also present		
	-51.50		0.4				
52					Gray, fine to medium sand, silt, shell fragments, trace of clay	Backfill	
54			1.6				
56	-56.50						
	-57.00		4.1		Gray clay, with some fine sand, and some shell fragments	Well Bottom 57' *B.S.=Barrier sand	
58							
60							

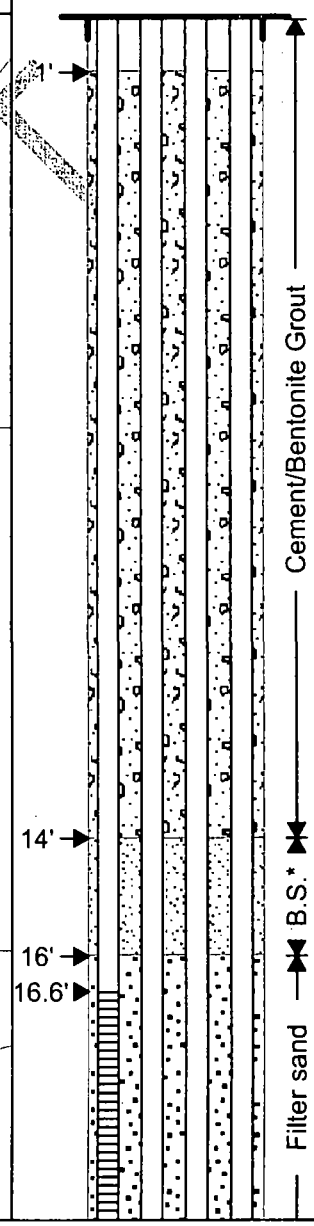
DRAFT

MTR

Injectors: S9-1A, B, C, and D

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/23/2005**	***Northing:*** **Not Measured**
Date Completed: **2/24/2005**	***Easting:*** **Not Measured**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
0	0.00				Ground Surface		
	-0.75				0-0.75 ft: Orange brown, very fine sand		
2					0.75-7 ft:Orange and gray, very fine sand, with some clay		
4		4.3			clay content decreasing with depth		0 to 7 ft: no odor, no visual
6	-7.00						
8			0		7-15.9 ft: Orange to gray, tan very fine to medium sand		
10			0				7 to 15.9 ft: no odor, no visual
12		10					
14			0			14'	
	-15.90						
16					15.9-17.5 ft: Gray, stiff clay	16'	15.9 to 17.5 ft: very slight odor at 17 ft, no visual
	-17.50		0		16.5-17 ft: trace sand	16.6'	
18			0		17.5-21 ft: Brown, fine to medium sand, some silt		17.5 to 21 ft: moderate odor, no visual
20							



DRAFT

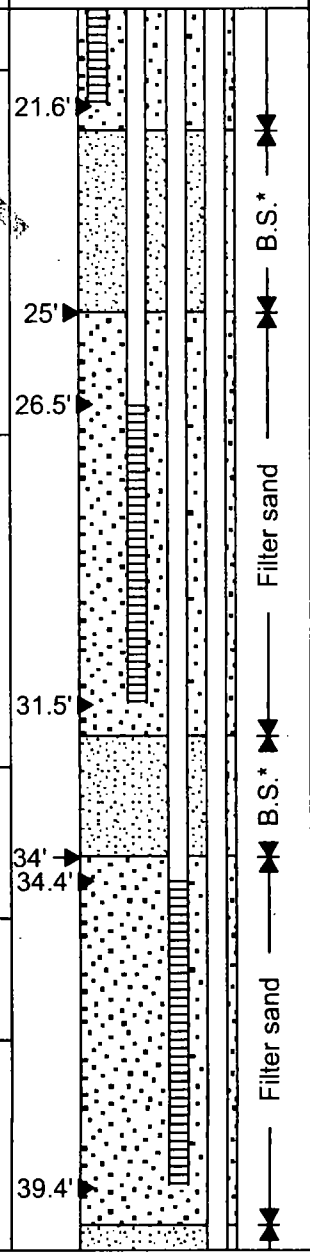
MTR

Injectors: S9-1A, B, C, and D

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/23/2005**	***Northing:*** **Not Measured**
Date Completed: **2/24/2005**	***Easting:*** **Not Measured**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Observations
	-21.00		0			
22		10			21-27 ft: Gray-green, stiff clay, trace fine sand	
24			0			21 to 26.9 ft: slight to moderate odor, no visual
26	-27.00				26.9-27 ft: shell fragments	
			0		27-32.5 ft: Brown, grading to gray, fine to medium sand, with some silt and shell fragments	
28			5.8			
30						27 to 32.5 ft: slight to moderate odor, no visual
32	-32.50	10	13.8		32-32.5 ft: clayey	
					32.5-35 ft: Gray, stiff clay, no to trace sand	
34	-35.00		1.6			
36	-37.00				35-37 ft: Gray clay and fine sand	35 to 37 ft: slight odor, no visual
38			6.6 16.0			
40			28.8			

Injector Diagram



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MTR

Injectors: S9-1A, B, C, and D

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/23/2005**	***Northing:*** **Not Measured**
Date Completed: **2/24/2005**	***Easting:*** **Not Measured**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Injector Diagram	Observations
42, 44, 46	-47.00	10	17.8		37-47 ft: Gray, fine to coarse sand, coarsening with depth 45-47 ft: some peat 47 ft: clay	41.1' 46.1' B.S.* Filter sand	37 to 47 ft: slight to moderate odor, no visual
48, 50	-50.00		11.2		47-50 ft: Stiff gray clay, trace silt and sand		47 to 50 ft: no odor, no visual
52, 54, 56	-51.50 -56.50	10	0.4 1.6		50-51.5 ft: Gray, fine sand, silt, and clay, shell fragments also present 51.5-56.5 ft: Gray, fine to medium sand, silt, shell fragments, trace of clay	B.S.*	51.5 to 56.5 ft: sulfur-ammonia like odor, no visual
58, 60	-57.00		4.1		56.5-57 ft: Gray clay, with some fine sand, and some shell fragments	Total boring depth: 57 ft *B.S.=Barrier sand	

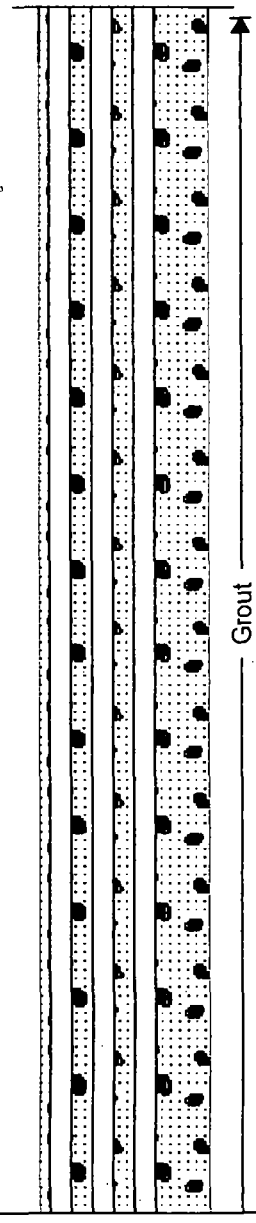
DRAFT

MTR

Monitoring Well: S9-2

Client: **SCANA Services**	***Ground Elevation (Ft.):***
Site Location: **CPA site (East Bay)**	***Top of Casing Elevation (Ft.):***
Date Started: **3/25/05**	***Northing:***
Date Completed: **3/25/05**	***Easting:***
Logged by: **M.Ferlin**	***Total Well Depth (Ft.):***
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface		
2	-3.00						
	-3.50				Very fine sand, clay grey		
4					Fine sand, with some silt, gray to tan		
6	-7.00						
8	-9.00				Tan, grey, stiff clay, trace silt sand		
10					Tan, grey fine coarse sand, coarsening downward		



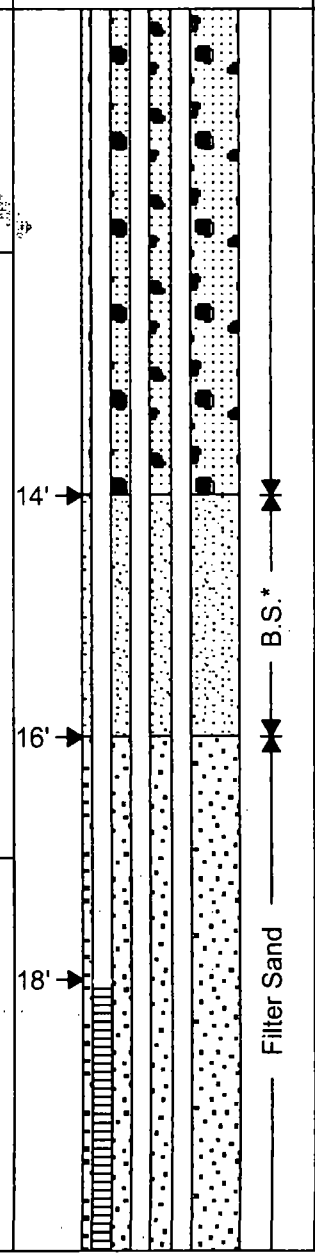
DRAFT

MTR

Monitoring Well: S9-2

Client: **SCANA Services**	***Ground Elevation (Ft.):***
Site Location: **CPA site (East Bay)**	***Top of Casing Elevation (Ft.):***
Date Started: **3/25/05**	***Northing:***
Date Completed: **3/25/05**	***Easting:***
Logged by: **M.Ferlin**	***Total Well Depth (Ft.):***
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Well Diagram	Observations
12	-12.00				Tan, gray stiff clay, silt and very fine sand		
14						14'	
16						16'	
	-17.00				Tan, gray stiff clay		
18						18'	
20							



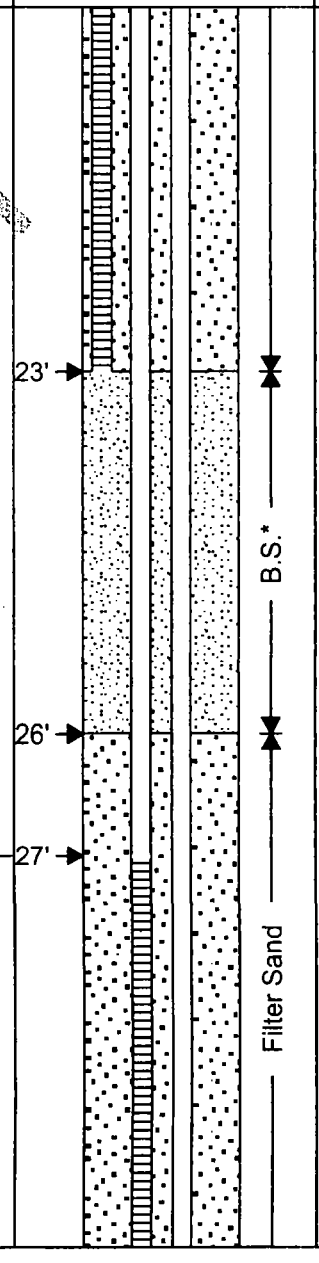
DRAFT

MTR

Monitoring Well: S9-2

Client: **SCANA Services**	***Ground Elevation (Ft.):***
Site Location: **CPA site (East Bay)**	***Top of Casing Elevation (Ft.):***
Date Started: **3/25/05**	***Northing:***
Date Completed: **3/25/05**	***Easting:***
Logged by: **M.Ferlin**	***Total Well Depth (Ft.):***
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Well Diagram	Observations
22							
24							
26							
	-27.00				Gray, fine sand, some silt and shell fragments, silt increasing toward 32 ft.		
28							
30							



DRAFT

MTR

Monitoring Well: S9-2

Client: **SCANA Services**	***Ground Elevation (Ft.):***
Site Location: **CPA site (East Bay)**	***Top of Casing Elevation (Ft.):***
Date Started: **3/25/05**	***Northing:***
Date Completed: **3/25/05**	***Easting:***
Logged by: **M.Ferlin**	***Total Well Depth (Ft.):***
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Well Diagram	Observations
32	-32.00					32'	
	-32.50				Gray silt, clay, shell fragments		
					Gray, stiff clay with trace sand		
34						34'	
36							
	-36.80						
					Gray fine sand		
					Gray fine to coarse sand		
38			7.0			38'	
40							

B.S.*

Filter Sand

DRAFT

MTR

Monitoring Well: S9-2

Client: SCANA Services	*Ground Elevation (Ft.):*
Site Location: CPA site (East Bay)	*Top of Casing Elevation (Ft.):*
Date Started: 3/25/05	*Northing:*
Date Completed: 3/25/05	*Easting:*
Logged by: M.Ferlin	*Total Well Depth (Ft.):*
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Well Diagram	Observations
42			8.0			42'	
44	-44.00		1.8		Dark gray silt, fine sand	Back Fill	
46	-45.50		0.2		Dark gray stiff clay, with trace silt		
48	-47.00					Bottom of Well 47' *B.S.=Barrier Sand	
50							

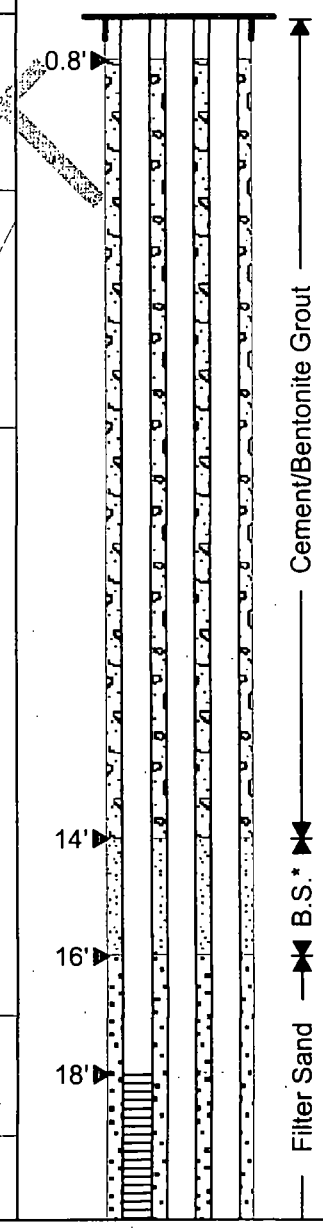
DRAFT

MTR

Injectors: S9-2 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/25/05**	***Northing:*** **Not Measured**
Date Completed: **2/25/05**	***Easting:*** **Not Measured**
Logged by: **S. Pesch**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
	-3.00				0-3 ft: fill (bricks)	
	-3.50	4			3-3.5 ft: Gray very fine sand and gray clay	0 to 7 ft: no odor, no visual
	-7.00				3.5-7 ft: Fine sand, with some silt, gray to tan	
	-17.00				7-17 ft: Drilled through interval	
	-19.00		0.5		17-19 ft: Tan-gray stiff clay, trace sand and silt	17 to 19 ft: slight odor at 18 ft, no visual



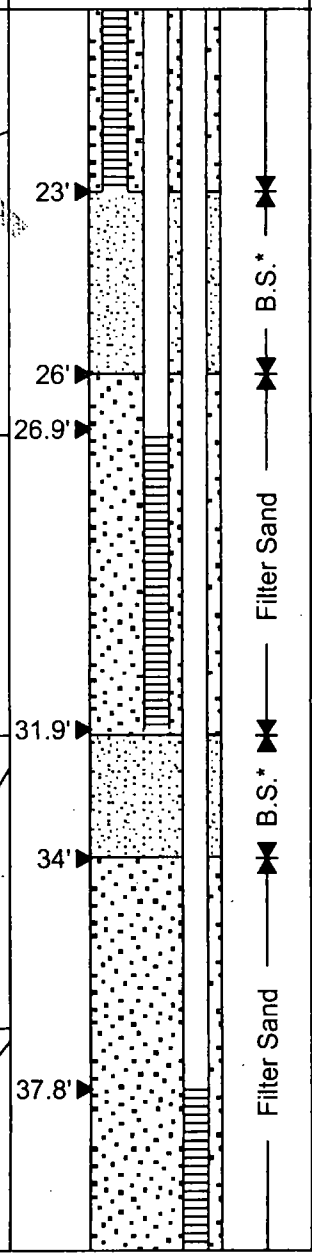
DRAFT

MTR

Injectors: S9-2 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/25/05**	***Northing:*** **Not Measured**
Date Completed: **2/25/05**	***Easting:*** **Not Measured**
Logged by: **S. Pesch**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Observations
			10		19-22 ft: Tan-gray, fine to coarse sand	19 to 22 ft: slight to moderate odor, no visual
22	-22.00	10			19-20 ft: trace to some silt	
					22-27 ft: Gray-tan, stiff clay, trace silt and very fine sand	
24			1.4			22 to 27 ft: slight odor, no visual
26						
	-27.00		1.4		27-32 ft: Gray, fine sand, some silt and shell fragments	
28						27 to 32 ft: slight to moderate odor, no visual
30						
					32 ft: Silt content increases	
32	-32.00 / -32.50	10			32-32.5 ft: Gray, silt and clay, some shell fragments	32 to 32.5 ft: slight to moderate odor, no visual
34					32.5-36.8 ft: Gray, stiff clay with trace sand	
36					Sand content increasing with depth	
	-36.80				36.8-37 ft: Gray fine sand	
38			7.0			
40						



DRAFT

MTR

Injectors: S9-2 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/25/05**	***Northing:*** **Not Measured**
Date Completed: **2/25/05**	***Easting:*** **Not Measured**
Logged by: **S. Pesch**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
42		10	8.0		37-44 ft: Gray, fine to coarse sand sand coarsening with depth 39 ft: Trace peat 42 ft: wood fragments	42.8' Back Fill	37 to 44 ft: slight to moderate odor, no visual
44	-44.00		1.8		44-45 ft: Dark gray, silt, fine sand		44 to 45.5 ft: no to slight odor, no visual
46	-45.50 -47.00		0.2		45.5-47 ft: Dark gray, stiff clay, with trace silt	Total boring depth: 47 ft *B.S.=Barrier Sand	45.5 to 47 ft: no odor, no visual
48							
50							
52							
54							
56							
58							
60							

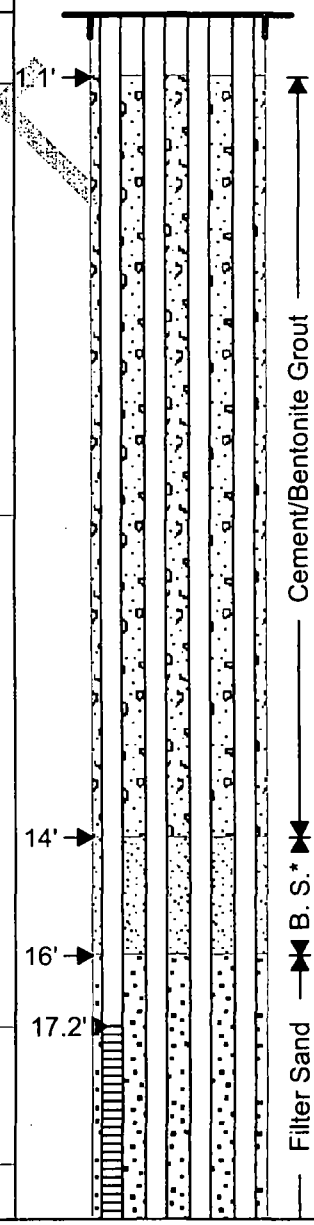
DRAFT

MTR

Injectors: S9-3 A, B, C, and D

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/18/2005**	***Northing:*** **Not Measured**
Date Completed: **2/18/2005**	***Easting:*** **Not Measured**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
	-1.20				0-1.2 ft: Fill	
2					1.2-8.5 ft: Tan to lite brown, fine sand, trace silt	
4		5.5			3.5ft: wet	
6						1.2 to 8.5 ft: no odor, no visual
8	-8.50		0			
10			0		8.5-17.2 ft: Tan, fine to medium sand, wet	
12		10				
14			0		15.5-17.2 ft: color change to orange	8.5 to 17.2 ft: no odor, no visual
16						
	-17.20		0			
18			7.1		17.2-19.5 ft: Gray, stiff clay	17.2 to 19.5 ft: moderate odor, no visual
	-19.50					
20						



DRAFT

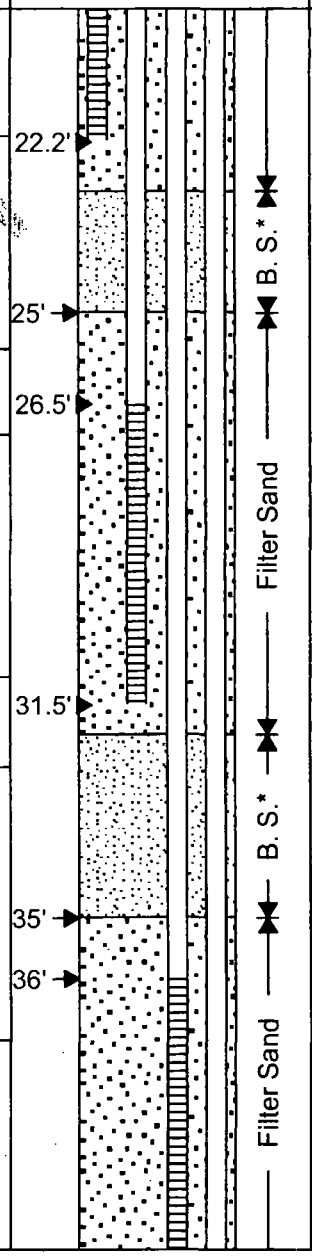
MTR

Injectors: S9-3 A, B, C, and D

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/18/2005**	***Northing:*** **Not Measured**
Date Completed: **2/18/2005**	***Easting:*** **Not Measured**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
			70.3		19.5-22.1 ft: Green, fine to medium sand, with some silt	19.5 to 22.1 ft: moderate odor, no visual
22	-22.10	10			22.1-25.6 ft: Brown, stiff, clay	22.1 to 25.6 ft: moderate odor, no visual
24			15.1			
	-25.60					25.6 to 27 ft: moderate to strong odor, no visual
26					25.6-27 ft: Green-blue, fine to medium sand, with some clay	
	-27.00		56.6		27-31 ft: Brown-gray, fine to medium sand, shell fragments, some silt	
28			66.3			27 to 31 ft: moderate to strong odor, no visual
30						
	-31.00		59.6		31-32.5 ft: Gray, fine sand and clay, with some shell fragments	
32	-32.50	NR			32.5-37 ft: Gray, stiff clay	
34			0.3			
36						
	-37.00		0		37-43.5 ft: Gray, fine to medium sand	
38					42.5-43.5 ft: coarse sand	37 to 43.5 ft: strong odor, no visual
40						

Injector Diagram



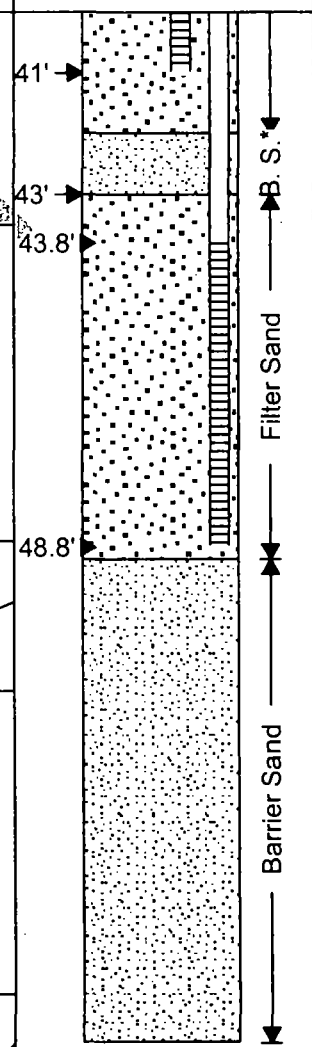
MTR

Injectors: S9-3 A, B, C, and D

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/18/2005**	***Northing:*** **Not Measured**
Date Completed: **2/18/2005**	***Easting:*** **Not Measured**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
42	-43.50	10				
44					43.5-48.7 ft: Dark gray, fine sand, with some silt	43.5 to 48.7 ft: very slight odor, no visual
46					46-47 ft: clay layers, silt content increasing	
48	-48.70		NR			
	-49.70				48.7-49.7 ft: Dark gray, medium to coarse sand, slight peat	48.7 to 49.7 ft: slight odor, no visual
50	-51.20		16.8		49.7-51.2 ft: Gray clay, with some shell fragments and sand	49.7 to 51.2 ft: "swamp" odor, no visual
52		10			51.2-56.2 ft: Gray sand, silt, and shell fragments, trace clay	
54			12.3			51.2 to 56.2 ft: no odor, no visual
56	-56.20					
	-57.00		11.1		56.2-57 ft: Gray clay, with some fine sand and shell fragments	56.2 to 57 ft: "swamp" odor, no visual
58						
60						

Injector Diagram



Total boring depth: 57 ft

* B.S.=Barrier Sand
NR= Not recorded

DRAFT

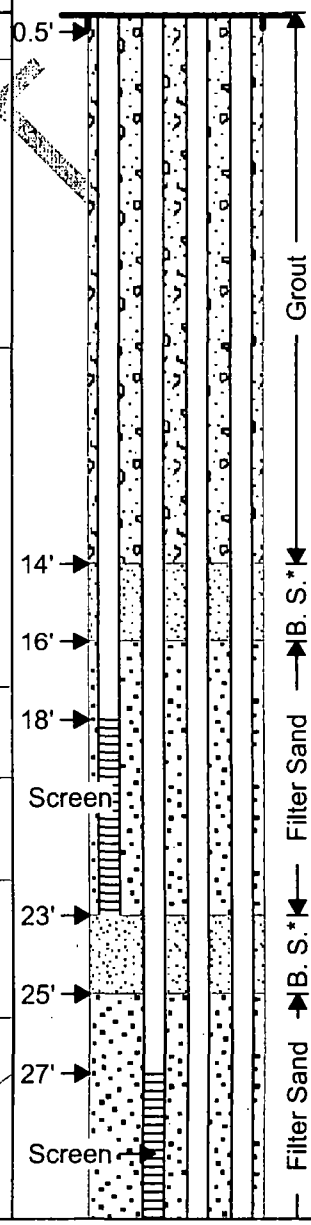
MTR

Injectors: S9-3 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/18/2005**	***Northing:*** **Not Measured**
Date Completed: **2/18/2005**	***Easting:*** **Not Measured**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
	-1.20				Fill	
2–8		5.5			Tan to lite brown, fine sand, trace silt, wet at 3.5 ft bgs	From 1.2 to 8.5 ft bgs: no odor, no visual
8	-8.50		0			
10–16		10	0 0 0		Tan, fine to medium sand, wet, from 15.5 to 17.2 sand is more orange	From 8.5 to 17.2 ft bgs: no odor, no visual
16	-17.20		0			
18			7.1		Gray, stiff clay	
	-19.50					
20			10.3		Green, fine to medium sand, with some silt	From 17.2 to 25.6: moderate odor, no visual
22	-22.10	10			Brown, stiff clay	
24			15.1			
	-25.60					
26	-27.00		56.6		Green blue, fine to medium sand, with some clay	
28			66.3		Brown, fine to medium sand, shell fragments, some silt, gray from 29 to 31 ft bgs	From 25.6 to 31 ft bgs: moderate to strong odor, no visual
30						

Injector Diagram



DRAFT

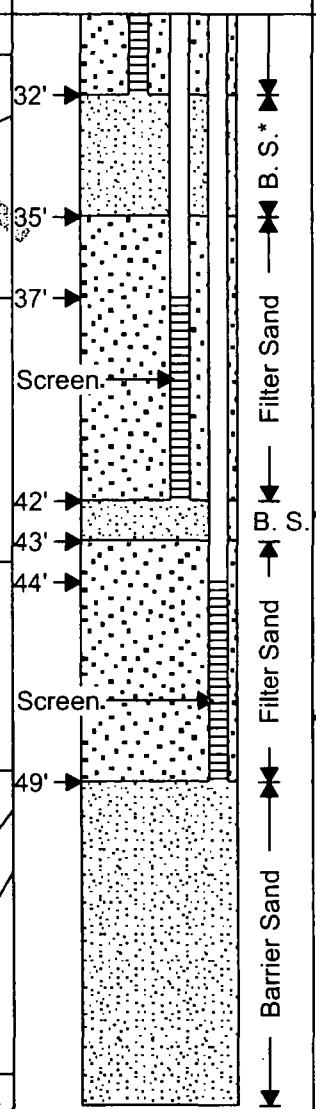
MTR

Injectors: S9-3 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/18/2005**	***Northing:*** **Not Measured**
Date Completed: **2/18/2005**	***Easting:*** **Not Measured**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **57**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
	-31.00		59.6			
32	-32.50	NR			Gray, fine sand and clay, with some shell fragments	
34			0.3		Gray, stiff clay	
36	-37.00		0			
38					Gray, fine to medium sand, coarse sand from 42.5 to 43.5 ft bgs	
40						From 37 to 43.5 ft bgs: strong odor, no visual
42		10				
	-43.50					
44					Dark gray, fine sand, with some silt, clay layers at 46 to 47 ft bgs, silt content increasing with depth	
46						From 43.5 to 48.7: very slight odor, no visual
48	-48.70		DNR			
	-49.70				Dark gray, fine to coarse sand, slight peat	
50	-51.20		16.8		Gray clay, with some shell fragments and sand	
52		10			Gray shell fragments, sand, and silt, trace clay	
54			12.3			From 49.7 to 56.2: no odor, no visual
56	-56.20					
	-57.00		11.1		Gray clay, with some fine sand and shell fragments	
58			DNR=Did not record			From 56.2 to 57: "swampy" odor, no visual
60						

Injector Diagram



* B.S.=Barrier Sand

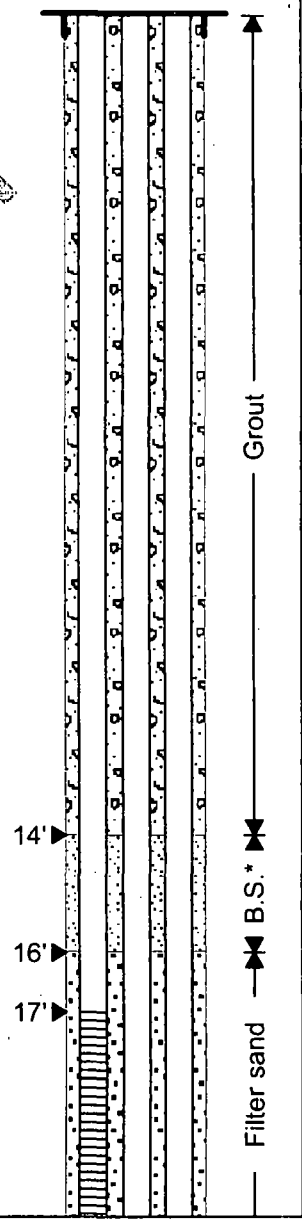
DRAFT

MTR

Monitoring Well: S9-4

Client: SCANA Services	*Ground Elevation (Ft.):*
Site Location: CPA Site (East Bay)	*Top of Casing Elevation (Ft.):*
Date Started: 2/24/2005	*Northing:*
Date Completed: 2/24/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 47
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
					Drilled through, no log taken	
2						
4						
6						
8						
10						
12						
14						
16						
	-17.00				Gray, stiff clay, trace silt	
18	-18.00		3.2		Gray, fine sand, with some silt, trace clay	From 17 to 19 ft bgs: slight odor, no visual
	-19.00				Tan, fine to medium sand, trace silt to no silt with depth	
20						



DRAFT

MTR

Monitoring Well: S9-4

Client: **SCANA Services**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (East Bay)**	***Top of Casing Elevation (Ft.):***
Date Started: **2/24/2005**	***Northing:***
Date Completed: **2/24/2005**	***Easting:***
Logged by: **M. Ferlin**	***Total Well Depth (Ft.):*** **47**
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
			8.5				From 19 to 21.9 ft bgs: slight to moderate odor, no visual
	-21.90						
22					Blue gray, fine sand and clay	22'	
					Blue gray clay		
24			9.9				From 22.3 to 26 ft bgs: slight odor, no visual
						25'	
	-26.00						
26					Blue, sand and clay, shell fragments and peat, sand content increases with depth		From 26 to 27 ft bgs: strong odor
	-27.00		57.6			27.5'	
28			13.6		Gray to tan, fine sand, with shell fragments and some to trace silt		
30			19.7				From 27 to 32 ft bgs: moderate to strong odor, no visual
	-32.00						
32	-32.50				Gray, fine sand and silt, DNAPL occurred as staining and blebs in interval	32.5'	From 32 to 32.5 ft bgs: moderate odor
34			0.9		Gray, stiff clay, with trace of shell fragments and silt		From 32.5 to 37 ft bgs: slight odor, no visual
36							
	-37.00		1.4		Gray, fine to medium sand	37'	
38			32.7				
						39'	
40							

Well Diagram legend: B.S.* — Filter sand — B.S.*

DRAFT

MTR

Monitoring Well: S9-4

Client: SCANA Services	*Ground Elevation (Ft.):*
Site Location: CPA Site (East Bay)	*Top of Casing Elevation (Ft.):*
Date Started: 2/24/2005	*Northing:*
Date Completed: 2/24/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 47
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
42			26.4				From 37 to 44 ft bgs: slight to moderate odor, no visual
44	-44.00		7.1		Gray, stiff clay, trace sand at bottom of interval	44' Filter sand B.S.*	
46	-47.00		3.9			Well bottom 47' *B.S.= Barrier sand	From 44 to 47 ft bgs: " swamp ' odor, no visua
48							
50							
52							
54							
56							
58							
60							

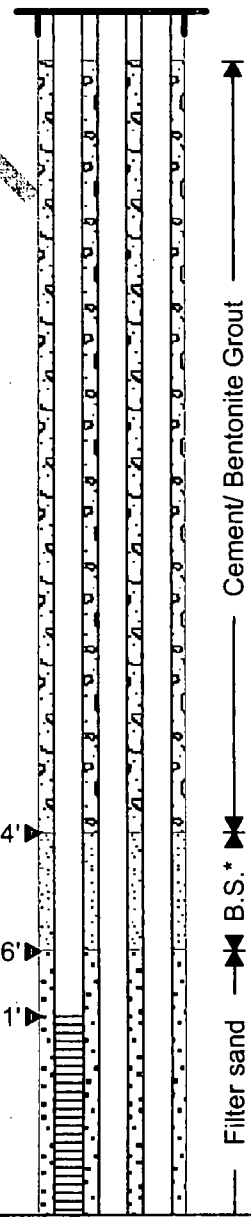
DRAFT

MTR

Injectors: S9-4 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/24/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/24/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
0	0.00				Ground Surface		
					0-17 ft: Drilled through interval		
2							
4							
6							
8							
10							
12							
14						14'	
16						16'	
	-17.00					17.1'	
18	-18.00		3.2		17-18 ft: Gray, stiff clay, trace silt		17 to 19 ft: slight odor, no visual
	-19.00				18-19 ft: Gray, fine sand, with some silt, trace clay		
20							



DRAFT

MTR

Injectors: S9-4 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/24/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/24/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Injector Diagram	Observations
			8.5		19-21.9 ft: Tan, fine to medium sand, trace to no silt (with depth)		19 to 21.9 ft: slight to moderate odor, no visual
22	-21.90				21.9-22.3 ft: Blue gray, fine sand and clay	22.1'	
24			9.9		22.3-26 ft: Blue gray clay	25'	22.3 to 26 ft: slight odor, no visual
26	-26.00				26-27 ft: Blue, sand and clay, shell fragments and some peat, sand content increases with depth		26 to 27 ft: strong odor
	-27.00		57.6			27.6'	
28			13.6		27-32 ft: Gray to tan, fine sand, some to trace silt, and shell fragments		27 to 32 ft: moderate to strong odor, DNAPL observed in tray, potentially from interval
30			19.7		iron staining		
32	-32.00 -32.50				32-32.5 ft: Gray, fine sand and silt	32.6'	32 to 32.5 ft: moderate odor, DNAPL blebs and staining
34			0.9		32.5-37 ft: Gray, stiff clay, with trace silt, shell fragments		32.5 to 37 ft: slight odor, no visual
36	-37.00		1.4		37-44 ft: Gray, fine to medium sand	37'	
38			32.7			39.1'	
40							

B.S.* — Filter sand — B.S.*

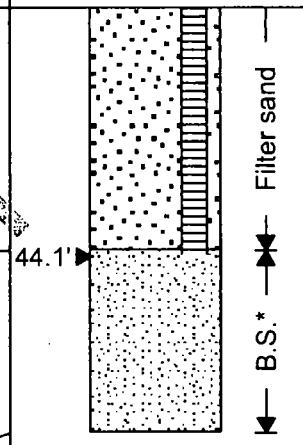
DRAFT

MTR

Injectors: S9-4 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/24/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/24/2005**	***Easting:*** **Not Surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Injector Diagram	Observations
42			26.4				37 to 44 ft: slight to moderate odor, odor decreasing with depth, no visual
44	-44.00		7.1		44-47 ft: Gray, stiff clay, trace peat	44.1'	44 to 47 ft: "swamp " odor, no visual
46	-47.00		3.9		47 ft: trace sand	Total boring depth: 47 ft *B.S.= Barrier sand	
48							
50							
52							
54							
56							
58							
60							



DRAFT

MTR

Monitoring Well: S9-5

Client: SCANA Services	*Ground Elevation (Ft.):*
Site Location: CPA Site (East Bay)	*Top of Casing Elevation (Ft.):*
Date Started: 3/25/05	*Northing:*
Date Completed: 3/25/05	*Easting:*
Logged by: M.Ferlin	*Total Well Depth (Ft.):* 47
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface	17'	
					Drilled through interval	Grout	
2							
4							
6							
8							
10							

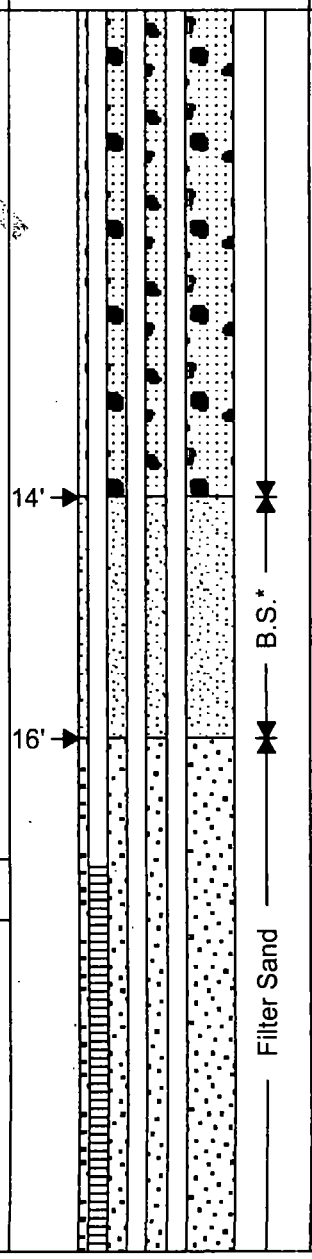
DRAFT

MTR

Monitoring Well: S9-5

Client: SCANA Services	*Ground Elevation (Ft.):*
Site Location: CPA Site (East Bay)	*Top of Casing Elevation (Ft.):*
Date Started: 3/25/05	*Northing:*
Date Completed: 3/25/05	*Easting:*
Logged by: M.Ferlin	*Total Well Depth (Ft.):* 47
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
12							
14						14'	
16						16'	
	-17.00						
	-17.50				Stiff gray clay, trace sand		
18					Gray, Fine to medium sand with silt, silt from 17.5 ft. to 18.5 ft.		
20							



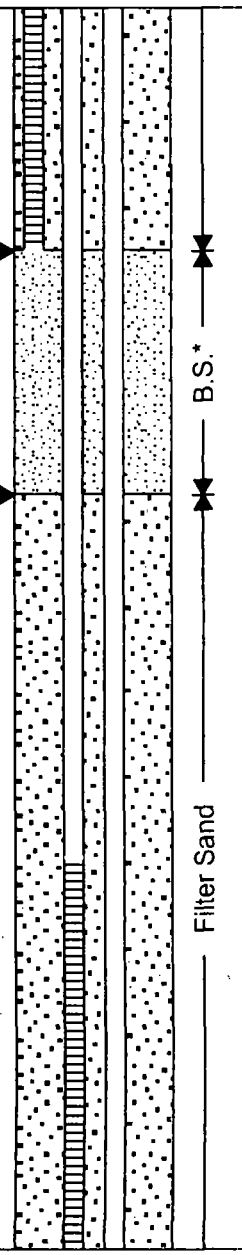
DRAFT

MTR

Monitoring Well: S9-5

Client: **SCANA Services**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (East Bay)**	***Top of Casing Elevation (Ft.):***
Date Started: **3/25/05**	***Northing:***
Date Completed: **3/25/05**	***Easting:***
Logged by: **M.Ferlin**	***Total Well Depth (Ft.):*** **47**
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
	-20.30						
22					Gray stiff clay with shell fragments at 21.3, 23.3 with residual DNAPL, 24.1 shell fragments with sand	22'	
24						24'	
26	-26.00				Gray sandy shell fragments, silt		
	-27.00						
28					Tan to brown fine to medium sand, some silt ans shell fragments, turning gray at 30 ft.		
30							



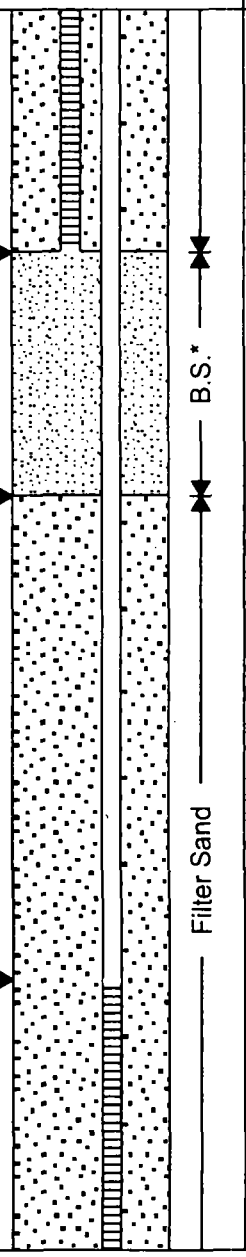
DRAFT

MTR

Monitoring Well: S9-5

Client: SCANA Services	*Ground Elevation (Ft.):*
Site Location: CPA Site (East Bay)	*Top of Casing Elevation (Ft.):*
Date Started: 3/25/05	*Northing:*
Date Completed: 3/25/05	*Easting:*
Logged by: M.Ferlin	*Total Well Depth (Ft.):* 47
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
	-31.50						
	-32.00				Gray sand with silt		
32					Gray clay, thin sand layer at 34 ft. and 35 ft.	32'	
34						34'	
36							
	-37.00				Gray fine coarse sand, coarsening downward, coarse form 40.5 to 42 ft.		
38						38'	
40							



DRAFT

MTR

Monitoring Well: S9-5

Client: **SCANA Services**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (East Bay)**	***Top of Casing Elevation (Ft.):***
Date Started: **3/25/05**	***Northing:***
Date Completed: **3/25/05**	***Easting:***
Logged by: **M.Ferlin**	***Total Well Depth (Ft.):*** **47**
Drilled by: **Prosonic**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Well Diagram	Observations
42	-42.00				Dark brown silt with some fine sand	43'	
44	-44.50				Dark gray stiff clay 45.4 sand layer approx. 0.1 ft. thick	Backfill	
46	-47.00						
48						Bottom of Well 47' B.S.=Barrier Sand	
50							

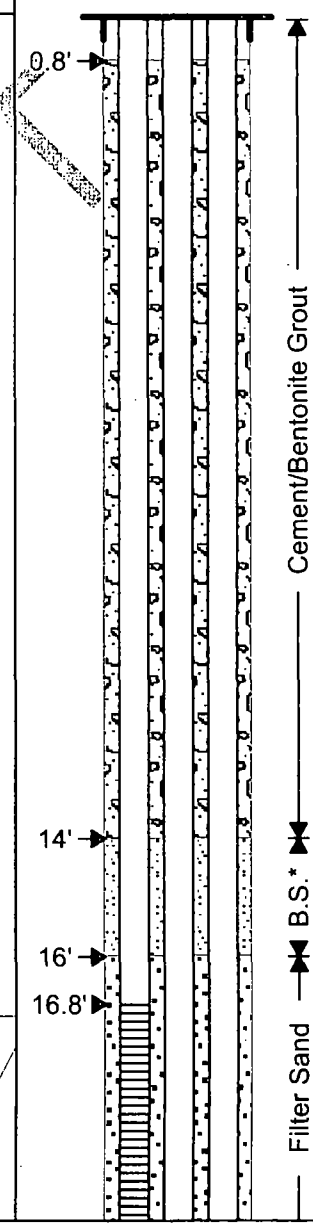
DRAFT

MTR

Injectors: S9-5 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/25/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/25/2005**	***Easting:*** **Not Surveyed**
Logged by: **M.Ferlin**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
0	0.00				Ground Surface		
					0-17 ft: Drilled through interval		
2							
4							
6							
8							
10							
12							
14							
16							
	-17.00						
	-17.50				17-17.5 ft: Stiff gray clay, trace sand		
18					17.5-20.3 ft: Gray, fine to medium sand 17.5-18.5 ft: silt		17.5 to 20.2 ft: moderate odor, no visual
20	-20.30						



DRAFT

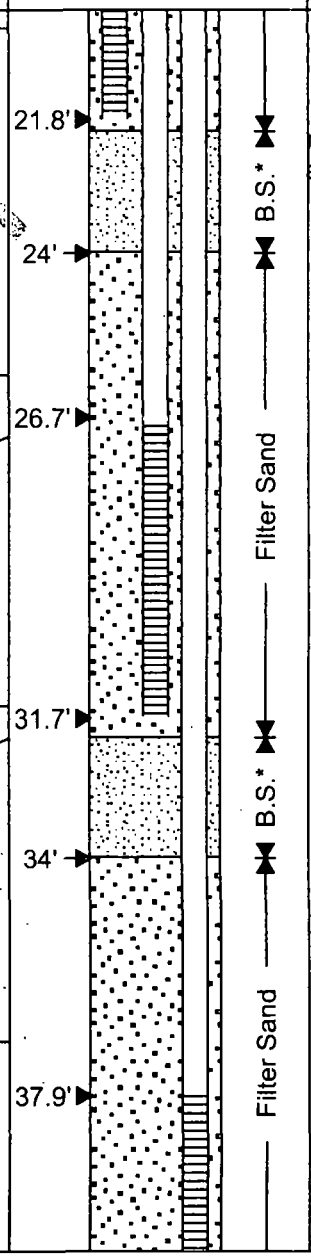
MTR

Injectors: S9-5 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/25/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/25/2005**	***Easting:*** **Not Surveyed**
Logged by: **M.Ferlin**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
22, 24					20.3-26 ft: Gray, stiff clay with shell fragments	20.2 to 26 ft: residual DNAPL at 21.3 and 23.3 ft on shell fragments
26	-26.00					26 to 27 ft: moderate to strong odor, DNAPL bleb at 26.2 ft
	-27.00				26-27 ft: Gray, sandy silt, and shell fragments	
28, 30					27-31.5: Tan to brown, fine to medium sand, some silt and shell fragments 30 ft: color change to gray	27 to 31.5 ft: moderate odor, no visual
	-31.50					
	-32.00				31.5-32 ft: Gray, sandy silt	31.5 to 32 ft: moderate odor, no visual
32, 34, 36					32-37 ft: Gray, stiff, clay 34 and 35 ft: thin sand layer	32 to 37 ft: slight odor, no visual
	-37.00					
38, 40	-40.00				37-42 ft: Gray, fine to coarse sand 38.5 ft: peat 40.5-42 ft: coarse sand	37 to 42 ft: slight to moderate odor, no visual

Injector Diagram



DRAFT

MTR

Injectors: S9-5 A, B, and C

Client: **SCANA Services**	***Ground Elevation (Ft.):*** **Not Surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Surveyed**
Date Started: **2/25/2005**	***Northing:*** **Not Surveyed**
Date Completed: **2/25/2005**	***Easting:*** **Not Surveyed**
Logged by: **M.Ferlin**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Sonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Injector Diagram	Observations
42	-42.00				sand coarsening with depth		
44	-44.50				42-44.5 ft: Dark brown, silt, with some fine sand	42.9' B.S.*	42 to 44.5 ft: slight odor, no odor at 44 ft, no visual
46	-47.00				44.5-47 ft: Dark gray, stiff, clay 45.4 ft: 0.1 ft thick sand layer	Total boring depth: 47 ft B.S.=Barrier Sand	44.5 to 47 ft: no odor, no visual
48							
50							Note: PID readings were not obtained since the Minirae would not start
52							
54							
56							
58							
60							

DRAFT

MTR

Monitoring Well: S9-6

Client: SCANA Services, Inc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (East Bay)	*Top of Casing Elevation (Ft.):*
Date Started: 2/24/2005	*Northing:*
Date Completed: 2/24/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 47
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface		
2							
4							
6							
8							
10							
12							
14							
16							
18							
20							

DRAFT

MTR

Monitoring Well: S9-6

Client: SCANA Services, Inc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (East Bay)	*Top of Casing Elevation (Ft.):*
Date Started: 2/24/2005	*Northing:*
Date Completed: 2/24/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 47
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Well Diagram	Observations
22							
24							
26							
28							
30							
32							
34							
36							
38							
40							

DRAFT

MTR

Monitoring Well: S9-6

Client: SCANA Services, Inc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (East Bay)	*Top of Casing Elevation (Ft.):*
Date Started: 2/24/2005	*Northing:*
Date Completed: 2/24/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 47
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Well Diagram	Observations
42							
44							
46	-47.00						
48							
50							
52							
54							
56							
58							
60							

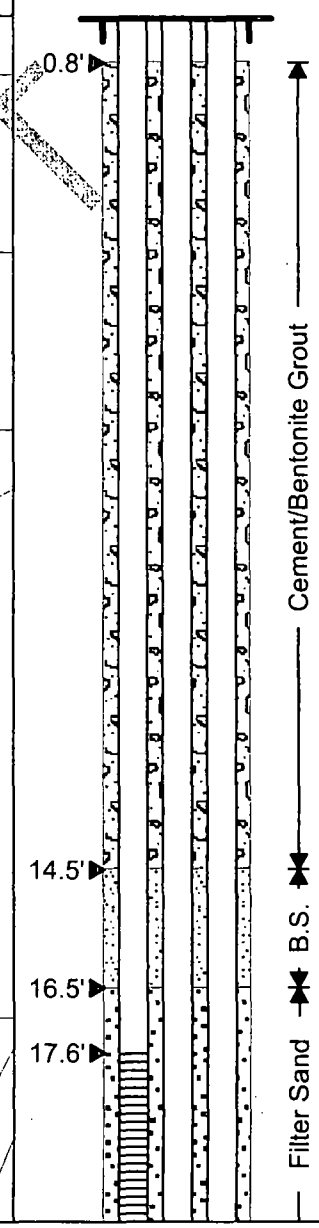
DRAFT

MTR

Injectors: S9-6 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/24/2005**	***Northing:*** **Not Measured**
Date Completed: **2/24/2005**	***Easting:*** **Not Measured**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
	-1.00				0-1 ft: Asphalt and fill	
2					1-4 ft: Tan, fine to medium sand	
4	-4.00	4			4-7 ft: Green, fine sand, with some silt	0 to 7 ft: no odor, no visual
6	-7.00					
8	-8.00		0		7-8 ft: Dark gray, fine sand and silt	7 to 8 ft: no odor, no visual
10			0		8-17 ft: Tan, fine sand	
12		7.3				8 to 17 ft: no odor, no visual
14			0		14-17 ft: Coarsening to medium sand	
16	-17.00					
	-17.50		0		17-17.5 ft: Green-gray, fine sand and clay	
18	-19.00		0.1		17.5-19 ft: Green-gray, fine sand, with trace to some silt and clay	17.5 to 20.5 ft: slight to moderate odor, no visual
20						



DRAFT

MTR

Injectors: S9-6 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/24/2005**	***Northing:*** **Not Measured**
Date Completed: **2/24/2005**	***Easting:*** **Not Measured**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
	-20.50				19-20.5 ft: Fine to coarse sand		
			0.3		20.5-26.9 ft: Stiff clay, with trace fine sand and shell fragments		
22		NR				22.6'	20.5 to 26.9 ft: slight odor, no visual
24			0.5			25'	
26	-26.90						
			1.4		26.9-28.5 ft: Dark gray to brown, fine to medium sand, with trace to some silt and shell fragments	26.9'	26.9 to 28.5 ft: slight to moderate odor, limited DNAPL bleb noted
28	-28.50		7.9				
					28.5-32 ft: Gray, fine to medium sand, with some silt and shell fragments		28.5 to 32 ft: slight to moderate odor, blebs of DNAPL at 31 and 31.5 ft
30			14.6		31.5-32 ft: Silt content increasing		
32	-32.00	10			32-36.7 ft: Gray, clay, with trace to some fine sand, trace shell fragments	31.9'	
34			4.1				32 to 36.7 ft: slight odor, no visual
36	-36.70						
			8.5		36.7-43 ft: Gray, fine to coarse sand	37'	36.7 to 43 ft: slight to moderate odors, no visual
38			13.5		36.7-37ft: trace silt	38.9'	
					37-43 ft: wood fragments		
40							

B.S. — Filter Sand — B.S.

DRAFT

MTR

Injectors: S9-6 A, B, and C

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not Measured**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not Measured**
Date Started: **2/24/2005**	***Northing:*** **Not Measured**
Date Completed: **2/24/2005**	***Easting:*** **Not Measured**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **47**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
42	-43.00	NR	6.8				
44	-45.00		8.2		43-45 ft: Gray-brown, very fine to fine sand, with some silt to and silt	43.9' Filter Sand	43 to 45 ft: slight to moderate odors, no visual
46	-47.00		0		45-47 ft: Dark gray, clay, trace silt 46 ft: Sand lens 0.2 ft thick		45 to 47 ft: "ammonia" odor, no visual
48						Total boring depth: 47 ft B.S.= Barrier sand NR= Not recorded	
50							
52							
54							
56							
58							
60							

DRAFT

MTR

SECTOR 12

LUDEN'S

TABLE 3

INJECTOR BORING SOIL ANALYTICAL RESULTS
SECTOR 12 - LUDEN'S

South Carolina Electric Gas Co. - CPA Site
Charleston, South Carolina

	Injector Boring	S12-1			S12-2		S12-5	
	Depth Interval (ft.)	26-31	33-38	43-38	22-27	31-36	24-29	31-36
	Sand Unit	Middle Sand (1)	Middle Sand	Dup. of 33-38	Middle Sand (1)	Middle Sand	Middle Sand (1)	Middle Sand
Parameter	Date	2/21/2005	2/21/2005	2/21/2005	2/21/2005	2/21/2005	2/23/2005	2/23/2005
Volatiles (BTEX)	**Units**							
Benzene	ug/kg	310 J	130 J	180 J	22,000	5,400	140	5.1 U
Ethylbenzene	ug/kg	2,200	170 J	240 J	170,000	45,000	340 J	5.1 U
Toluene	ug/kg	5.6 U	5.1 U	5.6 U	59,000	2,400 U	71	5.1 U
Total Xylenes	ug/kg	56	28 J	44 J	281,000	21,100	363	5.1 U
Total BTEX	**ug/kg**	**2,566**	**328**	**464**	**532,000**	**71,500**	**914**	**5.1 U**
	mg/kg	**2.566**	**0.328**	**0.464**	**532.00**	**71.50**	**0.914**	**0.0051**
Semi-Volatiles								
2,4-Dimethylphenol	ug/kg	240 U	210 U	210 U	250 U	2,100 U	240 U	220 U
2-Methylnaphthalene	ug/kg	240 U	210 U	210 U	3,800	540,000	490	220 U
Acenaphthene	ug/kg	570	210 U	210 U	4,100	44,000	850	220 U
Acenaphthylene	ug/kg	240 U	210 U	210 U	2,500	130,000	240 U	220 U
Anthracene	ug/kg	240 U	210 U	210 U	3,500	66,000	240 U	220 U
Benzo(a)anthracene	ug/kg	240 U	210 U	210 U	3,000	46,000	240 U	220 U
Benzo(a)pyrene	ug/kg	240 U	210 U	210 U	2,200	41,000	240 U	220 U
Benzo(b)fluoranthene	ug/kg	240 U	210 U	210 U	2,400	41,000	240 U	220 U
Benzo(g,h,i)perylene	ug/kg	240 U	210 U	210 U	430	5,500	240 U	220 U
Benzo(k)fluoranthene	ug/kg	240 U	210 U	210 U	900	15,000	240 U	220 U
Carbazole	ug/kg	240 U	210 U	210 U	440	17,000	410	220 U
Chrysene	ug/kg	240 U	210 U	210 U	2,700	45,000	240 U	220 U
Dibenz(a,h)anthracene	ug/kg	240 U	210 U	210 U	250 U	4,600	240 U	220 U
Dibenzofuran	ug/kg	240 U	210 U	210 U	1,400	30,000	500	220 U
Fluoranthene	ug/kg	240 U	210 U	210 U	4,600	90,000	540	220 U
Fluorene	ug/kg	240 U	210 U	210 U	4,400	110,000	590	220 U
Indeno(1,2,3-cd)pyrene	ug/kg	240 U	210 U	210 U	420	12,000	240 U	220 U
Naphthalene	ug/kg	1,900	210 U	210 U	2,400	940,000	790	220 U
Phenanthrene	ug/kg	240 U	210 U	210 U	16,000	220,000	950	220 U
Pyrene	ug/kg	240 U	210 U	210 U	4,500	92,000	360 J	220 UJ
Total Semi-Volatiles	**ug/kg**	**2,470**	**210 U**	**210 U**	**59,690**	**2,489,100**	**5,480**	**220 U**
	mg/kg	**2.47**	**0.21 U**	**0.21 U**	**59.69**	**2,489.10**	**5.48**	**0.22**
Conventional								
Percent Moisture	wt %	30	19	19	32	18	28	22

Notes:
(1): Middle Sand (Upper)
U - Not detected above the reporting limit

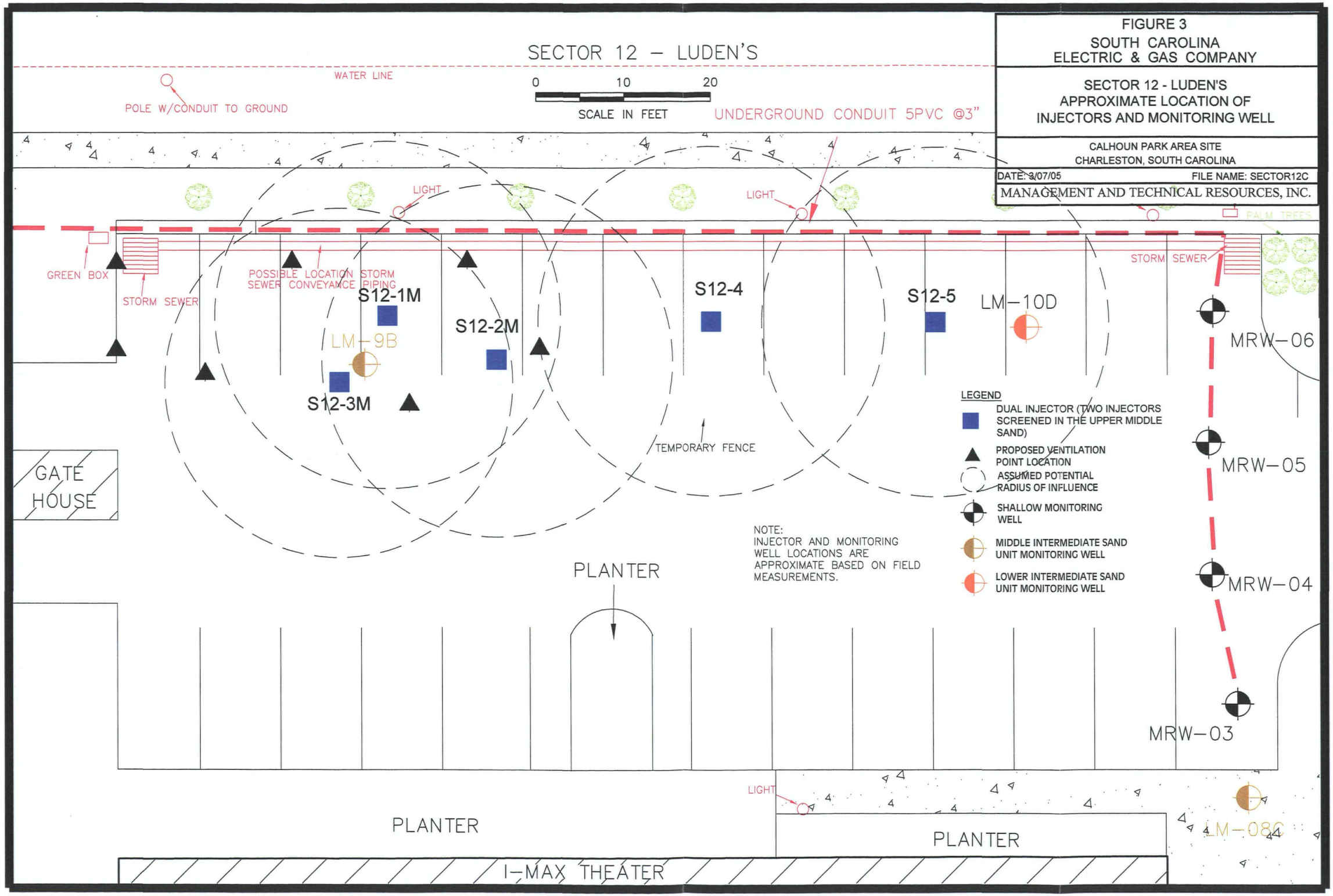


FIGURE 3
SOUTH CAROLINA
ELECTRIC & GAS COMPANY

SECTOR 12 - LUDEN'S
APPROXIMATE LOCATION OF
INJECTORS AND MONITORING WELL

CALHOUN PARK AREA SITE
CHARLESTON, SOUTH CAROLINA

DATE: 3/07/05 FILE NAME: SECTOR12C

MANAGEMENT AND TECHNICAL RESOURCES, INC.

Monitoring Well: S12-1

Client: SCANA Services, nc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (Luden's)	*Top of Casing Elevation (Ft.):*
Date Started: 2-21-2005	*Northing:*
Date Completed: 2-21-2005	*Easting:*
Logged by: Mark Ferlin	*Total Well Depth (Ft.):* 38
Drilled by: Prosonic	*Drilling Method:*

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface		
2							
4							
6							
8							
10							
12							
14							
16							
18							
20							

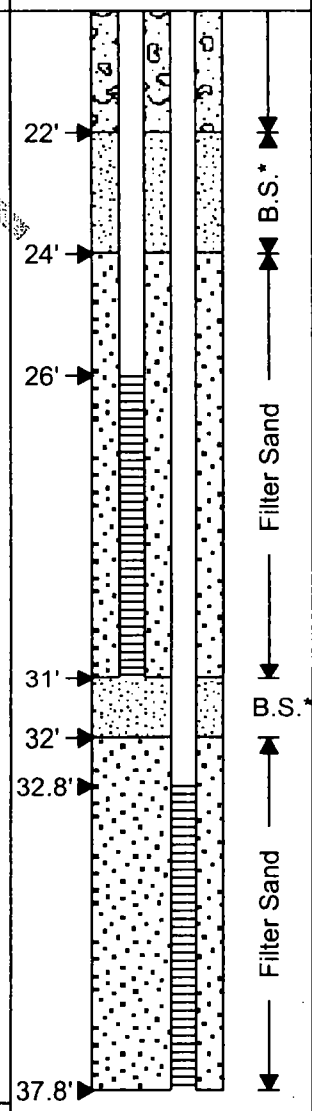
DRAFT

MTR

Monitoring Well: S12-1

Client: SCANA Services, nc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (Luden's)	*Top of Casing Elevation (Ft.):*
Date Started: 2-21-2005	*Northing:*
Date Completed: 2-21-2005	*Easting:*
Logged by: Mark Ferlin	*Total Well Depth (Ft.):* 38
Drilled by: Prosonic	*Drilling Method:*

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
22						22'	
24						24'	
26						26'	
28							
30							
31'							
32						32'	
32.8'							
34							
36							
38	-38.00					37.8'	
40							



Well Bottom 38'

*B.S.= Barrier Sand

DRAFT

MTR

Monitoring Well: S12-1

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (Luden's)**	***Top of Casing Elevation (Ft.):***
Date Started: **2-21-2005**	***Northing:***
Date Completed: **2-21-2005**	***Easting:***
Logged by: **MArk Ferlin**	***Total Well Depth (Ft.):*** **38**
Drilled by: **Prosonic**	***Drilling Method:***

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface		
					Brown, tan, black fill, cinders, brick fragments, and shells, from 9.3 to 9.5 ft bgs fine sand with residual DNAPL	0.5' Grout	From 0 to 7 ft bgs: no odor, no visual From 9.3 to 9.5 ft bgs: strong odor
	-9.50				Gray clay, very sticky, wood fragments from 17 to 19 ft bgs, blebs of DNAPL very minor		From 9.5 to 17 ft bgs: moderate odor, no visual

0 2 4 6 8 10 12 14 16 18 20

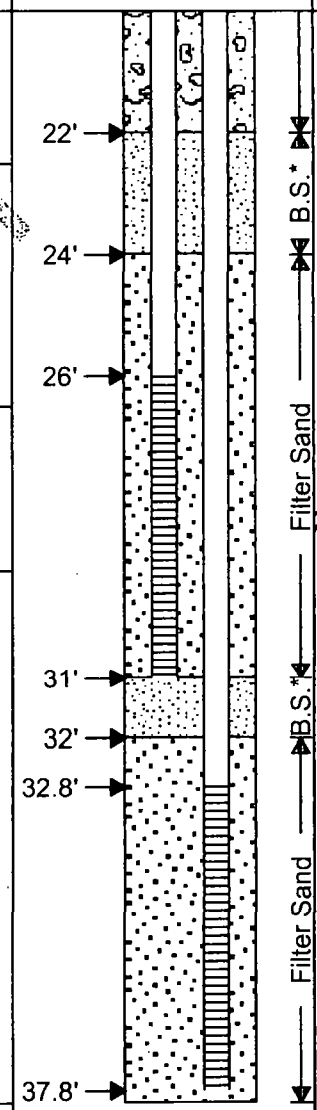
DRAFT

MTR

Monitoring Well: S12-1

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (Luden's)**	***Top of Casing Elevation (Ft.):***
Date Started: **2-21-2005**	***Northing:***
Date Completed: **2-21-2005**	***Easting:***
Logged by: **MArk Ferlin**	***Total Well Depth (Ft.):*** **38**
Drilled by: **Prosonic**	***Drilling Method:***

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
22	-22.50					22'	
24					Gray clay, fine sand, and silt, clay content decreasing to 26 ft bgs	24'	From 22.5 to 26.5: no odor, no visual
26	-26.50					26'	
28	-29.20				Gray, fine to medium sand and shell fragments, with some silt		From 26.5 to 29.2 ft bgs: very slight odor, no visual
30					Gray, fine to coarse sand, with trace shell fragments	31'	
32						32'	
34						32.8'	From 29.2 to 36.5 ft bgs: slight odor, no visual
36							
38	-38.00					37.8'	From 36.5 to 38 ft bgs: no odor, no visual
40							



Well Bottom 38'

*B.S.= Barrier Sand

DRAFT

MTR

Injectors: S12-1 A and B

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not surveyed**
Site Location: **CPA Site; Charleston S.C.**	***Top of Casing Elevation (Ft.):*** **Not surveyed**
Date Started: **2/21/2005**	***Northing:*** **Not surveyed**
Date Completed: **2/21/2005**	***Easting:*** **Not surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **38**
Drilled by: **Prosonic Corcoration**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
0	0.00				Ground Surface		
2					0-9.5 ft: Brown, tan, black fill, cinders, brick fragments,wood, and shells	0.54	
4		3.4					0 to 7 ft: no odor, no visual
6							
8							
	-9.50						9.3 to 9.5 ft: strong odor, residual DNAPL
10					9.5-22.5 ft: Gray, soft, clay		
12		4.0					
14							9.5 to 17 ft: moderate odor, no visual
16							
					17-19 ft: Palm tree fragments		
18							17 to 19 ft: minor DNAPL blebs
20							

Cement/Bentonite Grout

DRAFT

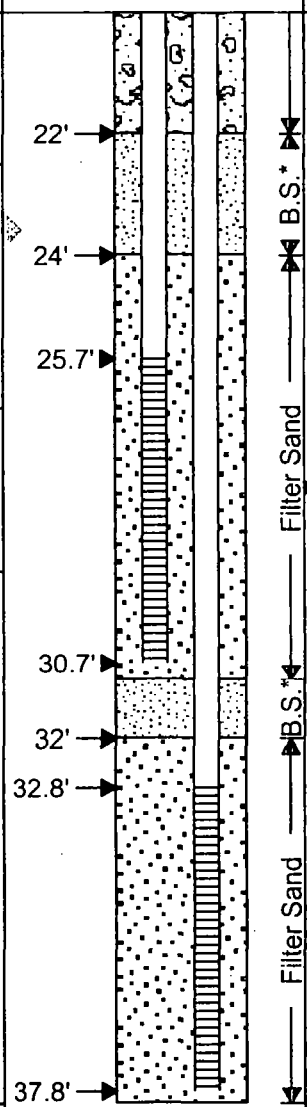
MTR

Injectors: S12-1 A and B

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not surveyed**
Site Location: **CPA Site; Charleston S.C.**	***Top of Casing Elevation (Ft.):*** **Not surveyed**
Date Started: **2/21/2005**	***Northing:*** **Not surveyed**
Date Completed: **2/21/2005**	***Easting:*** **Not surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **38**
Drilled by: **Prosonic Corcoration**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
22	-22.50	NR				
24					22.5-26.5 ft: Gray clay, fine sand, and silt	22.5 to 26.5 ft: no odor, no visual
26	-26.50				26 ft: Clay content decreasing	
28	-29.20				26.5-29.2 ft: Gray, fine to medium sand and shell fragments, with some silt	26.5 to 29.2 ft: no to very slight odor, no visual
30					29.2-38 ft: Gray, fine to coarse sand, with trace shell fragments	
32		NR				29.2 to 36.5 ft: slight odor, no visual
34						
36						36.5 to 38 ft: no odor, no visual
38	-38.00					
40						

Injector Diagram



Total boring depth: 38 ft

*B.S.= Barrier Sand
NR= Not recorded

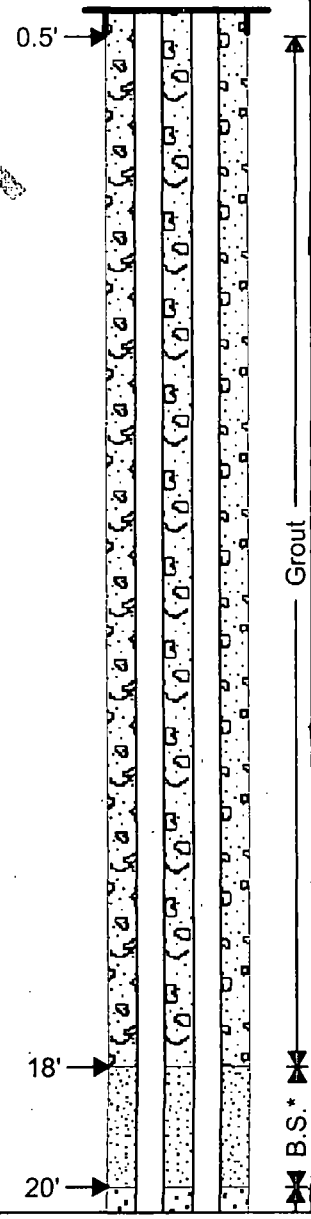
DRAFT

MTR

Monitoring Well: S12-2

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (Luden's)**	***Top of Casing Elevation (Ft.):***
Date Started: **2-21-2005**	***Northing:***
Date Completed: **2-21-2005**	***Easting:***
Logged by: **MArk Ferlin**	***Total Well Depth (Ft.):*** **38**
Drilled by: **Prosonic**	***Drilling Method:***

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface		
2							
4							From 0 to 7 ft bgs: no odor, no visual
6							
8							
	-9.50						
10					Gray clay, with wood fragments at 13 to 14 ft bgs, shell fragments at 16 to 17 ft bgs, sheens and trace DNAPL blebs at 17 to 20 ft bgs		
12							From 9.5 to 14 ft bgs: moderate odor, no visual
14							
16							
18							
20	-20.00						From 17 to 22.1 ft bgs: moderate to strong odor



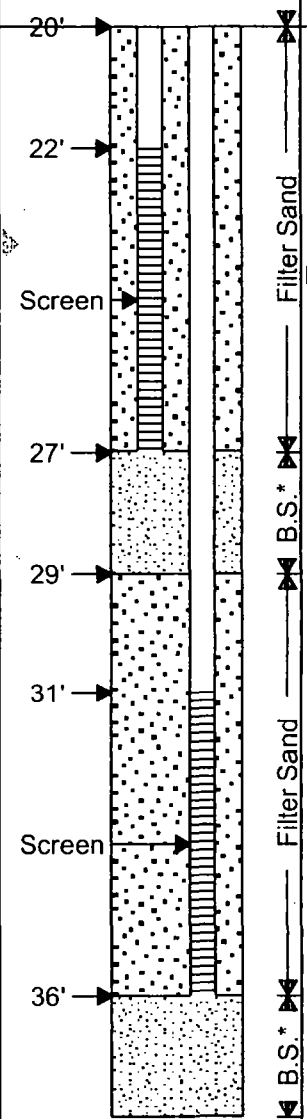
DRAFT

MTR

Monitoring Well: S12-2

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (Luden's)**	***Top of Casing Elevation (Ft.):***
Date Started: **2-21-2005**	***Northing:***
Date Completed: **2-21-2005**	***Easting:***
Logged by: **MArk Ferlin**	***Total Well Depth (Ft.):*** **38**
Drilled by: **Prosonic**	***Drilling Method:***

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
					Gray clay, with some sand, trace DNAPL blebs		
22	-22.10				Gray fine sand, with some silt and clay, DNAPL throughout the interval, but decreases with depth to trace amounts		From 21.1 to 27 ft bgs: strong decreasing to slight odor
24							
26	-27.00				No log recorded, samples taken from 31 to 36 ft bgs		
28							
30							
32							
34							
36							
38	-38.00						
40							



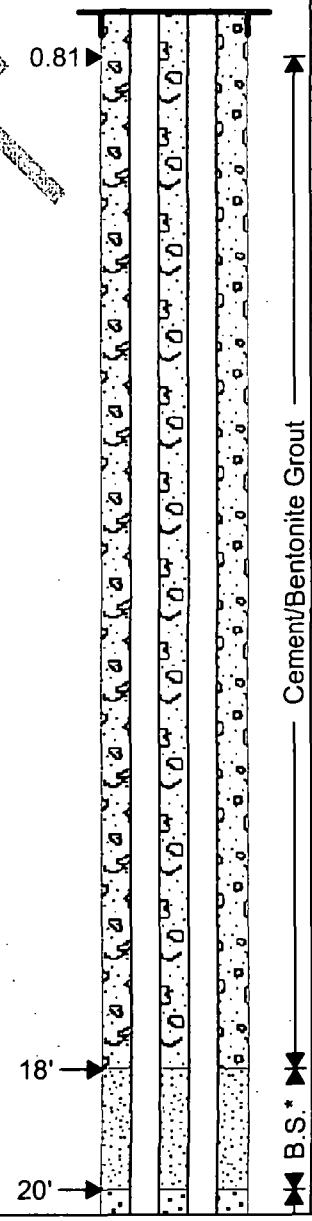
DRAFT

MTR

Injectors: S12-2 A and B

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not surveyed**
Date Started: **2/21/2005**	***Northing:*** **Not surveyed**
Date Completed: **2/21/2005**	***Easting:*** **Not surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **38**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
		3.3			0-9.5 ft: Fill (cinders, gravel, brick fragments)	0 to 7 ft: no odor, no visual
					9.5 ft: Due to limited recovery, depth selected as lithologic contact	7.5 to 8.5 ft: DNAPL blebs and sheens
	-9.50					8.5 to 9.5 ft: residual DNAPL
		7.3			9.5-20 ft: Gray clay	9.5 to 14 ft: moderate odor, no visual
					13-14 ft: Wood fragments	
					16-17 ft: Shell fragments	14 to 17 ft: slight odor, no visual
	-20.00					17 to 20 ft: moderate to strong odor, sheens, trace DNAPL blebs



DRAFT

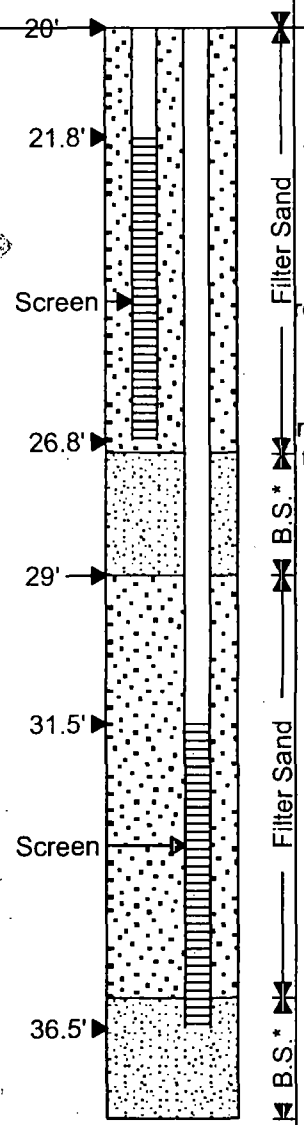
MTR

Injectors: S12-2 A and B

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not surveyed**
Date Started: **2/21/2005**	***Northing:*** **Not surveyed**
Date Completed: **2/21/2005**	***Easting:*** **Not surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **38**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
					20-22.1 ft: Gray clay, with some sand	20 to 22.1 ft: moderate to strong odor, trace DNAPL
22	-22.10	10			22.1-27 ft: Gray fine sand, with some silt and clay	21.1 to 24.1 ft: moderate to strong odor, residual DNAPL
24, 26	-27.00					24.1 to 27 ft: slight to moderate odor, trace amounts of residual DNAPL
28, 30, 32, 34, 36		NM			27-38 ft: Interval was inadvertently not logged	
38	-38.00					
40						

Injector Diagram



Total boring depth: 38 ft

*B.S.= Barrier Sand
NM= Not measured

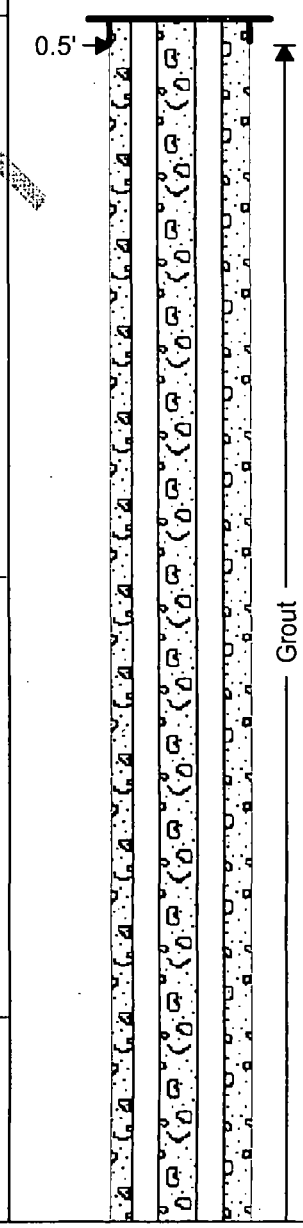
DRAFT

MTR

Monitoring Well: S12-3

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (Luden's)**	***Top of Casing Elevation (Ft.):***
Date Started: **2-21-2005**	***Northing:***
Date Completed: **2-21-2005**	***Easting:***
Logged by: **Mark Ferlin**	***Total Well Depth (Ft.):*** **38**
Drilled by: **Prosonic**	***Drilling Method:***

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
					Fill, gravel, brick fragments, cinders	From 0 to 7 ft bgs: no odor, no visual
	-9.50				Gray clay, with some wood fragments, some old weathered tar at 14 ft bgs	From 7 to 9.5 ft bgs: strong odor, residual DNAPL
	-17.00		3.4		Gray clay, with a trace of sand, thin residual DNAPL at 19.5 and 23.5 ft bgs	From 9.5 to 17 ft bgs: slight odor, no visual



DRAFT

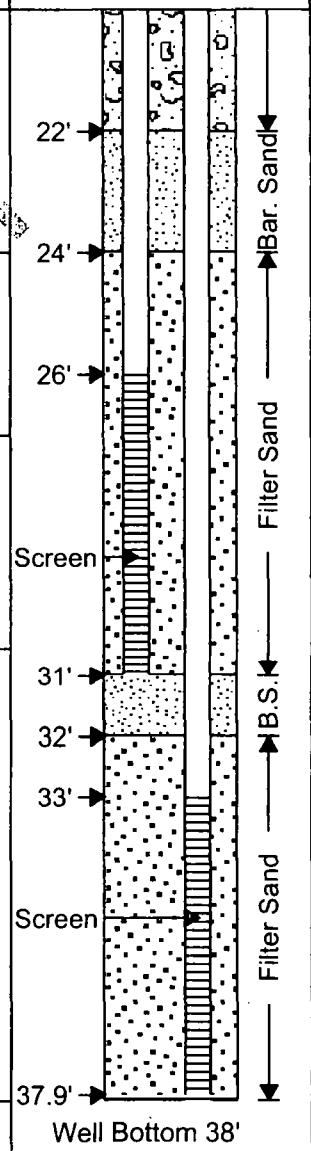
MTR

Monitoring Well: S12-3

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (Luden's)**	***Top of Casing Elevation (Ft.):***
Date Started: **2-21-2005**	***Northing:***
Date Completed: **2-21-2005**	***Easting:***
Logged by: **Mark Ferlin**	***Total Well Depth (Ft.):*** **38**
Drilled by: **Prosonic**	***Drilling Method:***

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
22			3.0			
24	-24.00		2.7		Gray clay, with some fine sand, DNAPL blebs at 25.5 ft bgs	From 24 to 27 ft bgs: slight to moderate odor
26	-27.00		0			
28			0.7		Gray, fine to coarse sand and silt, shell fragments from 29.5 to 30.5 ft bgs, some sheens at 27 to 28 ft bgs	From 27 to 30.5: slight to moderate odor
30	-30.50					
32			3.7		Gray, fine to coarse sand, with trace shell fragments	
34			4.1			From 30.5 to 36.5: strong to slight odor, no visual
36			0			
38	-38.00					From 36.5 to 38: no odor, no visual
40						

Well Diagram



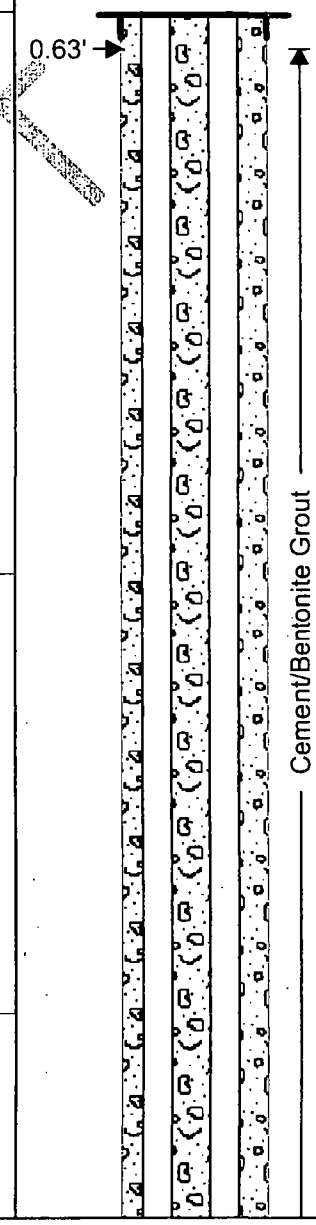
DRAFT

MTR

Injectors: S12-3 A and B

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not surveyed**
Date Started: **2/21/2005**	***Northing:*** **Not surveyed**
Date Completed: **2/21/2005**	***Easting:*** **Not surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **38**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
0	0.00				Ground Surface	
		1.9			0-9.5 ft: Fill (gravel, brick fragments, cinders), sand and clay	0 to 7 ft: no odor, no visual
	-9.50	7.5			9.5-17 ft: Gray, clay, with some wood fragments	7 to 9.5 ft: strong odor,blebs to residual DNAPL 9.5 to 17 ft: slight odor, weathered tar at 14 ft
	-17.00		3.4		17-24 ft: Gray, clay, with a trace of sand	



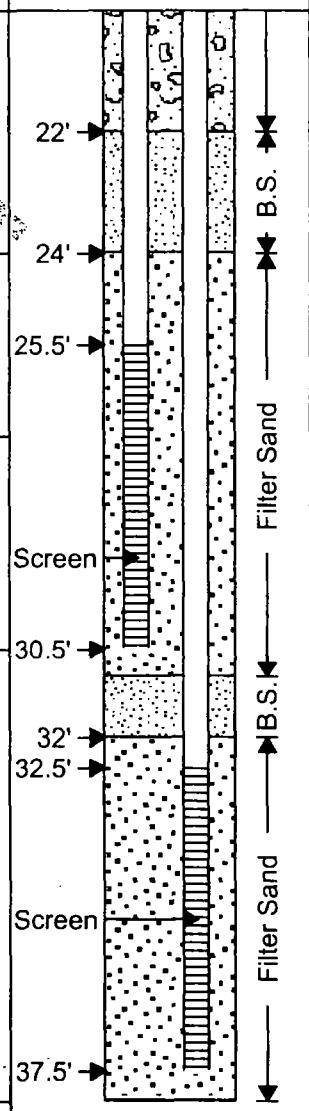
DRAFT

MTR

Injectors: S12-3 A and B

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not surveyed**
Date Started: **2/21/2005**	***Northing:*** **Not surveyed**
Date Completed: **2/21/2005**	***Easting:*** **Not surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **38**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
22		NM	3.0			17-24 ft: residual DNAPL at 19.5, at 32.5 ft ~ 0.5 ft thick blebs and residual DNAPL
24	-24.00		2.7		24-27 ft: Gray clay and fine sand, to some sand	24 to 27 ft: slight to moderate odor, DNAPL blebs at 25.5 ft
26	-27.00		0		27-30.5 ft: Gray, fine sand and silt, to some silt	27 to 30.5 ft: slight to moderate odor, sheens at 27 to 28 ft
28			0.7		29.5 to 30.5 ft: shell fragments and some clay	
30	-30.50				30.5-38 ft: Gray, fine to coarse sand, with trace shell fragments	
32		NM	3.7			30.5 to 36.5 ft: slight to strong odor, no visual
34			4.1			
36			0			36.5 to 38 ft: no odor, no visual
38	-38.00					
40						



Total boring depth: 38 ft

*B.S.= Barrier sand
NM= Not measured

DRAFT

MTR

Monitoring Well: S12-4

Client: SCANA Services, Inc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (Ludens)	*Top of Casing Elevation (Ft.):*
Date Started: 2/23/2005	*Northing:*
Date Completed: 2/23/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 37
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface		
2					Drilled through, no log taken		
4							
6							
8							
10							
12							
14							
16							
	-17.00						
18			8.2		Gray clay, with trace fine sand, palm fragments at 17.5 ft bgs, sheen from 17 to 18.5 ft bgs, residual DNAPL blebs occuring from 19.7 to 22.3 ft bgs, dry tar at 20.5 ft bgs		From 17 to 23.1 ft bgs: moderate to strong odor
20						20' Grout	

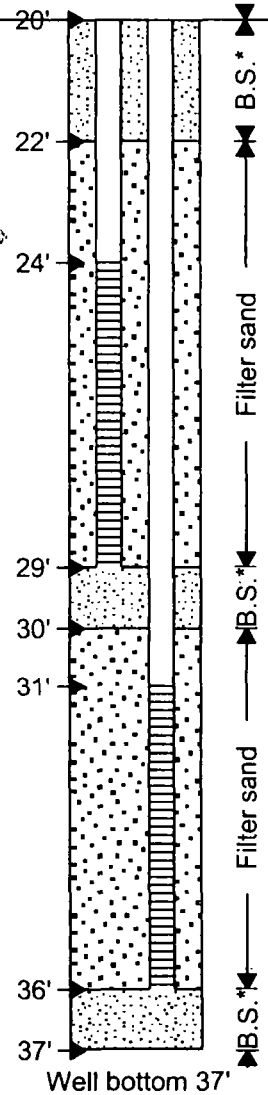
DRAFT

MTR

Monitoring Well: S12-4

Client: SCANA Services, Inc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (Ludens)	*Top of Casing Elevation (Ft.):*
Date Started: 2/23/2005	*Northing:*
Date Completed: 2/23/2005	*Easting:*
Logged by: M. Ferlin	*Total Well Depth (Ft.):* 37
Drilled by: Prosonic	*Drilling Method:* Sonic

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
			5.4				
22	-23.10						
24			1.4		Fine sand, with some silt, trace shell fragments		
26			0.6				From 23.1 to 28.1 ft bgs: moderate to strong odor, no visual
28	-28.10		1.5		Fine to medium sand, with trace shell fragments throughout the interval		
30			2.5				
32							From 28.1 to 35 ft bgs: slight to moderate odor, no visual
34			0.9				
36	-37.00		0.6				From 35 to 37 ft bgs: no odor, no visual
38							
40							



DRAFT

MTR

Injectors: S12-4 A and B

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not surveyed**
Date Started: **2/23/2005**	***Northing:*** **Not surveyed**
Date Completed: **2/23/2005**	***Easting:*** **Not surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **37**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
0	0.00				Ground Surface		
2, 4, 6, 8, 10, 12, 14, 16					0-17 ft: Drilled through interval	0.73' ▶ Cement/Bentonite Grout	
	-17.00						
18			8.2		17-23.1 ft: Gray clay, with trace fine sand 17.5 ft: Palm branches		17 to19 ft: moderate to strong odor, sheen from 17 to 18.5 ft
20						20' ▶	

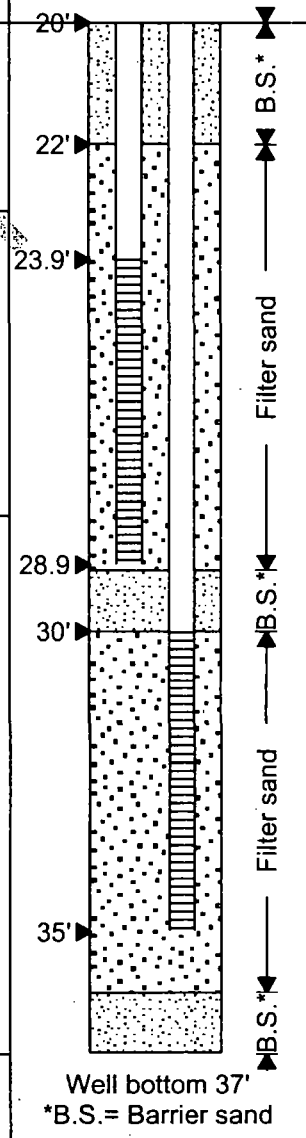
DRAFT

MTR

Injectors: S12-4 A and B

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not surveyed**
Date Started: **2/23/2005**	***Northing:*** **Not surveyed**
Date Completed: **2/23/2005**	***Easting:*** **Not surveyed**
Logged by: **M. Ferlin**	***Total Boring Depth (Ft.):*** **37**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Observations
22	-23.10	10	5.4			19 to 22.3 ft: DNAPL blebs, at 20.5 ft, weathered tar
24			1.4		23.1-28.1 ft: Fine sand, with some silt, trace shell fragments	23.1 to 28.1 ft: moderate to strong odor, no visual
26			0.6			
28	-28.10		1.5		28.1-37 ft: Fine to coarse sand	
30			2.5		Shell fragments throughout the interval	28.1 to 35 ft: slight to moderate odor, no visual
32		10				
34			0.9			
36	-37.00		0.6			35 to 37 ft: no to very slight odor, no visual
38						
40						



Well bottom 37'
*B.S.= Barrier sand

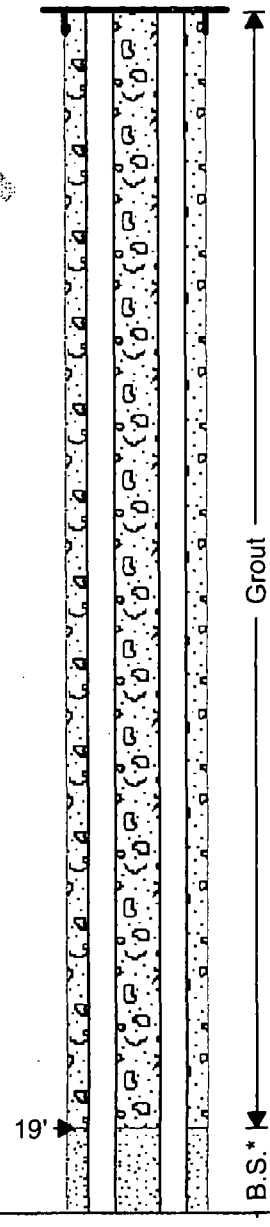
DRAFT

MTR

Monitoring Well: S12-5

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):***
Site Location: **CPA Site (Luden's)**	***Top of Casing Elevation (Ft.):***
Date Started: **2-22-2005**	***Northing:***
Date Completed: **2-22-2005**	***Easting:***
Logged by: **Mark Ferlin**	***Total Well Depth (Ft.):*** **37**
Drilled by: **Prosonic**	***Drilling Method:***

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symboi	Lithologic Description	Well Diagram	Observations
0	0.00				Ground Surface		
					Drilled through, no log taken		
2							
4							
6							
8							
10							
12							
14							
16							
	-17.00				Rock plugged core of drill, no log taken		
18							
20							



DRAFT

MTR

Monitoring Well: S12-5

Client: SCANA Services, Inc.	*Ground Elevation (Ft.):*
Site Location: CPA Site (Luden's)	*Top of Casing Elevation (Ft.):*
Date Started: 2-22-2005	*Northing:*
Date Completed: 2-22-2005	*Easting:*
Logged by: Mark Ferlin	*Total Well Depth (Ft.):* 37
Drilled by: Prosonic	*Drilling Method:*

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Well Diagram	Observations
22, 24, 26						21'	
	-27.00					27'	
28					Gray, fine sand, with some shell fragments and silt		From 27 to 29.7 ft bgs: moderate to strong odor, no visual
	-29.70					29.5'	
30, 32, 34					Gray, fine to coarse sand, with trace shell fragments, residual DNAPL staining 0.1 ft thick at 35 ft bgs		From 29.7 to 37 ft bgs: moderate to strong odor
36	-37.00					36'	
38, 40						Well Bottom 37'	

Filter sand
B.S.*
Filter sand
B.S.*

*B.S.= Barrier sand

DRAFT

MTR

Injectors: S12-5 A and B

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not surveyed**
Date Started: **2/22/2005**	***Northing:*** **Not surveyed**
Date Completed: **2/22/2005**	***Easting:*** **Not surveyed**
Logged by: **S. Pesch**	***Total Boring Depth (Ft.):*** **37**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
0	0.00				Ground Surface		
					0-17 ft:Drilled through interval	0.71' Cement/ Bentonite Grout B.S.*	
2							
4							
6							
8							
10							
12							
14							
16	-17.00						
					17-27 ft: Rock plugged core barrel, no sample retreived		
18						19'	
20							

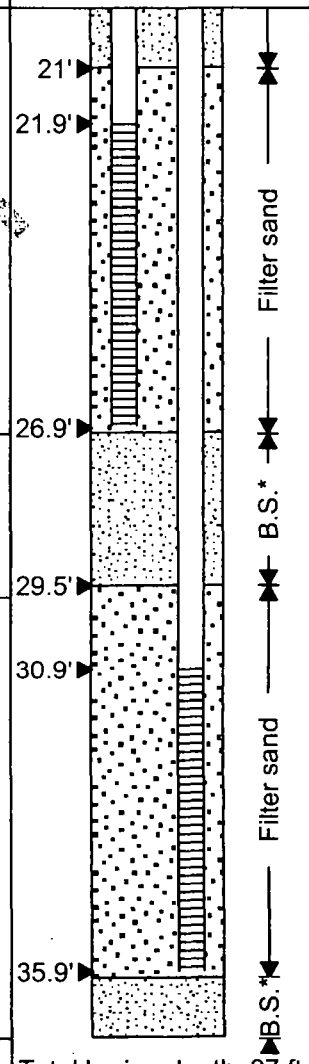
DRAFT

MTR

Injectors: S12-5 A and B

Client: **SCANA Services, Inc.**	***Ground Elevation (Ft.):*** **Not surveyed**
Site Location: **CPA Site; Charleston, S.C.**	***Top of Casing Elevation (Ft.):*** **Not surveyed**
Date Started: **2/22/2005**	***Northing:*** **Not surveyed**
Date Completed: **2/22/2005**	***Easting:*** **Not surveyed**
Logged by: **S. Pesch**	***Total Boring Depth (Ft.):*** **37**
Drilled by: **Prosonic Corporation**	***Drilling Method:*** **Rotosonic**

Depth (feet)	Elevation	Recovery (feet/feet)	Maximum PID Screen (ppm)	Symbol	Lithologic Description	Injector Diagram	Observations
22, 24, 26	-27.00	0					
28	-29.70	10	2.5		27-29.7 ft: Gray, fine sand, with some silt, shell fragments		27 to 29.7 ft: moderate to strong odor, no visual
30, 32, 34, 36	-37.00		4.5 14.3 0		29.7-37 ft: Gray, fine to coarse sand, with trace shell fragments		29.7 to 37 ft: moderate to strong odor, residual DNAPL staining ~0.1 ft thick at 35 ft
38, 40							



Total boring depth: 37 ft
*B.S.= Barrier sand

DRAFT

MTR