

Project Name : Job Number

MACTEC

SCE&G COL : 6234-06-3534

ROCK LOG - Boring No. B-335

Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Adjacent to Power Block	Total Depth 85 feet
Drilling Contractor and Rig MACTEC/Oglesby/219907 / CME 75	Elevation at Boring 426.3 feet	Ground Water Depth 28 feet
Casing Size and Depth 3.5 / 40 feet	Length of Core Barrel and Bit	No. of Core Boxes
	Borehole Inclination 0	Logged by B. Sharp
		Date Started 7/25/06
		Date Completed 7/26/06

Reviewed by / Date M. Cooke 8/4/06

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
40				SW to F	R3		AMPHIBOLITE SCHIST; bluish black (10 B 2.5/1); fine grained; foliated; dip not apparent; feldspar, quartz, biotite, amphibole	Refusal on 7/25/06 at 40 ft
41	1	$\frac{2.0}{3.5}$	33	CW	R0			Very soft drilling from 41.5 to 43 ft
42								
43								
44								
45								
46	2	$\frac{5.0}{5.0}$	100	F	R3		GRANODIORITE; white (N 8/); gray (N 6/); black (N 2.5/); pink (2.5 YR 8/4); predominately coarse grained; massive; some pink K-spar in localized zones; few small xenoliths of bluish black (10 B 2.5/1); amphibolite schist; feldspar, quartz, diorite, amphibole	
47								
48								
49								
50								
51	3	$\frac{5.0}{5.0}$	100	F	R3		GRANODIORITE	
52								
53								
54								
55								End of day 7/25/06
56	4	$\frac{5.0}{5.0}$	100	F	R3			Begin day 7/26/06; water level at 28 ft
57								
58								
59								
60								
61	5	$\frac{5.0}{5.0}$	100	F	R3		GRANODIORITE	
62								
63								
64								
65								
66	6	$\frac{5.0}{5.0}$	100	F	R3 to R4			
67								
68								
69							SAA; trace pyrite	
70								
71	7	$\frac{5.0}{5.0}$	100	F	R3 to R4		GRANODIORITE	
72								
73								
74								
75								
76	8	$\frac{5.0}{5.0}$	100	F	R3 to R4			
77								
78								
79								
80								

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Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
80	9	6.5 6.5	100	F	R3 to R4		GRANODIORITE	
81								
82								
83								
84								
85								Boring terminated at 85 ft on 7/26/06
86								
87								
88								
89								
90								
91								
92								
93								
94								
95								
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								

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SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-336

Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Adjacent to Power Block	Total Depth 115 feet
Drilling Contractor and Rig MACTEC/Oglesby/219907 / CME 75	Elevation at Boring 424.3 feet	Ground Water Depth Depth to Bedrock 37 feet
Sampling Method Standard	Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 12
	Borehole Inclination 0	Logged by B. Sharp
		Date Started 8/2/06
		Date Completed 8/3/06

Reviewed by / Date M. Cooke 8/3/06

Reviewed by / Date

Clay Lane 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0											Residuum
1	SPT 1	4	14							SAND silty (SM); red (10 R 4/8); moist; medium dense; ~80% fine grained sand, ~20% fines, gravel and roots upper 2 inches; RESIDUUM	
2	SPT 2	4	16							SAA; dark red (10 R 3/6); strong brown (7.5 YR 5/8); trace black (N 2.5/); some white (N 8/); moist; loose; ~70% fine grained sand, ~30% fines; micaceous; mottled with some possible subhorizontal structure; trace black manganese staining; RESIDUUM/SAPROLITE	
3											
4	SPT 3	5	16							SILT sandy (ML); dark red (10 R 3/6); trace black (N 2.5/); moist; stiff; ~70% fines, 30% fine grained sand; low plasticity; micaceous; trace black manganese staining; RESIDUUM	
5											
6	SPT 4	8	18							SAND silty (SM); brown (10 YR 4/3); dark yellowish brown (10 YR 4/6); moist; medium dense; 60 to 70% fine grained sand; 30 to 40% fines; micaceous; massive relic texture; abundant white (N 8/) feldspar; SAPROLITE	Saprolite
7											
8											
9	SPT 5	2	12							SAA; loose	
10											
11	SPT 6	8	18							SAA; medium dense	
12											
13											
14	SPT 7	4	12							SILT sandy (ML); red (2.5 YR 4/8); olive brown (2.5 Y 4/4); moist; very stiff; 15 to 25% fine grained sand; 75 to 85% fines; micaceous; low plasticity; some black manganese staining; SAPROLITE	
15											
16											
17											
18											
19	SPT 8	3	14							SAND silty (SM); olive brown (2.5 Y 4/4); strong brown (7.5 YR 5/8); trace white (N 8/); moist; medium dense; 60% fine grained sand; 40% fines; micaceous; SAPROLITE	
20										SAA; strong brown (7.5 YR 5/8); brown (7.5 YR 4/3); red (10 R 4/8); moist; medium dense; 60 to 70% fine grained sand; 30 to 40% fines; micaceous; SAPROLITE	
21											
22											
23											
24	SPT 9	4	15							SAA with some black (N 2.5/) manganese staining	
25											
26											
27											
28											
29	SPT 10	6	13							SAA; olive brown (2.5 Y 4/3); trace black manganese staining; trace white (N 8/) feldspar	
30											
31											
32											
33											
34	SPT 11	4	17							SAA; yellowish brown (10 YR 5/8); strong brown (7.5 YR 5/8); moist; loose; 70% fine grained sand; 30% fines; SAPROLITE	
35											
36											
37										Refusal at 37 ft, see rock log	
38										PARTIALLY WEATHERED ROCK bluish black (10 B 2.5/1)	
39											
40											

Project Name : Job Number

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SCE&G COL : 6234-06-3534

ROCK LOG - Boring No. B-336

Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Adjacent to Power Block	Total Depth 115 feet
Drilling Contractor and Rig MACTEC/Oglesby/219907 / CME 75	Elevation at Boring 424.3 feet	Ground Water Depth
Casing Size and Depth 3.5 / 37 feet	Length of Core Barrel and Bit	No. of Core Boxes
	Borehole Inclination 0	Logged by B. Sharp
		Date Completed 8/3/06

Reviewed by / Date M. Cooke 8/3/06

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
37				CW to R0				
38				HW R1				
39	1	0.3	0	RS to R0			SAPROLITE with lenses of fine to medium grained bluish black (10 B 2.5/1) amphibolite schist	Refusal at 37 ft on 8/2/06; see rock log
40		5.5					SAPROLITE or PARTIALLY WEATHERED ROCK No recovery	
41								
42								
43								
44	2	0.0	0	RS to R0				
45		5.0						
46								
47								
48				HW R2				
49	3	1.3	0	RS to R0			MIGMATITE; bluish black (10 B 2.5/1); gray (N 6/); white (N 8/); black (N 2.5/); medium grained; massive granodiorite with irregular flow banding; few xenoliths of amphibolite schist; feldspar, quartz, biotite, amphibole	
50		5.0					SAPROLITE or PARTIALLY WEATHERED ROCK zone	
51								
52								
53								
54	4	0.6	10	RS to R0				
55		5.0						
56								
57				MW R2				
58				F R3				
59	5	5.0	100	F R3			MIGMATITE; bluish black (10 B 2.5/1); gray (N 6/); white (N 8/); black (N 2.5/); medium grained; massive granodiorite with irregular flow banding; few xenoliths of amphibolite schist; feldspar, quartz, biotite, amphibole	Sound rock
60		5.0						
61								
62								
63							SAA; contains a zone of fine to medium grained well foliated biotite gneiss	
64	6	5.0	100	F R3				
65		5.0						
66								
67								
68								
69	7	5.0	100	F R3				
70		5.0						
71								
72								
73								
74	8	5.0	100	F R3			Large xenolith of fine to medium grained; bluish black amphibolite schist from 72.8 to 75.3 ft	
75		5.0						
76								
77								

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ROCK LOG - Boring No. B-336

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
77								
78								
79								
80	9	5.0 5.0	100	F	R3 to R4			
81								
82								
83								
84								
85	10	5.0 5.0	100	F	R3 to R4			SAA; some pyrite, some epidote due to alteration of feldspar; few zones of distinct gneissic flow banding; few large xenoliths of amphibolite schist
86								
87								
88								
89								
90	11	5.0 5.0	100	F	R3 to R4			SAA; small xenoliths of amphibolite schist; no pyrite or epidote
91								
92								
93								Gray felsic dike 91.7 to 92 ft contacts dipping 25 to 30°
94								
95	12	5.0 5.0	100	F	R3 to R4			
96								
97								
98								
99								
100	13	5.0 5.0	99	F	R3 to R4			
101								
102								
103								
104								SAA; but predominantly very dark bluish gray (10 B 3/1); medium grained; massive; quartz diorite
105	14	5.0 5.0	100	F	R3 to R4			
106								
107								
108								
109								
110								
111	15	7.5 7.5	100	F	R3			HORNBLLENDE GNEISS MIGMATITE; bluish black (10 B 3/1); greenish black (5 G 2.5/1); gray (N 6/); white (N 8/); black (N 2.5/); fine to medium grained; hornblende gneiss with some biotite gneiss; with zones of massive granodiorite and zones of irregular flow banding; variable dipping angles of foliation (0 to 60°); feldspar, quartz, amphibole, biotite
112								
113								
114								
115								
116								Boring terminated on 8/3/06 at 115 ft
117								

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-401Type and Diameter of Boring
Mud Rotary / 3 7/8 inch/NQBoring Location
Cooling TowerTotal Depth
120 feetDrilling Contractor and Rig
Gregg/Smith/Burnette/311025 / CME 55Elevation at Boring
404 feetGround Water Depth
4 feetDepth to Bedrock
64 feetSampling Method
StandardSample Driving Hammer/Drop
140 lbs / 30 inchesNo. of Samples
17Date Started
4/14/06Borehole Inclination
0Logged by
J. HarmonDate Completed
4/19/06

Reviewed by / Date M. Cooke 4/24/06

Reviewed by / Date

Clay Same 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0											
1		SPT 1	4	18					ML	SILT sandy (ML); moderate reddish brown (10 R 4/6); damp; stiff; fine sand ~30%; low plasticity; FILL	Fill
2		SPT 2	8	13					ML	SILT sandy (ML); moderate reddish brown (10 YR 4/6); moist; very stiff; fine sand ~40%; low plasticity; RESIDUUM	Residuum
3											
4		SPT 3	2	18					ML	SILT sandy (ML); moderate red (5 R 4/6); moist; very stiff; fine sand ~10%; low plasticity; slightly micaceous; RESIDUUM	
5											
6		SPT 4	4	13					ML	SILT sandy (ML); moderate reddish brown (10 R 4/6); moist; stiff; fine sand ~40%; low plasticity; slightly micaceous; RESIDUUM	
7											
8											
9		SPT 5	7	14					ML	SILT sandy (ML); light brown (5 YR 5/6); moist; stiff; fine sand ~40%; low plasticity; slightly micaceous; SAPROLITE	Saprolite
10											
11		SPT 6	6	18						SILT (ML); light brown (5 YR 5/6); moist; stiff; fine sand ~5%; low plasticity; micaceous; banded; SAPROLITE	
12											
13											
14		SPT 7	2	14						SAA	
15											
16											
17											
18											
19		SPT 8	4	15						SAA	
20											
21											
22											
23											
24		SPT 9	4	18						SAA; ~10% fine sand	
25											
26											
27		SPT 9A	4	16						SILT (ML); moderate reddish brown (10 R 4/6); moist; stiff; fine sand ~5%; low plasticity; micaceous; SAPROLITE	Hard drilling, check for rock at 26.5 ft
28											
29		SPT 10	4	18						SILT sandy (ML); pale reddish brown (10 R 5/4); moist; stiff; fine sand ~10%; low plasticity; micaceous; SAPROLITE	End of day 4/17/06 Begin day 4/18/06. No water to 28 ft
30											
31											
32											
33											
34		SPT 11	6	18						SILT sandy (ML); dark yellowish orange (10 YR 6/6); moist; very stiff; fine sand ~30%; low plasticity; micaceous; SAPROLITE	
35											
36											
37											
38											
39		SPT 12	6	15						SAA	
40											

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-401

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40										SILT sandy (ML); light brown (5 YR 5/6); moist; stiff; fine sand ~40%; low plasticity; slightly micaceous; SAPROLITE (Continued from previous page)	
41											
42											
43											
44	/	SPT 13	8 10 12	18						SAA	
45											
46											
47											
48											
49	/	SPT 14	6 11 15	14 18						SAA	
50											
51											
52									SM	SAND silty (SM); medium light gray (N 6 6/0); moist; medium dense; fine sand ~60%; SAPROLITE	
53											
54	/	SPT 15	12 14 14	14 18							
55											
56									ML	SILT sandy (ML); greenish black (N 2); moist; hard; fine sand ~30%; low plasticity; small quartz fragments; micaceous; SAPROLITE	
57											
58											
59	/	SPT 16	17 27 50	18 18							
60											
61											
62									ML	SILT sandy (ML); dark yellowish orange (10 YR 6/8); moist; hard; fine sand ~40%; low plasticity; small quartz fragments; PARTIALLY WEATHERED ROCK	Partially weathered rock
63											
64	/	SPT 17	50/6	6 6						BORING TERMINATED AT 64.0 ft. see rock log	
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											

Project Name : Job Number		ROCK LOG - Boring No. B-401	
SCE&G COL : 6234-06-3534			
Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ		Boring Location Cooling Tower	Total Depth 120 feet
Drilling Contractor and Rig Gregg/Smith/Burnette/311025 / CME 55		Elevation at Boring 404 feet	Ground Water Depth 4 feet
Casing Size and Depth 3.5 / 64 feet		Length of Core Barrel and Bit 5 feet	No. of Core Boxes 4
		Borehole Inclination 0	Date Started 4/14/06
		Logged by J. Harmon	Date Completed 4/19/06

Reviewed by / Date M. Cooke 4/24/06

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
64								
65								
66	1	1.1 5.0	16	RS	R0		AMPHIBOLITE SCHIST with GRANODIORITE; very dark gray and white (10 YR 2/1); and (Gley 1 8 /1); intrusion 30% foliated	Switched to coring. NQ sampler used (Triple tube samples)
67				SW				
68				F				
69				SW			GRANODIORITE; with amphibolite dikes and intrusions	
70								
71	2	4.5 5.0	76	F	R4			
72								
73							MIGMATITE GNEISS zones of SCHIST and GRANODIORITE; very dark gray and white (10 YR 2/1); and (Gley 8/1); fine to medium grained	
74				HW	R2			
75								End of day 4/18/06, water at 4 ft
76	3	5.0 5.0	100	F	R4		Foliation from 76 to 77 ft.	Begin day 4/19/06, no water to 74 ft
77								
78							AMPHIBOLITE SCHIST with GRANODIORITE intrusions	
79								
80								
81	4	5.0 5.0	100	F	R4			
82								
83				SW				
84							AMPHIBOLITE SCHIST; dark gray (10 YR 2/1); fine grained; foliation ~30°	
85								
86	5	5.0 5.0	86	F	R4			
87								
88				SW			GRANODIORITE with SCHIST intrusions; fine to medium grained	
89				F				
90							MIGMATITE GNEISS	
91	6	5.0 5.0	88	F	R4			
92								
93								
94								
95								
96	7	5.0 5.0	88	F	R4			
97								
98								
99								
100							With flowing bands of SCHIST and GRANODIORITE	
101	8	5.0 5.0	86	F	R4		MIGMATITE GNEISS with intrusions of SCHIST at 100.5 ft to 101.2 ft; fine to medium grained	
102								
103								
104								

Project Name : Job Number

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SCE&G COL : 6234-06-3534

ROCK LOG - Boring No. B-401

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
104	9	5.0 5.0	20	F	R4		Flowing texture with GRANODIORITE and SCHIST	
105								
106								
107								
108	10	5.0 5.0	88	F	R4		MIGMATITE GNEISS	
109								
110								
111								
112	11	1.0 1.0	100	F	R4		CORING TERMINATED AT 120.0 ft.	
113								
114	12	5.0 5.0	100	F	R4			
115								
116								
117								
118								Boring terminated at 120 ft, water at 4 ft. on 4/19/06
119								
120								
121								
122								
123								
124								
125								
126								
127								
128								
129								
130								
131								
132								
133								
134								
135								
136								
137								
138								
139								
140								
141								
142								
143								
144								

Project Name : Job Number


MACTEC

SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-402

Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Cooling Tower	Total Depth 61.5 feet
Drilling Contractor and Rig MACTEC/Cain/100 / D 50	Elevation at Boring 403.9 feet	Ground Water Depth Depth to Bedrock 47.7 feet
Sampling Method Standard	Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 13
	Borehole Inclination 0	Date Started 8/4/06
	Logged by M. Harvey	Date Completed 8/5/06

Reviewed by / Date M. Cooke 8/7/06

Reviewed by / Date

Clay Same 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0									ML	SILT sandy (ML); red (2.5 YR 4/6); dry; stiff	Residuum; surface graded for access
1	SPT 1	4	18						ML	SILT sandy (ML); red (2.5 YR 4/6); dry; very stiff	
2	SPT 2	12	8	18					ML	SILT (ML); red (2.5 YR 4/6); dry; very stiff; trace clay	
3											
4	SPT 3	3	12	18							
5											
6											
7	SPT 4	5	14	18						SILT (ML); red and pale gray (10 R 5/6 and 10 R 7/2); dry; very stiff; mottled; trace clay	
8											
9	SPT 5	6	15	18					SM	SAND silty, gravelly (SM); red, gray and brown (10 R 5/6, 10R 8/1, 10R 6/1, 10YR 7/6); dry; dense; relict structure; SAPROLITE	Saprolite
10											
11	SPT 6	8	14	18						SAND gravelly (SM); purple and white (10R 6/4 and 10R 8/1); dry; medium dense; some gravel	
12											
13											
14	SPT 7	9	13	18						SAA	
15											
16									ML	SILT (ML); dry; stiff	
17											
18											
19	SPT 8	3	16	18							
20									SM	SAND (SM); purplish red (10 R 5/6.4); dry; medium dense; SAPROLITE	
21											
22									ML	SILT sandy (ML); red (10 R 5/6); dry; very stiff; some manganese staining; SAPROLITE	
23											
24	SPT 9	7	16	18							
25											
26											
27									SM	SAND silty (SM); orange brown (10 YR 6/8); dry; medium dense; with manganese stains and gravel	
28											
29	SPT 10	25	16	18							
30									ML	SILT sandy (ML); orange and brown (5 YR 4/6, 7.5 YR 6/8); dry; very stiff; with manganese staining; foliated coloration with shaded layers of light and dark; SAPROLITE	
31											
32											
33											
34	SPT 11	4	16	18							
35											
36											
37											
38											
39	SPT 12	10	14	18						SILT sandy (ML); brown (10 YR 5/4); dry; very stiff; with prominent black manganese staining	
40											

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-402

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40											
41											
42											
43											
44		SPT 13	11 8 13	15 18							
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
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61											
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64											
65											
66											
67											
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69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											

SILT sandy (ML); orange and brown (5 YR 4/6, 7.5 YR 6/8); dry; very stiff; with manganese staining; foliated coloration with shaded layers of light and dark; SAPROLITE
(Continued from previous page)
SAA

Refusal at 47.7 ft, see rock log

Project Name : Job Number		ROCK LOG - Boring No. B-402	
SCE&G COL : 6234-06-3534			
Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ		Boring Location Cooling Tower	Total Depth 61.5 feet
Drilling Contractor and Rig MACTEC/Cain/100 / D 50		Elevation at Boring 403.9 feet	Ground Water Depth Depth to Bedrock 47.7 feet
Casing Size and Depth 3.5 / 47.7 feet		Length of Core Barrel and Bit	No. of Core Boxes Date Started 8/4/06
		Borehole Inclination 0	Logged by M. Harvey Date Completed 8/5/06

Reviewed by / Date M. Cooke 8/7/06

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
48				HW	R0			
49	1	2.2 3.3	48	MW	R1		MIGMATITE; foliated metamorphic granodiorite gneiss with amphibolite xenoliths; some deformed foliations vary in angle from high to near horizontal	
50				F	R3			
51					R4			
52								
53	2	4.0 4.0	100	F	R4			Borehole terminated on 8/5/06
54								
55				SW	R3			
56								
57	3	5.0 5.0	92	F	R4			
58								
59								
60								
61	4	1.2 1.5	80	F	R4		CORING TERMINATED at 61.5 ft	
62								Coring terminated on 8/5/06
63								
64								
65								
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								

Project Name : Job Number MACTEC SCE&G COL : 6234-06-3534		SOIL LOG - Boring No. B-403	
Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ		Boring Location Cooling Tower	Total Depth 82 feet
Drilling Contractor and Rig MACTEC/Gibson/211797 / CME 75		Elevation at Boring 400.7 feet	Ground Water Depth Depth to Bedrock 56 feet
Sampling Method Split Spoon		Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 15
		Borehole Inclination 0	Date Started 8/5/06
		Logged by J. Jordan	Date Completed 8/8/06

Reviewed by / Date M. Cooke 8/10/06

Reviewed by / Date

Lithology

Remarks

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0											
1	SPT 1	1	5	18					ML	SILT (ML); reddish brown (2.5 YR 5/3); medium soft; micaceous	Residuum
2	SPT 2	2	13	18						SILT (ML); strong brown (7.5 YR 5/6); moist; medium stiff; 90% silt; very micaceous	
3											
4	SPT 3	3	14	18						SAA; very stiff	
5											
6	SPT 4	4	14	18					ML	SILT (ML); light gray (5 YR 7/1); moist; stiff; micaceous; feldspar rich; SAPROLITE	First saprolitic sample
7											
8											
9	SPT 5	5	1	18						SILT sandy (ML)	
10											
11	SPT 6	6	17	18						SILT sandy (ML); pinkish white (10 R 8/2); very stiff; 20% sand; SAPROLITE	
12											
13											
14	SPT 7	7	18	18					SW-SM	SAND silty (SW to SM); light gray (10 R 7/1); wet; medium dense; fine to coarse grained; micaceous	
15											
16											
17											
18											
19	SPT 8	8	18	18						SAA; strong brown (7.5 YR 4/6); wet; medium dense; mica and feldspar abundant	
20											
21											
22											
23											
24	SPT 9	9	6	18						SAA	
25											
26											
27											
28											
29	SPT 10	10	4	18						SAA	
30											
31											
32											
33									ML	SILT trace sand (ML); light yellowish brown; wet; medium dense; 98% silt; feldspar rich with black minerals; SAPROLITE	
34	SPT 11	11	9	18							
35											
36											
37											
38									SP	SAND slightly silty (SP); pinkish white (7.5 YR 8/2); wet; dense; 90% feldspar and fine quartz sand; SAPROLITE/PARTIALLY WEATHERED ROCK	
39	SPT 12	12	14	18							
40											

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-403

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40											
41											
42											
43											
44	SPT 13	18 33	50/5.5	8 17.5							
45											
46											
47											
48									SM		
49	SPT 14	12 33	41	15 18							
50											
51											
52											
53											
54	SPT 15	50/0		0 0							
55											
56											
57											
58											
59											
60											
61											
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											

Project Name : Job Number

MACTEC

SCE&G COL : 6234-06-3534

ROCK LOG - Boring No. B-403

Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Cooling Tower	Total Depth 82 feet
Drilling Contractor and Rig MACTEC/Gibson/211797 / CME 75	Elevation at Boring 400.7 feet	Ground Water Depth Depth to Bedrock 56 feet
Casing Size and Depth 3.5 / 61 feet	Length of Core Barrel and Bit 11 feet	No. of Core Boxes 2
	Borehole Inclination 0	Date Started 8/5/06
	Logged by J. Jordan	Date Completed 8/8/06

Reviewed by / Date M. Cooke 8/10/06

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
56	1	1.0	0	HW	R1		GRANODIORITE; light gray (N 7/1); very blocky; multiple fractures; some partially weathered rock	Refusal at 56 ft on 8/7/06
57		1.0						
58								
59	2	3.4	50	MW	R1 to R2		QUARTZ DIORITE; light gray (7.5 YR 7/1)	
60		5.0						
61								
62								
63								
64								
65								
66								
67	3	9.8	59.5	MW	R1 to R2		MIGMATITE; multiple fractures; some heavily oxidized; lower in hornblende, quartz, K-spar, and mica Some partially weathered rock Some partially weathered rock Some partially weathered rock	
68		10.0						
69								
70								
71								
72								
73							MIGMATITE; less weathered	
74	4	5.0	84.1	MW to SW	R3			
75		5.0						
76								
77								
78								
79	5	4.8	96	SW	R3 to R4			
80		5.0						
81								
82							CORING TERMINATED at 82 ft	
83								End of coring on 8/8/06
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								
94								
95								
96								

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-404Type and Diameter of Boring
Mud Rotary / 3 7/8 inchBoring Location
Cooling TowerTotal Depth
112.6 feetDrilling Contractor and Rig
MACTEC/Cain/100 / D 50Elevation at Boring
410.9 feetGround Water Depth
46.6 feetDepth to Bedrock
112.6 feetSampling Method
StandardSample Driving Hammer/Drop
140 lbs / 30 inchesNo. of Samples
26Date Started
8/2/06Borehole Inclination
0Logged by
M. HarveyDate Completed
8/3/06

Reviewed by / Date M. Cooke 8/3/06

Reviewed by / Date

Clay Same 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0											
1	SPT 1	3 4 7	18 18						SM	SAND (SM); red (10 R 7/8); dry; medium dense; very fine	Residuum
2	SPT 2	4 6 10	12 18						ML	SILT sandy (ML); red (10 R 4.5/6); dry; very stiff; trace mica	
3											
4	SPT 3	3 4 9	12 18							SAA; red (10 R 4/8); dry; stiff; traces of orange/brown; mica present	
5											
6											
7	SPT 4	4 6 12	11 18						SM	SAND silty (SM); white (10 R 8/2); dry; medium dense	
8											
9	SPT 5	3 5 7	12 18						ML	SILT (ML); red (10 R 4/6) and brown (10 YR 5/8); dry; stiff; some mica	
10											
11	SPT 6	3 7 9	10 18							SAA; red and brown (10 R 5/6 and 10 YR 5/3); some medium to coarse sand in silt matrix at base of sampler; dry; very stiff	
12											
13											
14	SPT 7	4 6 9	12 18						ML	SILT (ML); red and brown (10 YR 5/8 and 10 R 4/4); dry; stiff; SAPROLITE	Saprolite
15											
16											
17											
18											
19	SPT 8	3 7 8	12 18						SM	SAND (SM); white; dry; medium dense	
20											
21									ML	SILT (ML); light green (5 Y 7/3); brown (7.5 YR 6/8); red (10 R 5/8); dry; stiff; with some manganese stains; SAPROLITE	
22											
23											
24	SPT 9	3 4 8	11 18								
25											
26											
27											
28											
29	SPT 10	3 4 7	15 18							SAA	
30											
31											
32											
33											
34	SPT 11	4 5 10	14 18							SILT (ML); very pale brown, red and orange (10 YR 7/3, 10 YR 6/8, 10 R 5/8, 10 R 2.5/1); dry; stiff; with manganese stains; sandy; micaceous; SAPROLITE	
35											
36											
37											
38											
39	SPT 12	6 10 13	14 18							SILT (ML); brown and red (7.5 YR 5.5/8, 10 R 5/8); dry; very stiff; with manganese staining	
40											

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-404

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40									SM	SAND silty (SM); white; dry; medium dense; SAPROLITE	
41										(Continued from previous page)	
42											
43											
44	SPT	13	8	14					ML	SILT (ML); brown (10 YR 5/6); dry; very stiff	
45			10	18							
46			16								
47											
48											
49	SPT	14	8	14						SAA; brown (10 YR 5/4); micaceous; SAPROLITE	
50			10	18							
51			15								
52											
53											
54	SPT	15	7	16						SAA	
55			11	18							
56			15								
57											
58									ML	SILT sandy (ML); brown (7.5 YR 5/8, Gley 1 5/1/10GY); hard; micaceous; SAPROLITE	
59	SPT	16	12	18							
60			18	18							Slow drilling
61			28								
62											
63											
64	SPT	17	17	14						SILT sandy (ML); brown (10 YR 5/3); dry; hard; micaceous; 30% fine sand	
65			20	18							
66			40								
67											
68									SM	SAND silty (SM); dark greenish gray (Gley 1 4/1/5G); moist; very dense; PARTIALLY WEATHERED ROCK	Partially weathered rock
69	SPT	18	25	10							
70			50/4	10							
71											
72											
73											
74	SPT	19	30	10						SAA	
75			50/4.5	10.5							
76											
77											
78											
79	SPT	20	38	8						SAA	
80			50/4	10							

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-404

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
80											
81										SAND silty (SM); dark greenish gray (Gley 1 4/1/5G); moist; very dense; PARTIALLY WEATHERED ROCK	End drilling 8/2/06
82										(Continued from previous page)	Start drilling 8/3/06; water level at 46.6 ft
83											
84	SPT	21	39 50/5	10 11						SAA; brown and black and gray (10 YR 5/6, Gley 1 2.5/N); very dense; fine to medium grained; micaceous; PARTIALLY WEATHERED ROCK	
85											
86											
87											
88											
89	SPT	22	50/4	3 4						SAA; white; dry; very dense; quartz seam degraded to sand; PARTIALLY WEATHERED ROCK	
90											
91											
92											
93											
94	SPT	23	50/6	6 6						SAA; white, black, and green (Gley 1 3/2/5G, Gley 1 8/1/N); dry; very dense	
95											
96											
97											
98											
99	SPT	24	21 50/6	9 12						SAA	
100											
101											
102											
103											
104	SPT	25	50/5	5 5						SAA	
105											
106											
107											
108											
109	SPT	26	50/2	2 2						SAND (SM); brown, black and white (7.5 YR 5/8, 7.5 YR 8/1, 7.5 YR 2.5/1, 1 Gley 4/2/5G); wet; very dense; PARTIALLY WEATHERED ROCK	
110											
111											
112										Refusal to tricone at 112.6 ft; Boring terminated	
113											
114											
115											
116											
117											
118											
119											
120											

Project Name : Job Number MACTEC		SOIL LOG - Boring No. B-405	
SCE&G COL : 6234-06-3534			
Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ		Boring Location Cooling Tower	Total Depth 52.6 feet
Drilling Contractor and Rig MACTEC/Akins/212393 / CME550		Elevation at Boring 392 feet	Ground Water Depth 32 feet
Sampling Method Standard		Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 13
		Borehole Inclination 0	Logged by M. Harvey
			Date Started 4/12/06
			Date Completed 4/13/06

Reviewed by / Date M. Cooke 4/14/06

Reviewed by / Date

Clay Sanna 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0											
1	SPT 1	1	1	14					SM	SAND (SM); red (2.5 YR 5/6); dry; very loose; silty; trace mica	Residuum
2	SPT 2	2	2	15						SAND silty (SM); orange red and black (10 YR 5/6, 10 R 3/4 and 2.5/N); dry; loose; fine; micaceous	
3											
4	SPT 3	3	3	16						SAA, color change to brown at 4.6 ft (10 YR 4/3); fine; heavily micaceous; SAPROLITE	
5									ML		
6	SPT 4	4	4	18						SILT sandy (ML); orange and red (7.5 YR 5/8 to 10 R 3/6), 8 inch of pinkish white (7.5 YR 8/2); moist; stiff; SAPROLITE	Saprolite
7											
8											
9	SPT 5	5	5	16					SM	SAND silty (SM); brown (7.5 YR 5/7); damp; medium dense; black bands, white vein from toe to 8 inch; SAPROLITE	
10											
11	SPT 6	6	6	16						SAA; olive yellow (2.5 Y 6/6); moist; medium dense; fine to coarse grained; foliated; black layered; some gravel grains	
12											
13											
14	SPT 7	7	7	14						SAA; black and brown, white from 14.5 ft; medium dense; fines (2.5 YR 5/6); heavily micaceous	
15											
16											
17											
18											
19	SPT 8	8	8	13						SAA; reddish yellow (7.5 YR 6/8); with sandier beige/white bands (10 YR 6/2); moist; medium dense; micaceous; manganese stains; SAPROLITE	
20											
21											
22											
23											
24	SPT 9	9	9	18						SAND silty (SM); brown (10 YR 5/3); moist; medium dense; white, beige and orange; manganese staining; micaceous; SAPROLITE	
25											
26											
27											
28											
29	SPT 10	10	10	18						SAA; grayish brown (10 YR 5/2); moist; medium dense; fine grained; orange manganese staining; SAPROLITE	
30											
31											
32											
33											
34	SPT 11	11	11	18						SAND silty (SM); very dark brown (10 YR 3/3); moist; very dense; fine to medium grained; white to brown bands 1 to 4 inch; micaceous	
35											
36											
37											
38											
39	SPT 12	12	12	18					SM		Partially weathered rock
40											

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-405

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40											
41											
42											
43											
44		SPT 13	20 50/1	6 7							
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
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66											
67											
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69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											

SAND silty (SM); black and white salt and pepper (1 Gley 4/1); moist; fine to medium grained; micaceous; PARTIALLY WEATHERED ROCK
(Continued from previous page)

SAND gravelly (SM); pink (2.5 YR 8/3); and brown (2.5 Y R 5/2); moist; very dense; micaceous; PARTIALLY WEATHERED ROCK
Tricone refusal 46.9 ft.; drilled with casing to 47.2 ft, see rock log

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-406

Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Cooling Tower	Total Depth 64.7 feet
Drilling Contractor and Rig MACTEC/Cain/100 / D 50	Elevation at Boring 384.7 feet	Ground Water Depth Depth to Bedrock 53.5 feet
Sampling Method Standard	Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 15
	Borehole Inclination 0	Date Started 8/9/06
	Logged by M. Harvey	Date Completed 8/10/06

Reviewed by / Date M. Cooke 8/20/06

Reviewed by / Date

Cly Samra 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0									ML	SILT (ML); red (2.5 YR 4/6); dry; stiff; trace mica; some organics (tree roots)	Graded area for access
1	SPT 1	3	18						ML	SAA; red, some black (2.5 YR 4/6 and 2.5 YR 2.5/2); dry; very stiff	
2	SPT 2	10	18						ML	SILT clayey (ML); brown (7.5 YR 5/3); dry; medium stiff; organics present; roots	
3									ML	SAA; dark gray (10 YR 4/1); moist; medium stiff	
4	SPT 3	4	15						ML	SILT clayey (ML); brown (7.5 YR 5/3); dry; medium stiff; organics present; roots	
5									ML	SAA; dark gray (10 YR 4/1); moist; medium stiff	
6	SPT 4	3	12						ML	SILT clayey (ML); brown (7.5 YR 5/3); dry; medium stiff; organics present; roots	
7									ML	SAA; dark gray (10 YR 4/1); moist; medium stiff	
8									ML	SILT clayey (ML); brown (7.5 YR 5/3); dry; medium stiff; organics present; roots	
9	SPT 5	2	6						CL	CLAY silty (CL); orange gray (5 YR 5/3); moist; medium stiff	
10									CL	CLAY silty (CL); orange gray (5 YR 5/3); moist; medium stiff	
11	SPT 6	4	15						ML	SILT sandy (ML); red (2.5 YR 4/6); dry; very stiff	
12									ML	SILT sandy (ML); red (2.5 YR 4/6); dry; very stiff	
13	SPT 7	3	12						ML	SILT (ML); orange (7.5 YR 5/8); moist; stiff; some relic structure	
14									ML	SILT (ML); orange (7.5 YR 5/8); moist; stiff; some relic structure	
15	SPT 8	3	12						ML	SILT (ML); brown (10 YR 6/6 and 2.5 YR 4/6); dry; stiff; micaceous	
16									ML	SILT (ML); brown (10 YR 6/6 and 2.5 YR 4/6); dry; stiff; micaceous	
17	SPT 9	4	9						ML	SILT sandy (ML); brown, orange silt with dark gray, bands of black sand (7.5 YR 5/8 and 7.5 YR 3/1); micaceous	
18									ML	SILT sandy (ML); brown, orange silt with dark gray, bands of black sand (7.5 YR 5/8 and 7.5 YR 3/1); micaceous	
19	SPT 10	4	10						ML	SILT (ML); brown (10 YR 4/3); dry; very stiff; micaceous; SAPROLITE	Saprolite
20									ML	SILT (ML); brown (10 YR 4/3); dry; very stiff; micaceous; SAPROLITE	Saprolite
21	SPT 11	7	12						SM	SAND silty (SM); dark grayish brown (10 YR 4/2); medium dense; fine grained; micaceous	End of day 8/9/06 Begin day 8/10/06
22									SM	SAND silty (SM); dark grayish brown (10 YR 4/2); medium dense; fine grained; micaceous	End of day 8/9/06 Begin day 8/10/06
23	SPT 12	8	13						SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
24									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
25	SPT 12	8	13						SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
26									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
27									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
28									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
29									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
30									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
31									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
32									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
33									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
34									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
35									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
36									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
37									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
38									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
39									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	
40									SM	SAND silty (SM); beige and brown (10 YR 2/3, 7.5 YR 5/8, 2.5 YR 10/3); micaceous	

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-406

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40										SAND silty (SM); dark grayish brown (10 YR 4/2); medium dense; fine grained; micaceous (Continued from previous page)	
41											
42											
43											
44		SPT 13	50/2	0 2						Little recovery; PARTIALLY WEATHERED ROCK	Partially weathered rock first occurrence
45											
46											
47											
48											
49		SPT 14	50/2.5	2.5 2.5					GW	GRAVEL (GW); pinkish white (5 YR 8/2); moist; very dense; quartz; PARTIALLY WEATHERED ROCK	
50											
51											
52										Refusal at 53.5 ft	
53											
54											
55											
56											
57											
58											
59											
60											
61											
62											
63											
64											
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66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											

Project Name : Job Number MACTEC		ROCK LOG - Boring No. B-406	
SCE&G COL : 6234-06-3534			
Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ		Boring Location Cooling Tower	
Drilling Contractor and Rig MACTEC/Cain/100 / D 50		Elevation at Boring 384.7 feet	Ground Water Depth Depth to Bedrock 53.5 feet
Casing Size and Depth 3.5 / 53.5 feet		Length of Core Barrel and Bit 13 feet	No. of Core Boxes 1
		Borehole Inclination 0	Date Started 8/9/06
		Logged by M. Harvey	Date Completed 8/10/06

Reviewed by / Date M. Cooke 8/20/06

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
54	1	$\frac{4.2}{4.2}$	92	F	R4		QUARTZ DIORITE; with multiple dikes of fine grained granodiorite and quartz; fine grained; nearly a migmatite texture	Refusal on 8/10/06 at 53.5 ft, see rock log
55				SW	R2			
56				F	R4			
57	2	$\frac{3.0}{3.0}$	97	F	R4		CORING TERMINATED at 64.7 ft	Borehole terminated on 8/10/06
58								
59								
60	3	$\frac{3.9}{4.0}$	99	F	R4			
61								
62								
63								
64								
65								
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								

Project Name : Job Number

MACTEC

SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-421

Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Cooling Tower	Total Depth 78 feet
Drilling Contractor and Rig Gregg/Burnett/233517 / CME 75	Elevation at Boring 396 feet	Ground Water Depth Depth to Bedrock 78 feet
Sampling Method Standard	Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 19
	Borehole Inclination 0	Date Started 8/8/06
	Logged by S. Woodham/M. Harvey	Date Completed 8/8/06

Reviewed by / Date M. Cooke 8/20/06

Reviewed by / Date

Clay Samm 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0											
1	SPT 1	4 5 7	16 18						ML	SILT sandy (ML); red (10 R 4/6); damp; stiff; 80% silt; 20% sand; some mica; RESIDUUM	Residuum
2	SPT 2	11 17 17	16 18							SAA; hard	
3											
4	SPT 3	5 10 12	20 18							SAA; very stiff	
5											
6											
7	SPT 4	4 4 7	20 18							SILT sandy (ML); yellowish red (5 YR 4/6); damp; stiff; 80% silt, 20% sand; mica; RESIDUUM	
8											
9	SPT 5	4 6 7	18 18						ML	SILT sandy (ML); yellowish red (7.5 YR 5/8); damp; stiff; 60% silt; 40% sand; SAPROLITE	First saprolitic sample
10											
11	SPT 6	3 4 5	18 18							SAA	
12											
13											
14	SPT 7	3 4 5	16 18						SM	SAND silty (SM); light yellowish brown (10 YR 6/4); damp; loose; 70% sand; 30% silt; micaceous	
15											
16											
17											
18											
19	SPT 8	5 4 5	16 18							SAA; 80% sand; 20% silt	
20											
21											
22											
23											
24	SPT 9	4 6 7	17 18							SAA; medium dense	
25											
26											
27											
28											
29	SPT 10	8 12 12	17 18							SAA; light yellowish brown (10 YR 6/4); damp; medium dense; 70% sand; 30% silt	
30											
31											
32											
33											
34	SPT 11	2 7 10	15 18							SAA; light brownish gray (10 YR 6/2)	
35											
36											
37											
38											
39	SPT 12	12 13 19	15 18							SAA; greenish black and white (Gley 1 2.5/1 and 8/N); damp; dense; 75% sand; 25% silt; fine to	
40											

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-421

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40											
41										medium grained	
42										SAND silty (SM); light yellowish brown (10 YR 6/4);	
43										damp; loose; 70% sand; 30% silt; micaceous	
44										(Continued from previous page)	
45		SPT 13	9 11 14	16 18					ML	SILT sandy (ML); very dark greenish gray and dark	
46										yellowish brown (Gley 1 3/1 and 10 YR 4/4); damp;	
47										very stiff; 70% silt; 30% sand	
48											
49		SPT 14	10 12 22	14 18					SM	SAND silty (SM); yellowish brown (10 YR 5/6);	
50										damp; dense	
51											
52											
53											
54		SPT 15	20 22 50/2	16 14						SAA; dark greenish gray; very dense	
55											
56											
57											
58											
59		SPT 16	12 19 16	16 18						SAA; yellowish brown (10 YR 5/6); damp; dense;	
60										micaceous	
61											
62											
63											
64		SPT 17	20 50/5	10 11						SAA; very dense	
65											
66											
67											
68											
69		SPT 18	12 28 50/4	14 16						SAA	
70											
71											
72											
73											
74		SPT 19	50/5	6 5						SAA	
75											
76										Refusal at 78 ft, see B-421A for rock log	
77											
78											
79											
80											

Project Name : Job Number

 MACTEC

SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-421A

Type and Diameter of Boring Rock core / NQ	Boring Location Cooling Tower	Total Depth 95 feet
Drilling Contractor and Rig MACTEC/Cain/100 / D 50	Elevation at Boring 396.2 feet	Ground Water Depth Depth to Bedrock 78.9 feet
Sampling Method No sampling	Sample Driving Hammer/Drop NA	No. of Samples 0
	Borehole Inclination 0	Logged by M. Harvey
		Date Started 8/15/06
		Date Completed 8/16/06

Reviewed by / Date M. Cooke 8/20/06

Reviewed by / Date *Clyde Sam 12/4/06*

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
32											
33											
34											
35											
36											
37											
38											
39											
40											

Drilled without SPT sampling to 78.9 ft, 4 ft south of B-421 to core rock, see B-421 for soil description

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-421A

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40										Drilled without SPT sampling to 78.9 ft, 4 ft south of B-421 to core rock, see B-421 for soil description (Continued from previous page)	
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											
61											
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
76											Drilling through rock lenses
77											
78											
79											
80											

Project Name : Job Number MACTEC SCE&G COL : 6234-06-3534		ROCK LOG - Boring No. B-421A	
Type and Diameter of Boring Rock core / NQ		Boring Location Cooling Tower	Total Depth 95 feet
Drilling Contractor and Rig MACTEC/Cain/100 / D 50		Elevation at Boring 396.2 feet	Ground Water Depth Depth to Bedrock 78.9 feet
Casing Size and Depth 3.5 / 78.9 feet		Length of Core Barrel and Bit 13 feet	No. of Core Boxes 1 Date Started 8/15/06
		Borehole Inclination 0	Logged by M. Harvey Date Completed 8/16/06

Reviewed by / Date M. Cooke 8/20/06

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
79								
80	1	$\frac{1.8}{2.1}$	76	F	R4		GRANODIORITE; medium to coarse grained	
81							Fracture zone 80.5 to 83.5; highly weathered	
82								
83	2	$\frac{4.0}{5.0}$	50	HW	R1			
84								
85				F	R4			
86							Higher mafic content	
87								
88	3	$\frac{5.0}{5.0}$	96	F	R4		Amphibolite xenoliths	
89								
90								
91								
92								
93	4	$\frac{4.0}{4.0}$	97.5	F	R4			
94								
95							AMPHIBOLITE SCHIST	
96							CORING TERMINATED at 95 ft	Borehole terminated on 8/16/06
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-422

Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Cooling Tower	Total Depth 83.5 feet
Drilling Contractor and Rig Gregg/Burnette/233517 / CME 75	Elevation at Boring 411.8 feet	Ground Water Depth 36 feet
Sampling Method Standard	Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 19
	Borehole Inclination 0	Logged by S. Woodham/J. Jordan
		Date Started 8/7/06
		Date Completed 8/9/06

Reviewed by / Date M. Cooke 8/10/06

Reviewed by / Date

Clay Sam 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0											
1	SPT 1	4	18						ML	SILT sandy (ML); red (7.5 YR 4/8); damp; very stiff; 60% silt, 40% sand; RESIDUUM	Residuum
2	SPT 2	12	13								
3											
4	SPT 3	5	16						SM	SAND silty (SM); red (7.5 YR 4/8); with some yellow; medium dense; 60% sand, 40% silt; SAPROLITE	Saprolite
5											
6	SPT 4	4	14								
7											
8									ML	SILT sandy (ML); red (7.5 YR 4/8); some yellow; damp; stiff; 60% silt, 40% sand	
9	SPT 5	4	16								
10											
11	SPT 6	4	16							SAA red (7.5 YR 4/8) and yellowish brown (5/6 10 YR)	
12											
13											
14	SPT 7	3	18							SAA; 55% silt, 45% sand	
15											
16											
17											
18									ML	SILT sandy (ML); brownish yellow (10 YR 6/6); damp; medium stiff; 80% silt, 20% sand	
19	SPT 8	3	15								
20											
21											
22											
23											
24	SPT 9	3	17							SAA; with black and white	
25											
26											
27											
28											
29	SPT 10	3	18							SAA; stiff	
30											
31											
32											
33											
34	SPT 11	5	16							SAA	
35											
36											
37											
38											
39	SPT 12	3	17							SAA	
40											

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-422

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40										SILT sandy (ML); brownish yellow (10 YR 6/6); damp; medium stiff; 80% silt, 20% sand (Continued from previous page)	
41											
42											
43											
44		SPT 13	4	0						No recovery	
45				18							
46											
47											
48											
49		SPT 14	4	0							
50				18							
51		SPT 15	8	18					SM	SAND silty (SM); yellowish brown (10 YR 5/6); damp; medium dense; 65% sand, 35% silt	
52											
53											
54		SPT 16	9	16						SAA; yellowish brown (10 YR 5/4); damp; medium dense; 75% sand, 25% silt	
55			12	18							
56											
57											
58											
59		SPT 17	6	18					SM	SAND silty (SM); white and grayish brown (2.5 Y 8/1 and 5/2); damp; medium dense; 70% sand, 30% silt	
60			9								
61			14								
62											
63											
64		SPT 18	50/3	6						SAND silty (SM); white and grayish brown (2.5 Y 8/1); damp; PARTIALLY WEATHERED ROCK	
65				3						See rock log	
66											
67											
68											
69		SPT 19	50/4	5							
70				4							
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											

Project Name : Job Number



ROCK LOG - Boring No. B-422

SCE&G COL : 6234-06-3534

Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Cooling Tower		Total Depth 83.5 feet
Drilling Contractor and Rig Gregg/Burnette/233517 / CME 75	Elevation at Boring 411.8 feet	Ground Water Depth 36 feet	Depth to Bedrock 71 feet
Casing Size and Depth 3.5 / 71 feet	Length of Core Barrel and Bit 11.2 feet	No. of Core Boxes 1	Date Started 8/7/06
	Borehole Inclination 0	Logged by S. Woodham/J. Jordan	Date Completed 8/9/06

Reviewed by / Date M. Cooke 8/10/06

Borehole Inclination		Logged by		Date Completed				
0		S. Woodham/J. Jordan		8/9/06				
Reviewed by / Date				M. Cooke 8/10/06				
Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
71	1	3.0 3.0	91.6	MW to SW	R3		QUARTZ DIORITE; bluish gray (10 B 5/1); quartz, hornblende abundant	Tricone refusal at 71 ft on 8/8/06, see rock log
72							GRANODIORITE; bluish gray (5 B 6/1); quartz, dark mineral, feldspar, hornblende	
73								
74	2	4.5 4.5	72	SW to F	R4			Fracture zone, slightly weathered 76.4 to 76.8 ft
75								
76								
77	3	5.0 5.0	100	F	R4			Borehole ended on 8/9/06 Water at 36 ft during drilling
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								
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95								
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107								
108								
109								
110								
111								

Project Name : Job Number MACTEC		SOIL LOG - Boring No. B-423	
SCE&G COL : 6234-06-3534			
Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ		Boring Location Cooling Tower	Total Depth 77.4 feet
Drilling Contractor and Rig MACTEC/Oglesby/219907 / CME 75		Elevation at Boring 408 feet	Ground Water Depth 29 feet
Sampling Method Standard		Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 17
		Borehole Inclination 0	Logged by J. Jordan
			Date Completed 8/10/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0											
1	/	SPT 1	4	14.5					ML	SILT (ML); reddish brown (2.5 YR 4/3); dry; stiff; slightly micaceous; RESIDUUM or FILL	May be fill or residuum to 5 ft
2	/	SPT 2	6	12						SAA; red (2.5 YR 4/6)	
3											
4	/	SPT 3	8	16						SAA; with quartz fragments	
5			10	18							
6									ML	SILT (ML); red (10 R 4/8); damp; very stiff; micaceous; RESIDUUM	Residuum
7	/	SPT 4	12	15							
8			10	18							
9	/	SPT 5	9	15						SAA; more micaceous	
10			12	18							
11											
12	/	SPT 6	6	12					ML	SILT (ML); reddish yellow (7.5 YR 6/6); dry; stiff; with notable saprolite structure; feldspar and quartz rich areas	Saprolite
13			7	18							
14	/	SPT 7	8	15						SAA; very stiff	
15			11	18							
16			9								
17											
18											
19	/	SPT 8	12	14						SILT (ML); reddish yellow (7.5 YR 6/6); damp; very stiff; mica, quartz, feldspar rich areas; SAPROLITE	
20			12	18							
21											
22											
23											
24	/	SPT 9	5	15							
25			8	18						SILT sandy (ML); strong brown (7.5 YR 5/6); damp; very stiff; micaceous	
26			9								
27											
28											
29	/	SPT 10	5	15					∇	SAA; very micaceous	
30			6	18							
31			9								
32											
33											
34	/	SPT 11	6	9						SILT (ML); strong brown; damp; stiff; mica, iron, some feldspathic areas, very micaceous; SAPROLITE	
35			6	18							
36			7								
37											
38											
39	/	SPT 12	7	14						SAA	
40			9	18							

Project Name : Job Number

 MACTEC

SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-423

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40										SILT sandy (ML); strong brown (7.5 YR 5/6); damp; very stiff; micaceous (Continued from previous page)	
41											
42											
43											
44	/	SPT 13	7 10 12	13 18						SAA	
45											
46											
47											
48											
49	/	SPT 14	9 14 13	9 18						SILT sandy (ML); strong brown; wet; very stiff; saprolitic structure; quartz, feldspar, iron, mica	
50											
51											
52											
53											
54	/	SPT 15	12 12 22	7 18						SAA; hard	
55											
56											
57											
58											
59	/	SPT 16	11 18 20	14 18						SAA; hard	
60											
61											
62											
63									SM	SAND silty (SM); brown (7.5 YR 5/2); wet; dense; quartz feldspar; dark minerals; relict rock structure; PARTIALLY WEATHERED ROCK	
64	/	SPT 17	14 16 26	9 18						Tricone refusal, see rock log	Partially weathered rock
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											

Project Name : Job Number MACTEC		ROCK LOG - Boring No. B-423	
SCE&G COL : 6234-06-3534			
Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Cooling Tower	Total Depth 77.4 feet	
Drilling Contractor and Rig MACTEC/Oglesby/219907 / CME 75	Elevation at Boring 408 feet	Ground Water Depth 29 feet	Depth to Bedrock 67 feet
Casing Size and Depth 3.5 / 67 feet	Length of Core Barrel and Bit	No. of Core Boxes	Date Started 8/9/06
	Borehole Inclination 0	Logged by J. Jordan	Date Completed 8/10/06

Reviewed by / Date M. Cooke 8/10/06

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Lithology	Remarks
67				SW				QUARTZ DIORITE; dark greenish gray (10 Y 4/1); massive with few quartz filled veins	Tricone refusal on 8/9/06
68								Quartz vein filled	
69									
70	1	$\frac{6.0}{6.0}$	100	F	R4			Quartz vein thin 70° dip	
71									
72									
73								Quartz veins filling 70°	
74									
75	2	$\frac{4.0}{4.0}$	92	F	R4			1 inch thick vein filled	
76									
77								Quartz veins	
78									Borehole terminated at 77.4 ft on 8/10/06; water at 29 ft during drilling
79									
80									
81									
82									
83									
84									
85									
86									
87									
88									
89									
90									
91									
92									
93									
94									
95									
96									
97									
98									
99									
100									
101									
102									
103									
104									
105									
106									
107									

Project Name : Job Number

MACTEC

SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-424

Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Cooling Tower	Total Depth 60.7 feet
Drilling Contractor and Rig MACTEC/Cain/100 / D 50	Elevation at Boring 387.3 feet	Ground Water Depth 13
Sampling Method Standard	Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 13
	Borehole Inclination 0	Logged by M. Harvey
		Date Started 8/5/06
		Date Completed 8/8/06

Reviewed by / Date M. Cooke 8/20/06

Reviewed by / Date

Clay Sam 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0									ML	SILT (ML); red (10 R 4/6); dry; stiff	Residuum
1	/	SPT 1	3	18						SAA; very stiff	
2	/	SPT 2	5	18						SAA	
3			15								
4	/	SPT 3	5	18							End of day 8/5/06
5			11								Begin day 8/8/06
6			17								
7	/	SPT 4	4	18						SAA	
8			6								
9			10								
10	/	SPT 5	5	18						SAA; red (2.5 YR 4/6)	
11			8								
12	/	SPT 6	5	18						SAA; red (2.5 YR 4/8); dry; micaceous	
13			10								
14	/	SPT 7	4	18						SAA	
15			6								
16			9								
17											
18											
19	/	SPT 8	3	18						SAA; orange brown (5 YR 5/4); dry; stiff; micaceous	
20			5								
21			9								
22									SM	SAND silty (SM); pale yellow orange (10 YR 7/6 to 10 YR 8/4); moist; medium dense; SAPROLITE	
23											
24	/	SPT 9	5	18							Saprolite first occurrence
25			5								
26			7								
27											
28											
29	/	SPT 10	4	18						SAA; pale brown (10 YR 6/4); micaceous	
30			5								
31			9								
32											
33											
34	/	SPT 11	4	18						SAA; brown (10 YR 5/4); dry; medium dense; micaceous	
35			8								
36			10								
37											
38											
39	/	SPT 12	9	14						SAA; black and beige (7.5 YR 6/8 and 7.5 YR 8/2); dry; dense; micaceous	
40			21	18							

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-424

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40										SAND silty (SM); pale yellow orange (10 YR 7/6 to 10 YR 8/4); moist; medium dense; SAPROLITE (Continued from previous page)	
41											
42											
43											
44		SPT 13	9 14 21	14 18						SAA; black and brown (2 Gley 3/1/5G, 7.5 YR 8/2, 7.5 YR 6/8); moist	
45											
46											
47											
48											
49										BORING TERMINATED at 48.9 ft, see rock log	
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											
61											
62											
63											
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73											
74											
75											
76											
77											
78											
79											
80											

Project Name : Job Number		MACTEC		ROCK LOG - Boring No. B-424	
SCE&G COL : 6234-06-3534					
Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ		Boring Location Cooling Tower		Total Depth 60.7 feet	
Drilling Contractor and Rig MACTEC/Cain/100 / D 50		Elevation at Boring 387.3 feet		Ground Water Depth Depth to Bedrock 48.9 feet	
Casing Size and Depth 3.5 / 48.9 feet		Length of Core Barrel and Bit		No. of Core Boxes Date Started 8/5/06	
		Borehole Inclination 0		Logged by M. Harvey Date Completed 8/8/06	

Reviewed by / Date M. Cooke 8/20/06

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
49	1	1.8	92	SW	R3		MIGMATITE; fine grained granodiorite with amphibolite xenoliths and quartz dikes, and quartz diorite and hornblende gneiss xenoliths Near vertical dike weathered away; quartz partly healed	Refusal on 8/8/06 at 48.9 ft
50		1.8						
51				SW	R3			
52	2	5.0	100				CORING TERMINATED at 60.7 ft	Recovery run #3 counted 0.3 ft left in hole
53		5.0		F	R4			
54								
55								Borehole terminated at 60.7 ft on 8/8/06
56	3	5.0	87	F	R4			
57		5.0						
58								
59								
60								
61								
62								
63								
64								
65								
66								
67								
68								
69								
70								
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72								
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74								
75								
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-501

Type and Diameter of Boring Mud Rotary / 3 7/8 inch	Boring Location Makeup Water Structure	Total Depth 80 feet
Drilling Contractor and Rig MACTEC/White/331145 / CME 55 LC	Elevation at Boring 430 feet	Ground Water Depth 20.4 feet
Sampling Method Standard	Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 25
	Borehole Inclination 0	Date Started 7/22/06
	Logged by M. Harvey/C. Gandy	Date Completed 7/26/06

Reviewed by / Date M. Cooke 8/4/06

Reviewed by / Date

Clay Sam 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 Inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0									ML	SILT (ML); red and brown (10 R 4/8 and 10 YR 6/4); dry; very stiff; with trace gravel and organics (small roots); FILL	Fill
1	SPT 1	10	13	14					SM	SAND silty, clayey (SM); brown, gray (10 YR 5/3); dry to moist; medium dense SAA	
2	SPT 2	9	12	15							
3											
4	SPT 3	7	9	10							
5			11	18							
6											
7	SPT 4	3	3	0						No recovery	
8			2	18							
9											
10	SPT 5	5	15	7						SAA	
11			14	18							
12	SPT 6	50/3	5	3					SM	SAND silty (SM); reddish brown (2.5 YR 4/4); moist; very dense due to gravel; with 1 inch diameter gravel; non plastic; organics; FILL	Refusal in rubble fill 7/22/06 at 11 ft Offset 10 ft; retry; refusal at offset on 7/22/06 Begin day 7/25/06; used casing advancing for CME 55 LC MACTEC Raleigh
13											
14	SPT 7	1	2	4						SAA; reddish brown (5 YR 4/4); very loose	
15			2	18							
16											
17	SPT 8	1	1	6.5						SAA; very loose	
18			1	18							
19											
20	SPT 9	0	1	4					SP	SAND (SP); yellowish red (5 YR 5/8); wet; very loose; non plastic; organics; no silt; FILL	
21			1	10							
22	SPT 10	2	1	18					ML	SILT sandy (ML); strong brown (7.5 YR 5/6); very soft; moist to wet; low plasticity; 65% silt, 35% sand; organics; FILL	
23											
24	SPT 11	3	2	18						SILT sandy, gravelly (ML); brown (7.5 YR 5/4); moist; medium stiff due to gravel; low plasticity; gravel ~1 inch in diameter; FILL	
25			4	18							
26	SPT 12	2	3	18					CL-ML	CLAY silty (CL-ML); dark reddish brown; (2.5 YR 3/4); moist; medium stiff; medium plasticity; 70% clay, 25% silt; 5% sand; micaceous; RESIDUUM	Bottom of fill, top of residuum
27											
28											
29	SPT 13	3	4	18						SAA; dark red (2.5 YR 3/6); damp; stiff; medium plasticity; ~50/50% clay and silt; increasing mica content; RESIDUUM	
30			5	18							
31											
32											
33											
34	SPT 14	3	2	18						CLAY, silty, sandy (CL-ML); damp to moist; medium stiff; 45% clay, 45% silt, 10% sand; micaceous	
35			3	18							
36											
37											
38											
39	SPT 15	1	3	16						SAA; yellowish red (5 YR 4/6); damp; medium stiff; medium plasticity	End of day 7/25/06 Begin day 7/26/06
40			3	18							

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-501

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40									SM	SAND silty, gravelly (SM); red (2.5 YR 4/8); wet; medium stiff; 80% sand, 20% silt; non plastic; micaceous; gravel ~1 inch diameter	Saprolite
41									ML	(Continued from previous page)	
42											
43											
44	SPT	16	5	18						SILT sandy (ML); reddish brown (5 YR 4/4); damp; medium stiff; low plasticity; 80% silt, 20% sand; micaceous; SAPROLITE	
45											
46											
47											
48											
49	SPT	17	5	18						SAA; very dark brown (7.5 YR 2.5/2) to light brown (7.5 YR 6/3); stiff	
50											
51											
52											
53											
54	SPT	18	5	18						SAA; except hard; 70% silt, 30% sand	
55											
56											
57											
58											
59	SPT	19	12	16						SAA	
60										SILT sandy (ML); black (7.5 YR 2.5/1); damp; hard; low plasticity; 80% silt, 20% sand; micaceous; SAPROLITE	
61											
62											
63											
64	SPT	20	24	11						SILT sandy (ML); light brown (7.5 YR 6/3); to black (7.5 YR 2.5/1)	
65											
66											
67											
68											
69	SPT	21	22	15.5						SAA	
70											
71											
72											
73											
74	SPT	22	39	11						SAA; pebble to gravel size clasts; angular ~20% volume	
75											
76											
77											
78											
79	SPT	23	22	12						SAA; strong brown (7.5 YR 5/6); 55% silt, 45% sand	
80											

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-501

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
80											
81											
82											
83											
84											
85											
86											
87											
88											
89											
90											
91											
92											
93											
94											
95											
96											
97											
98											
99											
100											
101											
102											
103											
104											
105											
106											
107											
108											
109											
110											
111											
112											
113											
114											
115											
116											
117											
118											
119											
120											

BORING TERMINATED at 80 ft

7/26/06; water level at 20.7 ft
 7/27/06; water level at 20.4 ft
 Borehole terminated at 80 ft
 on 7/26/06

Project Name : Job Number

 MACTEC

SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-501A

Type and Diameter of Boring Mud Rotary / 3 7/8 inch	Boring Location Makeup Water Structure		Total Depth 10 feet
Drilling Contractor and Rig MACTEC/Cain/100	Elevation at Boring 430 feet	Ground Water Depth	Depth to Bedrock
Sampling Method No sampling	Sample Driving Hammer/Drop NA / NA	No. of Samples 0	Date Started 7/22/06
	Borehole Inclination 0	Logged by M. Harvey	Date Completed 7/22/06

Reviewed by / Date M. Cooke 8/4/06

Reviewed by / Date

Clay Samm 12/4/06

Lithology

Remarks

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)		
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
32											
33											
34											
35											
36											
37											
38											
39											
40											

Drilled to 10 feet without sampling.

Refusal in Rubble Fill at 10 feet.
Boring Terminated at 10 feet.

Project Name : Job Number		SOIL LOG - Boring No. B-502	
SCE&G COL : 6234-06-3534			
Type and Diameter of Boring Mud Rotary / 3 7/8 inch		Boring Location Makeup Water Structure	
Drilling Contractor and Rig MACTEC/White/331145 / CME 55 LC		Elevation at Boring 428.8 feet	Ground Water Depth 9.7 feet
Sampling Method Standard		Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 26
		Borehole Inclination 0	Date Started 7/22/06
		Logged by M. Harvey/C. Gandy	Date Completed 7/27/06

Reviewed by / Date M. Cooke 8/2/06

Reviewed by / Date

Clay Sam 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0		SPT 1	10	12					SM	SAND silty (SM); brown, gray; dry; medium dense; FILL	Fill
1		SPT 2	10	18					SM	SAA	
2		SPT 3	11	18					SM	SAND silty (SM); gray (10 YR 6/2); dry; loose; fine sand; FILL	
3		SPT 4	4	10					SM	SAA; brown (7.5 YR 6/4); moist; loose;	
4		SPT 5	4	9					SM	SAA; very loose	
5		SPT 6	2	3					SM	SAA	
6		SPT 7	2	3					SM	SAND silty (SP-SM); brown (7.5 YR 5/4); moist; loose; non plastic; 90% sand, <10% silt; FILL	
7		SPT 8	2	3					SM	SAA; brown (7.5 YR 4/5); very loose; coarse sand; gravel, angular (~1 inch diameter)	
8		SPT 9	2	3					SM	SAA; medium stiff	
9		SPT 10	3	4					SM	SAA; except loose	
10		SPT 11	2	10					CL	CLAY sandy (CL); brown (7.5 YR 4/4); moist; very soft; medium plasticity; ~50% clay, ~50% sand; gravel (~1 inch diameter, angular); FILL	
11		SPT 12	3	6					SP-SM	SAND slightly silty (SP-SM); brown (7.5 YR 5/4); moist; loose; non plastic; ~90% sand; ~10% silt; FILL	
12		SPT 13	2	6					SP-SM	SAA; brown (7.5 YR 4/4); wet; very loose; gravel (~1 inch diameter, angular)	
13		SPT 14	2	11					CL	CLAY sandy (CL); brown (7.5 YR 5/4); moist; soft; medium plasticity; ~50% clay, ~50% sand; gravel (~1 inch diameter, angular); FILL	
14		SPT 15	2	13					CL	SAA	
15		SPT 16	4	13					CL	SAA; white (7.5 YR 8/1) to brown (7.5 YR 5/4); and medium stiff; no gravel	
16		SPT 17	4	14					CL	SILT sandy (ML); brown (7.5 YR 5/4); damp; medium stiff; low plasticity; ~50% sand, 50% silt	

Project Name : Job Number

 MACTEC

SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-502

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40										SILT sandy (ML); brown (7.5 YR 5/4); damp; medium stiff; low plasticity; ~50% sand, 50% silt (Continued from previous page)	Bottom of fill, top of residuum
41											
42											
43											
44	SPT 18	4	16						CL	CLAY (CL); dark red (2.5 YR 3/6); dry; stiff; medium plasticity; RESIDUUM	
45									ML	SILT (ML); dark red (2.5 YR 3/6); damp; medium stiff; medium plasticity; silt and clay >95%, <5% sand; micaceous; RESIDUUM	
46											
47											
48											
49	SPT 19	5	18								
50											
51											
52									ML	SILT sandy (ML); brown (7.5 YR 4/4); moist; medium stiff; low plasticity; silt 60%, sand 40%; micaceous; pyritic; SAPROLITE	Saprolite
53											
54	SPT 20	4	16.5								
55											End day 7/26/06; water level at 10.7 ft Begin day 7/27/06; water level at 9.7 ft
56											
57											
58											
59	SPT 21	8	16							SAA; light brown (7.5 YR 6/4) to black (7.5 YR 2.5/1); black soil is predominate; damp; very stiff; low plasticity; silt 80%, sand 20%; pyritic; micaceous; SAPROLITE	
60											
61											
62											
63											
64	SPT 22	15	16							SAA; hard	
65											
66											
67											
68											
69	SPT 23	17	15							SILT sandy (ML); black with white veins (7.5 YR 2.5/1); damp; hard	
70											
71											
72											
73											
74	SPT 24	17	17							SAA; white (10 R 8/1) to black (2.5 YR 2.5/1)	
75										SAA; brown (7.5 YR 4/3)	
76											
77											
78											
79	SPT 25	50/5	5							SILT (ML) black (2.5 YR 2.5/1); moist; silt >95%, sand <5%	
80											

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-502

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
80											
81											
82											
83											
84											
85											
86											
87											
88											
89											
90											
91											
92											
93											
94											
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109											
110											
111											
112											
113											
114											
115											
116											
117											
118											
119											
120											

BORING TERMINATED at 80 ft

Drilling terminated on
7/27/06

Project Name : Job Number MACTEC		SOIL LOG - Boring No. B-601	
SCE&G COL : 6234-06-3534			
Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ		Boring Location Switchyard	
Drilling Contractor and Rig MACTEC/Cain/100 / D 50		Elevation at Boring 418.8 feet	Ground Water Depth 55.2 feet
Sampling Method Standard		Sample Driving Hammer/Drop 140 lbs / 30 inches	No. of Samples 15
		Borehole Inclination 0	Logged by M. Harvey
			Date Completed 7/19/06

Reviewed by / Date M. Cooke 8/4/06

Reviewed by / Date

Clay Sam 12/4/06

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
0									ML	SILT (ML); dark reddish brown (2.5 YR 2.5/4); dry; medium stiff; RESIDUUM	Residuum
1	SPT 1	2	5	14					ML	SAA; dark reddish brown (2.5 YR 3/4); very stiff; RESIDUUM	
2	SPT 2	5	13	12					ML	SILT clayey (ML); red (2.5 YR 4/6); dry; hard; RESIDUUM	
3									ML	SAA; trace mica; RESIDUUM	
4	SPT 3	9	13	14					ML	SILT sandy (ML); red (5 YR 4/6); dry; very stiff; trace fine sand; micaceous	
5									ML	SAA	
6	SPT 4	8	13	16					ML	SAND silty (SM); dark yellowish brown (10 YR 4/4); dry; medium dense; micaceous	
7									ML	SILT sandy (ML); brown (7.5 YR 5/8); dry; stiff; micaceous	
8									ML		
9	SPT 5	7	10	14					ML	SILT (ML); brown (7.5 YR 5/8); stiff; manganese staining; trace sand; micaceous; SAPROLITE	Saprolite first occurrence
10									ML		
11	SPT 6	5	9	12					ML	SILT (ML); yellowish reddish brown (5 YR 4/6, 7.5 YR 5/6); dry; stiff; some manganese staining; trace fine sand; micaceous	
12									ML	SAA; light greenish gray (Gley 1 7/1/5GY); moist; very stiff	
13									ML	SAA; brown (7.5 YR 4/6); dry; very stiff; some fine sand; micaceous	
14	SPT 7	4	6	9					ML		
15									ML		
16									ML		
17									ML		
18									ML		
19	SPT 8	3	4	9					ML		
20									ML		
21									ML		
22									ML		
23									ML		
24	SPT 9	2	4	11					ML		
25									ML		
26									ML		
27									ML		
28									ML		
29	SPT 10	4	6	11					ML		
30									ML		
31									ML		
32									ML		
33									ML		
34	SPT 11	6	9	3					ML		
35									ML		
36									ML		
37									ML		
38									ML		
39	SPT 12	7	9	12					ML		
40									ML		

Project Name : Job Number



SCE&G COL : 6234-06-3534

SOIL LOG - Boring No. B-601

Depth (feet)	Sample	Sample Type & No.	Uncorrected Blows/6 inches	Recovery (inches)	Water Content	Grain Size	Atterberg Limits	Lithology	Soil Type (USCS)	Lithology	Remarks
40											
41											
42											
43											
44		SPT 13	16 39 25	10 18							
45											
46											
47											
48											
49		SPT 14	50/2	2 2							
50											
51											
52											
53											
54		SPT 15	50/1	0 1							
55											
56											
57											
58											
59											
60											
61											
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											

SILT (ML); brown (7.5 YR 5/8); stiff; manganese staining; trace sand; micaceous; SAPROLITE
(Continued from previous page)

SAND (SM); upper 7 inch, white with black and brown; medium to coarse grained; lower 3 inch, brown (2.5 Y 4/4); dry; very dense; SAPROLITE

SAND (SM); dark grayish black (Gley 1 3/N); medium to coarse grained; PARTIALLY WEATHERED ROCK

Refusal at 55.2 ft, see rock log

No recovery

Partially weathered rock first occurrence

SCE&G COL : 6234-06-3534

Type and Diameter of Boring Mud Rotary / 3 7/8 inch/NQ	Boring Location Switchyard		Total Depth 86 feet
Drilling Contractor and Rig MACTEC/Cain/100 / D 50	Elevation at Boring 418.8 feet	Ground Water Depth	Depth to Bedrock 55.2 feet
Casing Size and Depth 3.8 / 55.2 feet	Length of Core Barrel and Bit 13 feet	No. of Core Boxes 2	Date Started 7/13/06
	Borehole Inclination 0	Logged by M. Harvey	Date Completed 7/19/06

Reviewed by / Date M. Cooke 8/4/06

Depth (feet)	Run No.	Recovery / Cut	% RQD	Weathering	Strength	In-Situ Testing	Lithology	Remarks
56	1	4.0 5.0	0	HW	R2		QUARTZ DIORITE; highly weathered to 63 ft Fracture zone from 55.2 to 63 ft	Tricone refusal at 55.2 ft, see rock log
57								
58								
59	2	4.0 5.8	46.5	HW	R2		QUARTZ DIORITE; dark gray (Gley 2 6/1, 5 PB to 2.5/1 5/1); average (4/1/5PB)	
60								
61								
62	3	5.0 5.0	100	F	R4		SAA; lighter color than above, high angle quartz dikes (2 Gley 8/1/5PB to 2.5/1/5PB, 6/1/5PB average)	
63								
64								
65	4	5.0 5.0	100	F	R4		Quartz seam to granite pegmatite, with chlorite, 9 inch, 70° Quartz diorite with high angle quartz seams nearly vertical	
66								
67								
68	5	5.0 5.0	100	F	R4		MIGMATITE; quartz dike with chlorite and chalcopryite, hornblende gneiss	
69								
70								
71	6	5.0 5.0	100	F	R4		QUARTZ DIORITE; medium grained; blue, gray to black with high angle quartz seams	
72								
73								
74							MIGMATITE	
75								
76								
77							QUARTZ DIORITE; medium grained	
78								
79								
80							CORING TERMINATED at 86 ft	
81								
82								
83								
84								
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Coring terminated on 7/19/06