



November 19, 2007

Mr. Tom McCallum
Georgia Power Company
C/O Southern Nuclear Operating Company, Inc.
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, Alabama 35201
Phone: (205) 992-6697
e-mail: tomccall@southernco.com

**Subject: Addendum to Geotechnical Data Report
Attachment F – Laboratory Testing Data (Geotechnical), Revision 3,
November 9, 2007
Vogtle Units 3 & 4 COL Project
Vogtle Electric Generating Plant
Burke County, Georgia
MACTEC Project Number 6141-06-0286**

Dear Mr. McCallum:

MACTEC Engineering & Consulting, Inc. is pleased to submit this Addendum to Attachment F of the Final Data Report for the geotechnical exploration and laboratory testing for the Vogtle Units 3 & 4 COL Project located adjacent to the existing Vogtle Electric Generating Plant near Waynesboro, Burke County, Georgia.

This addendum consists of direct shear test data, index test results (gradation, atterberg limits, moisture content), and carbonate content test results that were not previously submitted with Attachment F, Revision 3, November 9, 2007.

It has been a pleasure to perform the work described in the attached report. If you have any questions, or if we may be of further service, we hope that you will contact us at your convenience.

Sincerely,

MACTEC ENGINEERING & CONSULTING, INC.

A handwritten signature in black ink, appearing to read "Matthew F. Cooke".

Matthew F. Cooke
Senior Geologist
Site Superintendent
Registered, Georgia 1887

A handwritten signature in black ink, appearing to read "Pieter J. DePree".

Pieter J. DePree
Principal Geotechnical Engineer
Registered, Georgia 19637

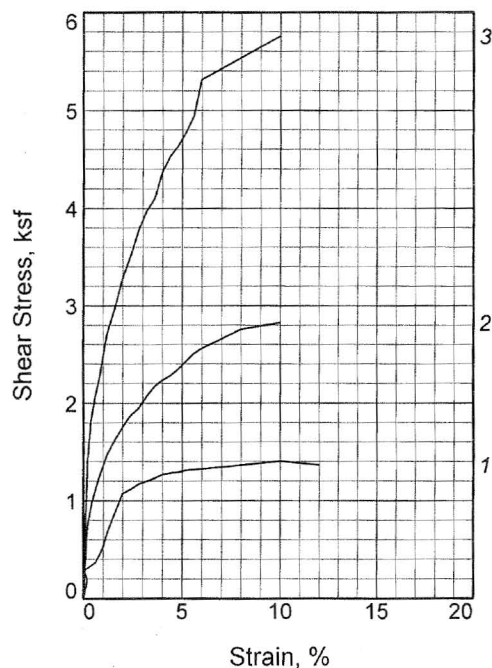
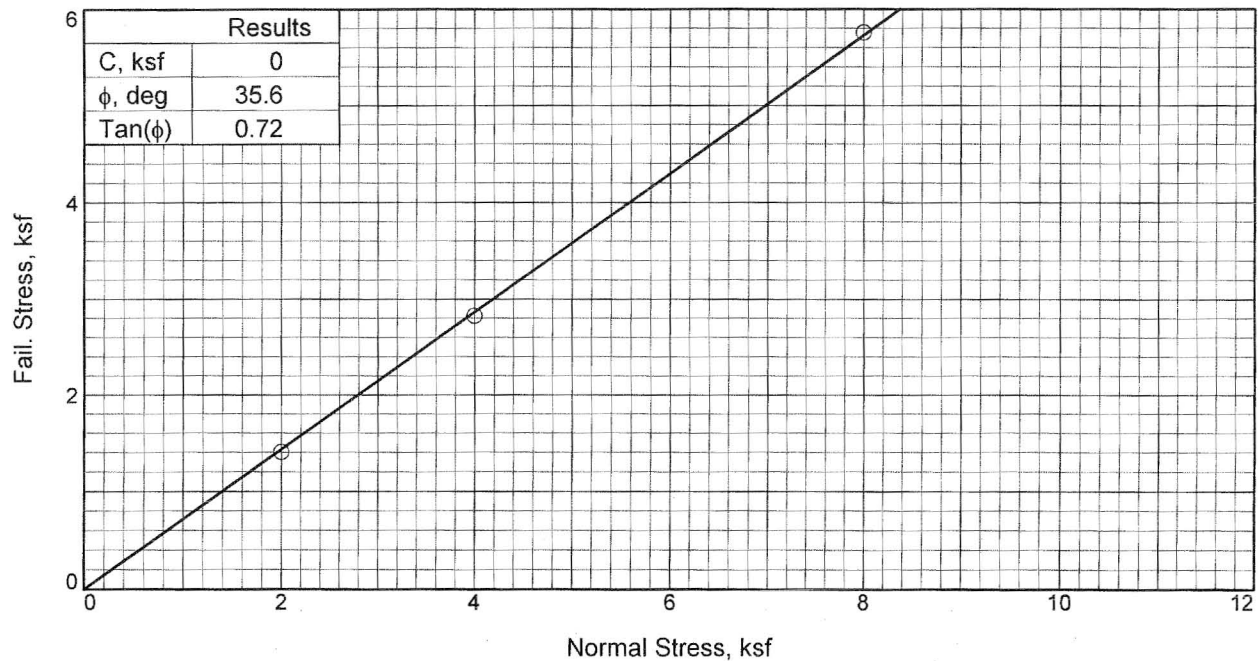
A handwritten signature in black ink, appearing to read "Allen Lancaster".

Wm. Allen Lancaster
Project Manager
Civil Engineer
Registered, Georgia 7075

By with Permission

By with Permission

DCN VGCOL 324



Sample No.		1	2	3
Initial	Water Content, %	16.0	13.8	11.9
	Dry Density, pcf	98.1	96.1	88.9
	Saturation, %	60.1	49.4	35.9
	Void Ratio	0.7179	0.7532	0.8966
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
At Test	Water Content, %	26.4	22.1	21.8
	Dry Density, pcf	98.3	96.2	88.9
	Saturation, %	99.8	79.4	65.8
	Void Ratio	0.7146	0.7521	0.8952
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
Normal Stress, ksf		2.00	4.00	8.00
Fail. Stress, ksf		1.40	2.83	5.76
Strain, %		10.0	10.0	10.0
Ult. Stress, ksf				
Strain, %				
Strain rate, mm./min.		0.0	0.0	0.0

Sample Type: Undisturbed
Description: SAND, clayey (SC)

LL= **PL=** **PI=**

Specific Gravity= 2.7

Remarks: Lab no. 7476

Lab no. _____

Client: GPC c/o SNOC

Project: Vogtle Units 3 & 4 COL Project

Location: B-1130

Sample Number: UD-1

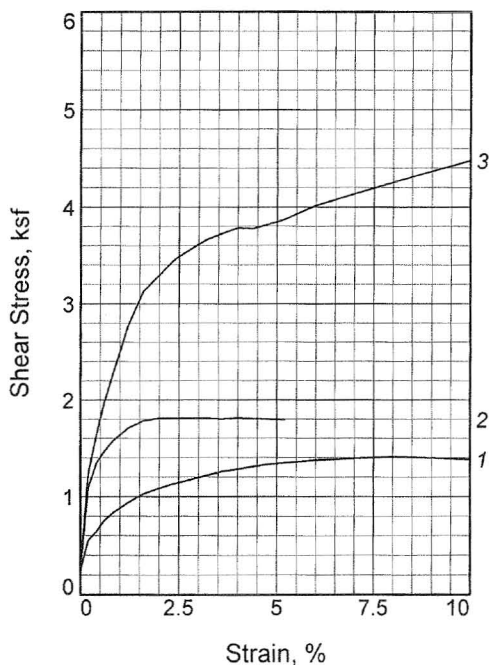
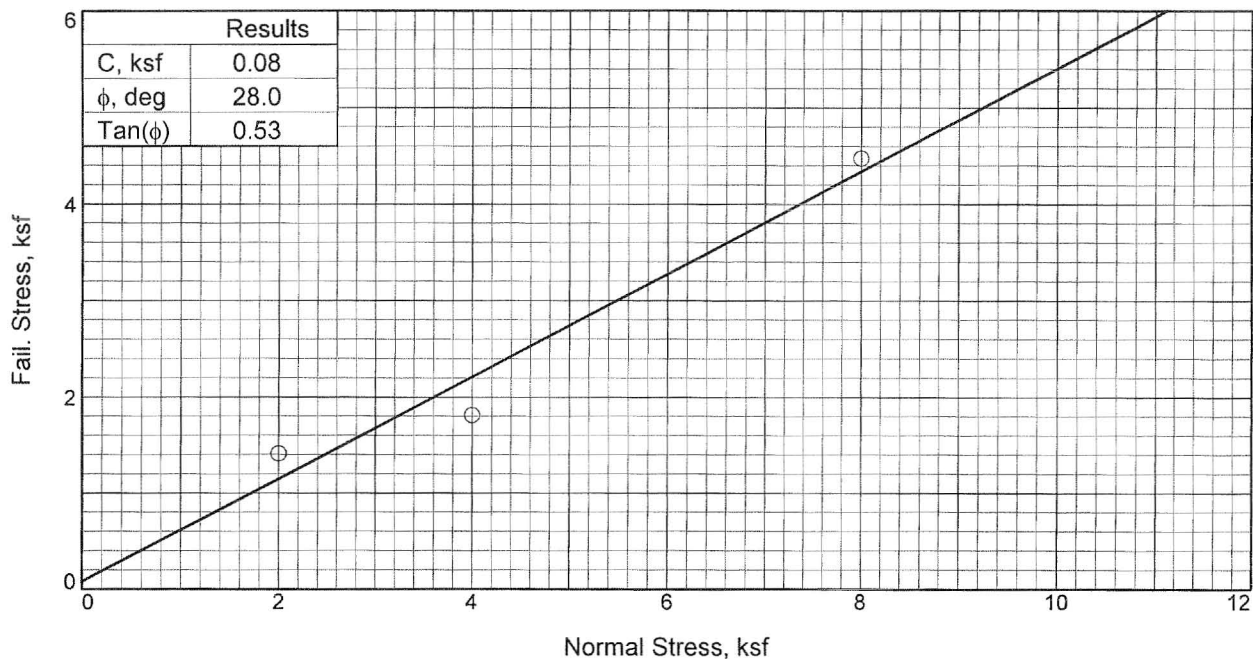
Depth: 28.5/188.96

Proj. No.: 6141-06-0286

Date: 3/8/07

DIRECT SHEAR TEST REPORT

MACTEC ENGINEERING AND CONSULTING, INC.



Sample No.		1	2	3
Initial	Water Content, %	17.3	24.7	15.7
	Dry Density, pcf	97.2	84.3	107.0
	Saturation, %	63.7	66.6	73.6
	Void Ratio	0.7344	1.0002	0.5751
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
At Test	Water Content, %	27.1	37.1	21.4
	Dry Density, pcf	97.4	84.3	107.0
	Saturation, %	100.2	100.1	100.3
	Void Ratio	0.7307	1.0002	0.5751
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
Normal Stress, ksf		2.00	4.00	8.00
Fail. Stress, ksf		1.41	1.81	4.47
Strain, %		8.0	4.0	10.0
Ult. Stress, ksf				
Strain, %				
Strain rate, mm./min.		0.0	0.0	0.0

Sample Type: Undisturbed
Description: SAND, with Silt (SP-SM)

LL= **PL=** **PI=**

Specific Gravity= 2.7

Remarks: Lab no. 7481

Lab no. _____

Client: GPC c/o SNOC

Project: Vogtle Units 3 & 4 COL Project

Location: B-1132

Sample Number: UD-1

Depth: 28.5/188.96

Proj. No.: 6141-06-0286

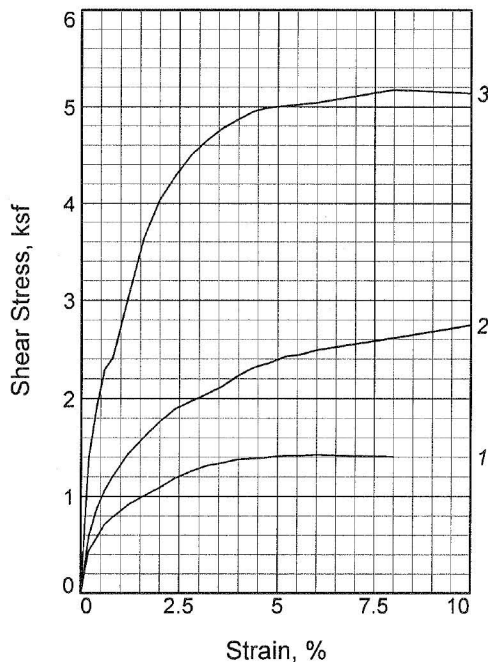
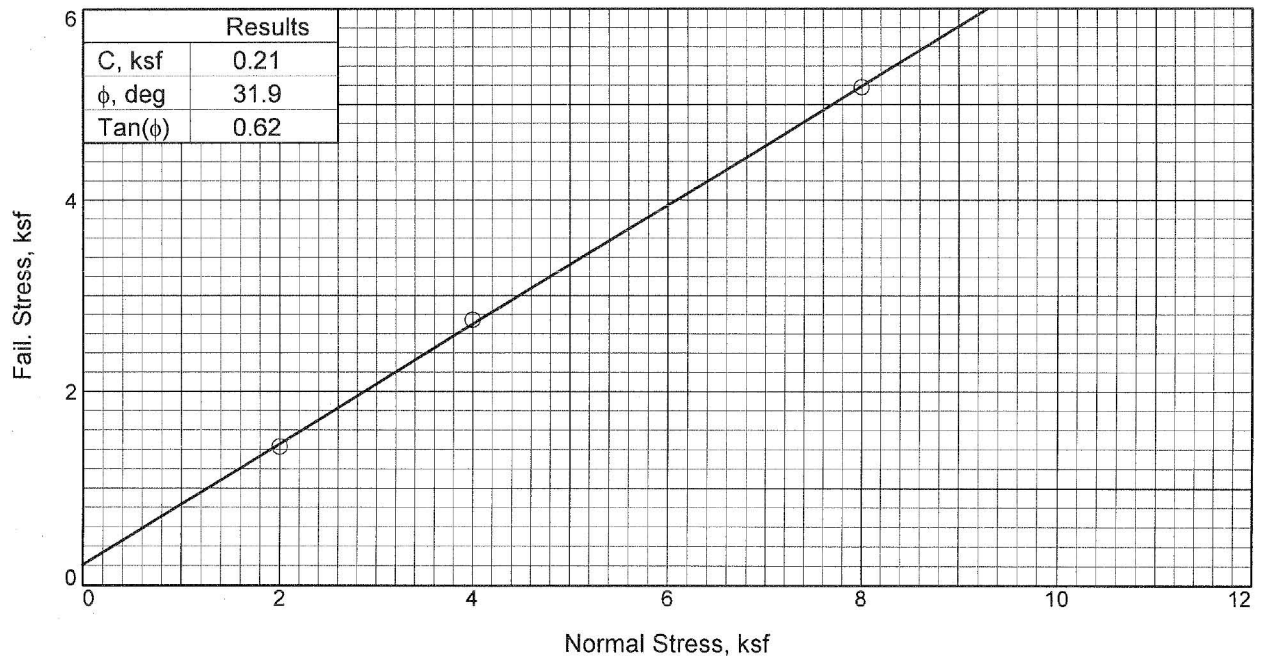
Date: 1/16/2007

DIRECT SHEAR TEST REPORT

MACTEC ENGINEERING AND CONSULTING, INC.

Tested By: JA

3 of 17
Checked By: DK



Sample No.		1	2	3
Initial	Water Content, %	15.9	13.6	8.8
	Dry Density, pcf	90.3	87.8	91.4
	Saturation, %	49.5	39.8	28.2
	Void Ratio	0.8659	0.9197	0.8444
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
At Test	Water Content, %	26.5	28.8	26.8
	Dry Density, pcf	90.3	87.9	91.4
	Saturation, %	82.6	84.8	85.8
	Void Ratio	0.8657	0.9184	0.8436
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
Normal Stress, ksf		2.00	4.00	8.00
Fail. Stress, ksf		1.43	2.74	5.18
Strain, %		6.0	10.0	8.0
Ult. Stress, ksf				
Strain, %				
Strain rate, mm./min.		0.0	0.0	0.0

Sample Type: Undisturbed
Description: SAND with silt (SP-SM)
LL= **PL=** **PI=**
Specific Gravity= 2.7
Remarks: Lab no. 7589

Client: GPC c/o SNOC

Project: Vogtle Units 3 & 4 COL Project

Location: B-3030

Sample Number: UD-1

Depth: 30.0/191.99

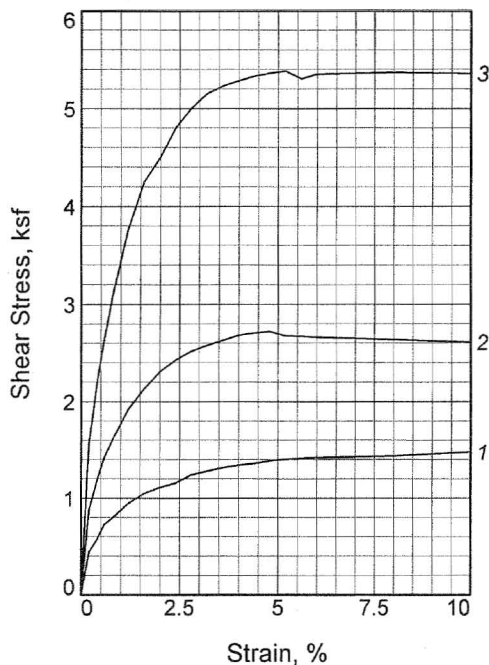
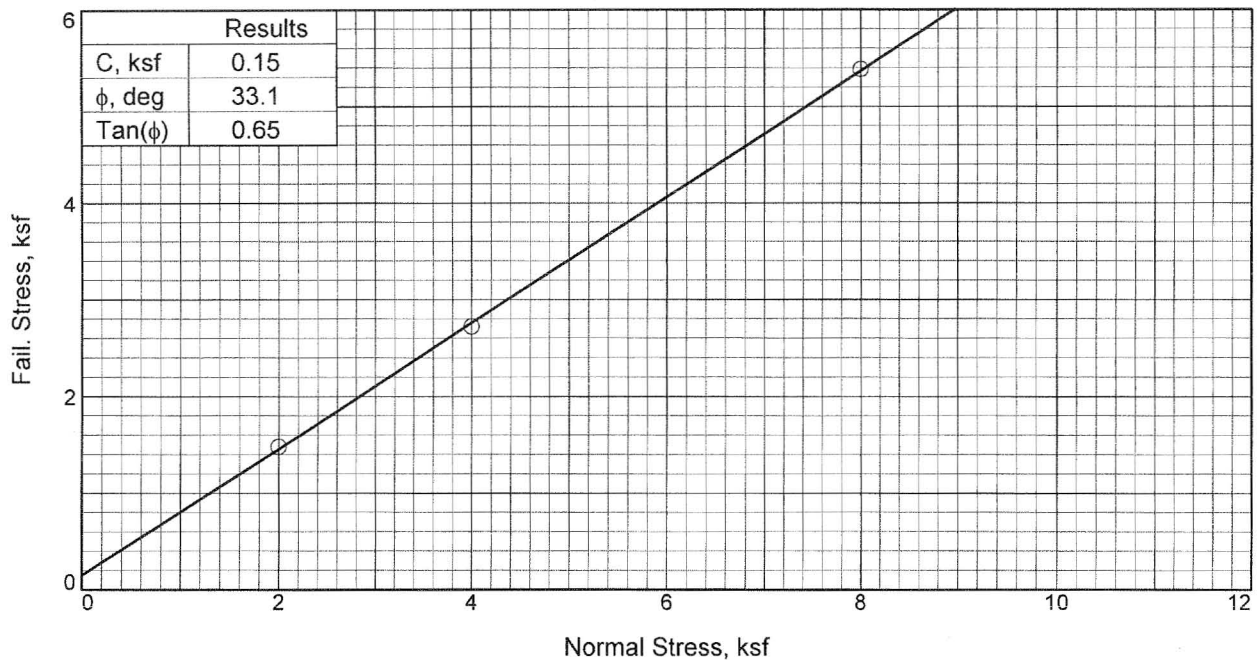
Proj. No.: 6141-06-0286

Date: 1/19/07

DIRECT SHEAR TEST REPORT

MACTEC ENGINEERING AND CONSULTING, INC.

Lab no. _____



Sample No.		1	2	3
Initial	Water Content, %	15.6	16.8	21.0
	Dry Density, pcf	87.0	90.8	93.7
	Saturation, %	45.3	53.2	71.4
	Void Ratio	0.9271	0.8476	0.7908
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
At Test	Water Content, %	28.2	27.1	26.6
	Dry Density, pcf	87.0	90.8	93.7
	Saturation, %	81.8	85.8	90.5
	Void Ratio	0.9271	0.8472	0.7900
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
Normal Stress, ksf		2.00	4.00	8.00
Fail. Stress, ksf		1.48	2.72	5.38
Strain, %		10.0	4.8	5.2
Ult. Stress, ksf				
Strain, %				
Strain rate, mm./min.		0.0	0.0	0.0

Sample Type: Undisturbed
Description: SAND, with silt (SP-SM)
LL= **PL=** **PI=**
Specific Gravity= 2.687
Remarks: Lab no. 7595

Lab no. _____

Client: GPC c/o SNOC

Project: Vogtle Units 3 & 4 COL Project

Location: B-3033

Sample Number: UD-1

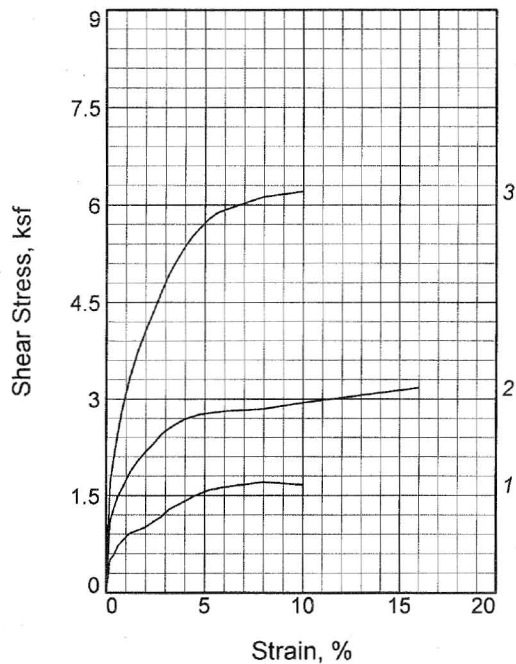
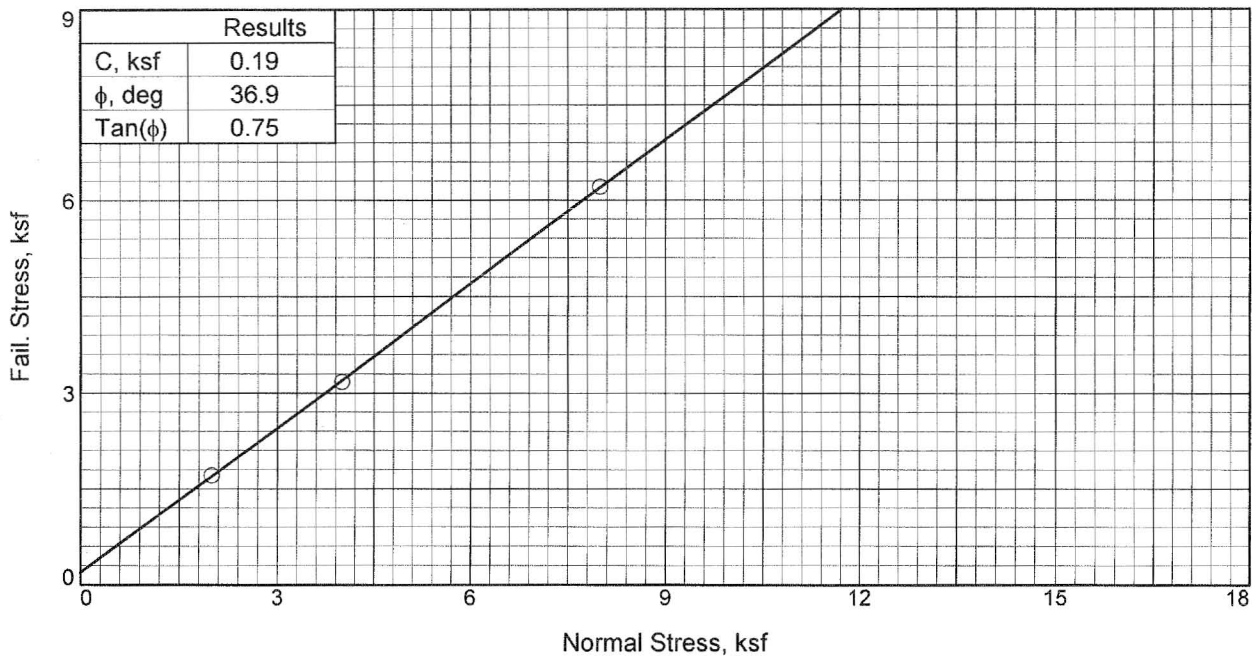
Depth: 13.5/208.76

Proj. No.: 6141-06-0286

Date: 1/17/07

DIRECT SHEAR TEST REPORT

MACTEC ENGINEERING AND CONSULTING, INC.



Sample No.		1	2	3
Initial	Water Content, %	17.4	16.3	15.3
	Dry Density, pcf	104.8	101.1	102.9
	Saturation, %	77.3	65.8	64.9
	Void Ratio	0.6081	0.6673	0.6375
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
At Test	Water Content, %	22.6	23.5	21.5
	Dry Density, pcf	104.8	101.4	103.2
	Saturation, %	100.1	95.8	91.5
	Void Ratio	0.6081	0.6630	0.6338
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
Normal Stress, ksf		2.00	4.00	8.00
Fail. Stress, ksf		1.71	3.17	6.21
Strain, %		8.0	16.0	10.0
Ult. Stress, ksf				
Strain, %				
Strain rate, mm./min.		0.0	0.0	0.0

Sample Type: Undisturbed
Description: Sand, silty (SM)

LL= **PL=** **PI=**

Specific Gravity= 2.7

Remarks: Lab no. 7600

Lab no. _____

Client: GPC c/o SNOC

Project: Vogtle Units 3 & 4 COL Project

Location: B-3034

Sample Number: UD-2

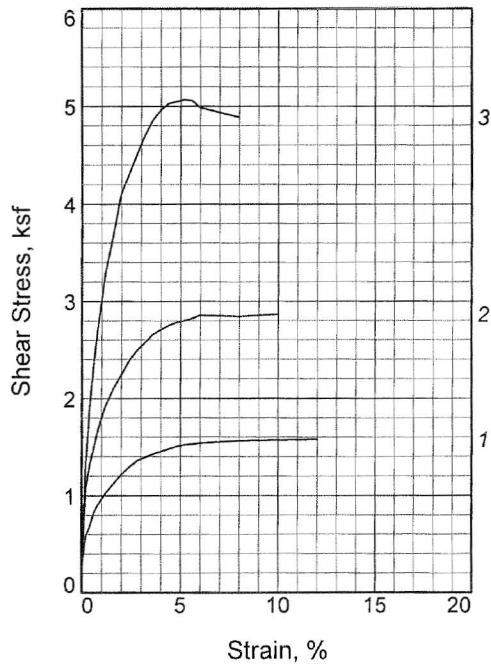
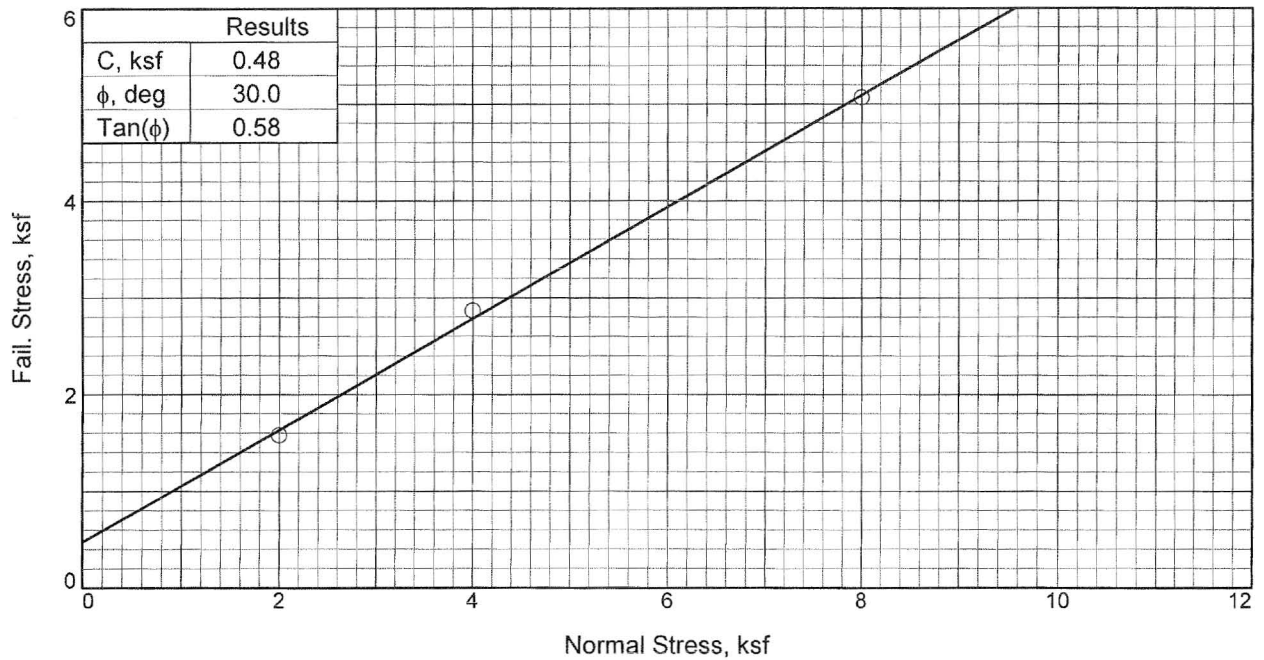
Depth: 33.5/191.17

Proj. No.: 6141-06-0286

Date: 12/19/07

DIRECT SHEAR TEST REPORT

MACTEC ENGINEERING AND CONSULTING, INC.



Sample No.		1	2	3
Initial	Water Content, %	15.1	14.8	15.8
	Dry Density, pcf	97.6	98.6	104.5
	Saturation, %	56.1	56.2	69.4
	Void Ratio	0.7271	0.7089	0.6133
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
At Test	Water Content, %	23.1	22.5	16.0
	Dry Density, pcf	97.6	98.7	104.7
	Saturation, %	85.7	85.7	70.8
	Void Ratio	0.7266	0.7084	0.6100
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
Normal Stress, ksf		2.00	4.00	8.00
Fail. Stress, ksf		1.58	2.87	5.07
Strain, %		12.0	10.0	5.2
Ult. Stress, ksf				
Strain, %				
Strain rate, mm./min.		0.0	0.0	0.0

Sample Type: Undisturbed
Description: SAND, silty (SM)

LL= **PL=** **PI=**

Specific Gravity= 2.7

Remarks: Lab no. 7606

Lab no. _____

Client: GPC c/o SNOC

Project: Vogtle Units 3 & 4 COL Project

Location: B-4030

Sample Number: UD-3

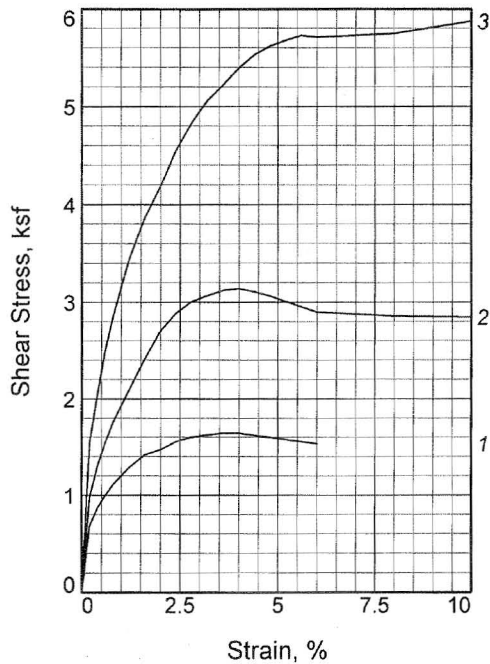
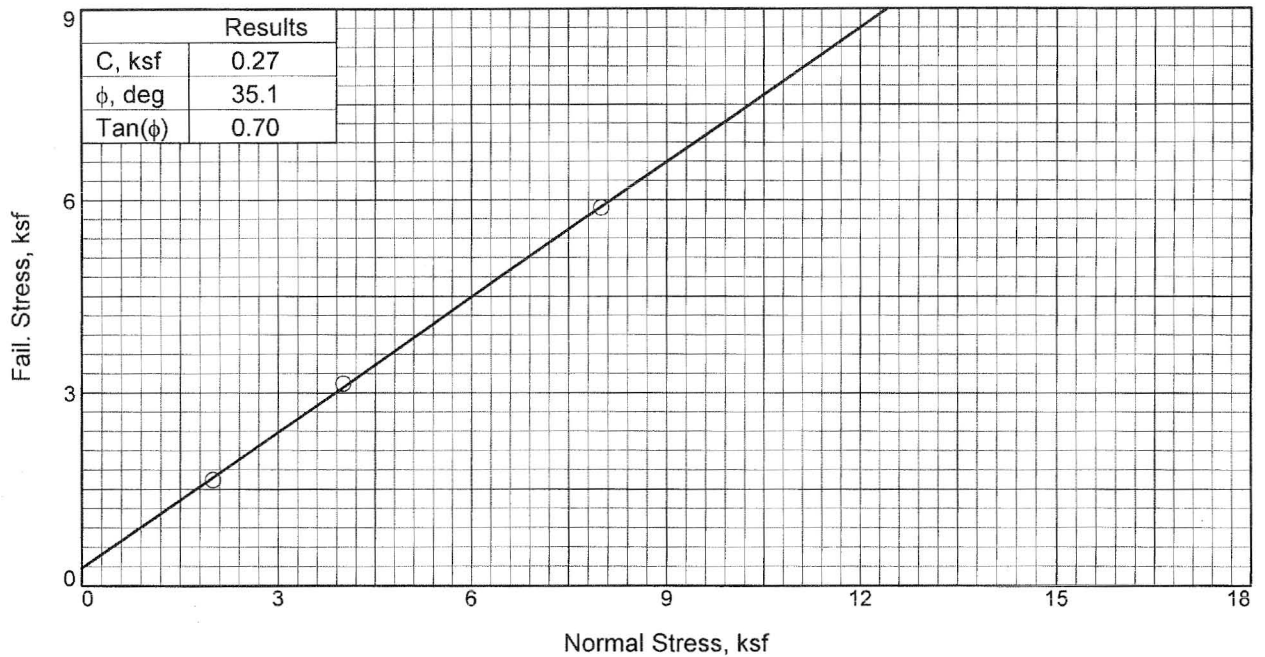
Depth: 33.5/188.85

Proj. No.: 6141-06-0286

Date: 1/31/07

DIRECT SHEAR TEST REPORT

MACTEC ENGINEERING AND CONSULTING, INC.



Sample No.		1	2	3
Initial	Water Content, %	15.0	14.4	13.4
	Dry Density, pcf	103.2	101.3	100.3
	Saturation, %	64.0	58.7	53.1
	Void Ratio	0.6337	0.6643	0.6801
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
At Test	Water Content, %	20.9	22.2	21.9
	Dry Density, pcf	103.2	101.4	100.3
	Saturation, %	89.3	90.5	87.0
	Void Ratio	0.6333	0.6623	0.6801
	Diameter, mm.	63.6	63.6	63.6
	Height, mm.	23.7	23.7	23.7
Normal Stress, ksf		2.00	4.00	8.00
Fail. Stress, ksf		1.64	3.14	5.87
Strain, %		3.6	4.0	10.0
Ult. Stress, ksf				
Strain, %				
Strain rate, mm./min.		0.0	0.0	0.0

Sample Type: Undisturbed
Description: SAND, silty (SM)

LL= **PL=** **PI=**
Specific Gravity= 2.70
Remarks: Lab no. 7610

Lab no. _____

Client: GPC c/o SNOC

Project: Vogtle Units 3 & 4 COL Project

Source of Sample: B-4031

Depth: 28.5/193.63

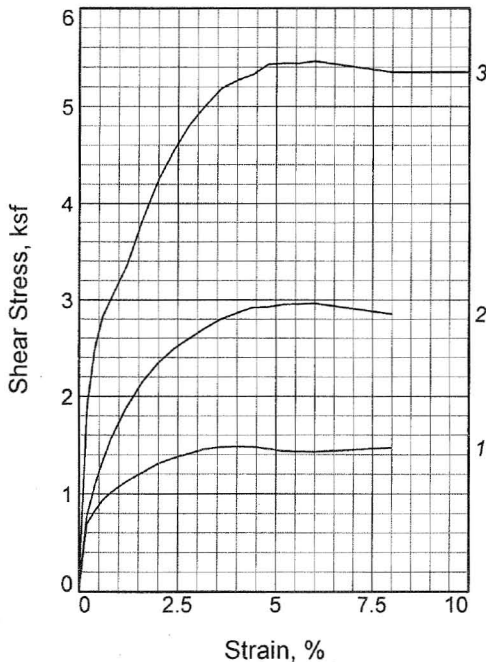
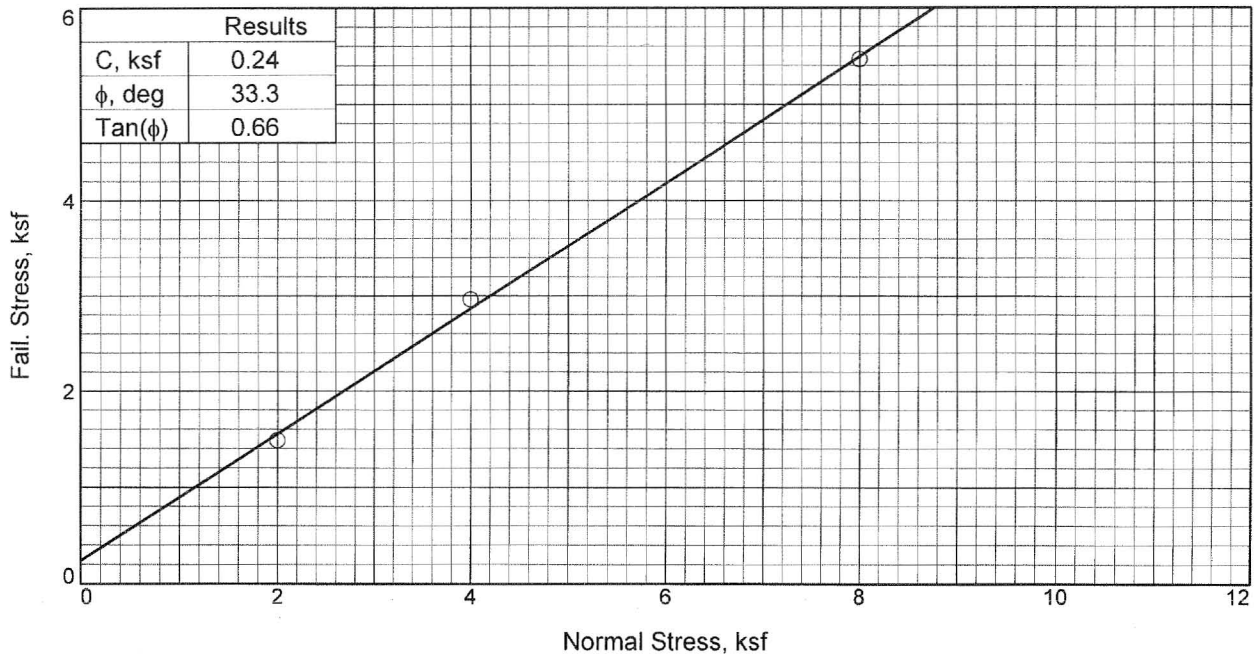
Sample Number: UD-1

Proj. No.: 6141-06-0286

Date: 2/18/07

DIRECT SHEAR TEST REPORT

MACTEC ENGINEERING AND CONSULTING, INC.



Sample No.		1	2	3
Initial	Water Content, %	18.9	18.5	17.6
	Dry Density, pcf	93.0	93.8	96.8
	Saturation, %	62.7	62.8	64.2
	Void Ratio	0.8127	0.7967	0.7413
	Diameter, mm.	63.7	63.6	63.6
	Height, mm.	23.7	23.7	23.7
At Test	Water Content, %	26.8	25.0	22.8
	Dry Density, pcf	93.1	94.1	96.8
	Saturation, %	89.1	85.3	83.2
	Void Ratio	0.8109	0.7917	0.7411
	Diameter, mm.	63.7	63.6	63.6
	Height, mm.	23.7	23.7	23.7
Normal Stress, ksf		2.00	4.00	8.00
Fail. Stress, ksf		1.49	2.96	5.46
Strain, %		4.0	6.0	6.0
Ult. Stress, ksf				
Strain, %				
Strain rate, mm./min.		0.0	0.0	0.0

Sample Type: Undisturbed
Description: SAND, with clay (SP-SC)
LL= **PL=** **PI=**
Specific Gravity= 2.7
Remarks: Lab no. 7620

Lab no. _____

Client: GPC c/o SNOC

Project: Vogtle Units 3 & 4 COL Project

Location: B-4034

Sample Number: UD-2

Depth: 33.5/189.29

Proj. No.: 6141-06-0286

Date: 2/17/2007

DIRECT SHEAR TEST REPORT

MACTEC ENGINEERING AND CONSULTING, INC.

Particle Size Distribution Report

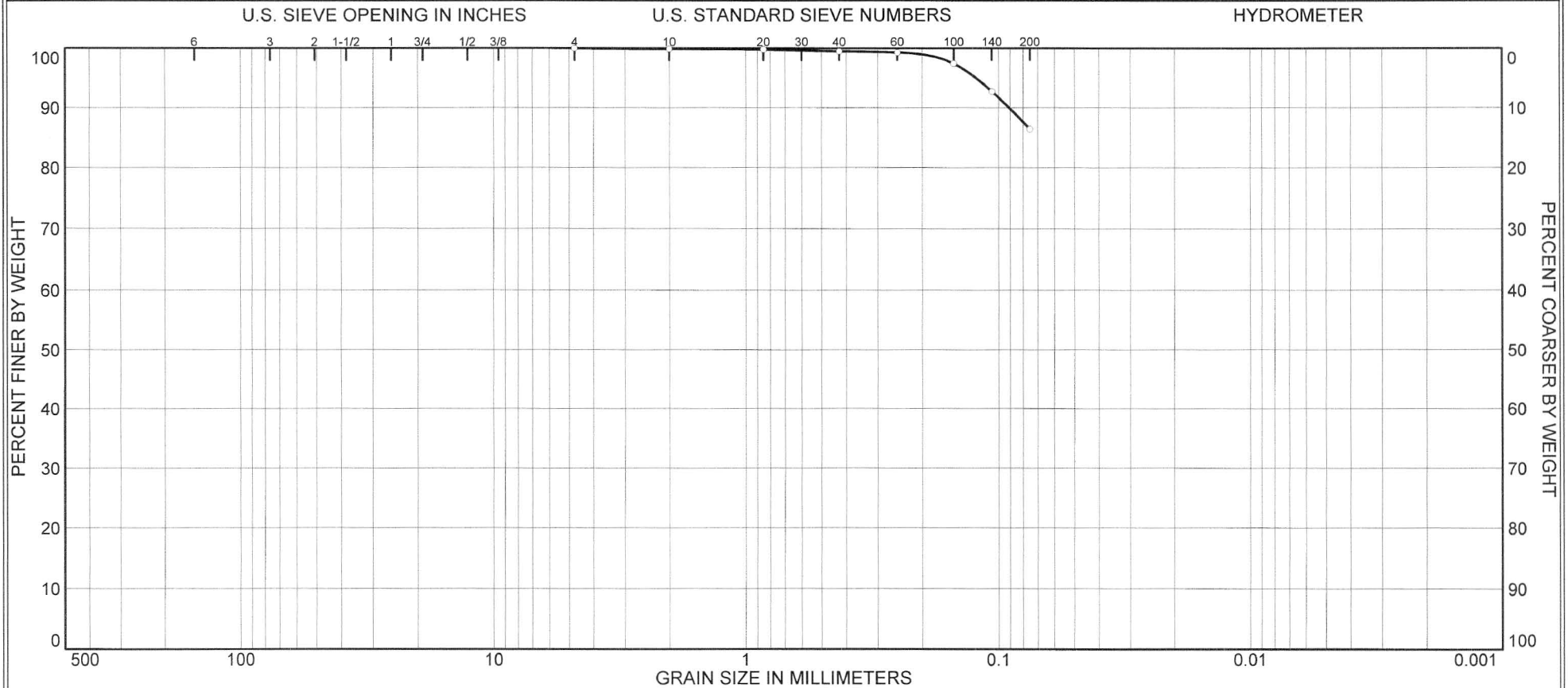
U.S. Sieve Opening in Inches

U.S. Standard Sieve Numbers

Hydrometer

Grain Size (mm)	Sieve / Note	Percent Finer (%)	
		Tested	Standard
500		100	100
250	No. 6	100	100
150	No. 10	100	100
100	No. 20	100	100
75	No. 30	100	100
60	No. 40	100	100
42.5	No. 60	100	100
30	No. 80	100	100
25	No. 100	100	100
20	No. 120	100	100
15	No. 160	100	100
12.5	No. 200	100	100
10	No. 240	100	100
7.5	No. 300	100	100
6	No. 360	100	100
4.75	No. 40	100	100
4.25	No. 45	100	100
3.75	No. 50	100	100
3.0	No. 60	100	100
2.5	No. 75	100	100
2.0	No. 100	100	100
1.5	No. 120	100	100
1.18	No. 160	100	100
0.85	No. 200	100	100
0.75	No. 240	100	100
0.6	No. 300	100	100
0.425	No. 40	100	100
0.3	No. 60	100	100
0.25	No. 75	100	100
0.2	No. 100	100	100
0.15	No. 120	100	100
0.125	No. 160	100	100
0.106	No. 200	100	100
0.075	No. 240	100	100
0.06	No. 300	100	100
0.05	No. 360	100	100
0.0425	No. 40	100	100
0.0375	No. 45	100	100
0.03	No. 60	100	100
0.025	No. 75	100	100
0.02	No. 100	100	100
0.015	No. 120	100	100
0.0125	No. 160	100	100
0.0106	No. 200	100	100
0.0075	No. 240	100	100
0.006	No. 300	100	100
0.005	No. 360	100	100
0.00425	No. 40	100	100
0.00375	No. 45	100	100
0.003	No. 60	100	100
0.0025	No. 75	100	100
0.002	No. 100	100	100
0.0015	No. 120	100	100
0.00125	No. 160	100	100
0.00106	No. 200	100	100
0.00075	No. 240	100	100
0.0006	No. 300	100	100
0.0005	No. 360	100	100
0.000425	No. 40	100	100
0.000375	No. 45	100	100
0.0003	No. 60	100	100
0.00025	No. 75	100	100
0.0002	No. 100	100	100
0.00015	No. 120	100	100
0.000125	No. 160	100	100
0.000106	No. 200	100	100
0.000075	No. 240	100	100
0.00006	No. 300	100	100
0.00005	No. 360	100	100
0.0000425	No. 40	100	100
0.0000375	No. 45	100	100
0.00003	No. 60	100	100
0.000025	No. 75	100	100
0.00002	No. 100	100	100
0.000015	No. 120	100	100
0.0000125	No. 160	100	100
0.0000106	No. 200	100	100
0.0000075	No. 240	100	100
0.000006	No. 300	100	100
0.000005	No. 360	100	100
0.00000425	No. 40	100	100
0.00000375	No. 45	100	100
0.000003	No. 60	100	100
0.0000025	No. 75	100	100
0.000002	No. 100	100	100
0.0000015	No. 120	100	100
0.00000125	No. 160	100	100
0.00000106	No. 200	100	100
0.00000075	No. 240	100	100
0.0000006	No. 300	100	100
0.0000005	No. 360	100	100
0.000000425	No. 40	100	100
0.000000375	No. 45	100	100
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Particle Size Distribution Report

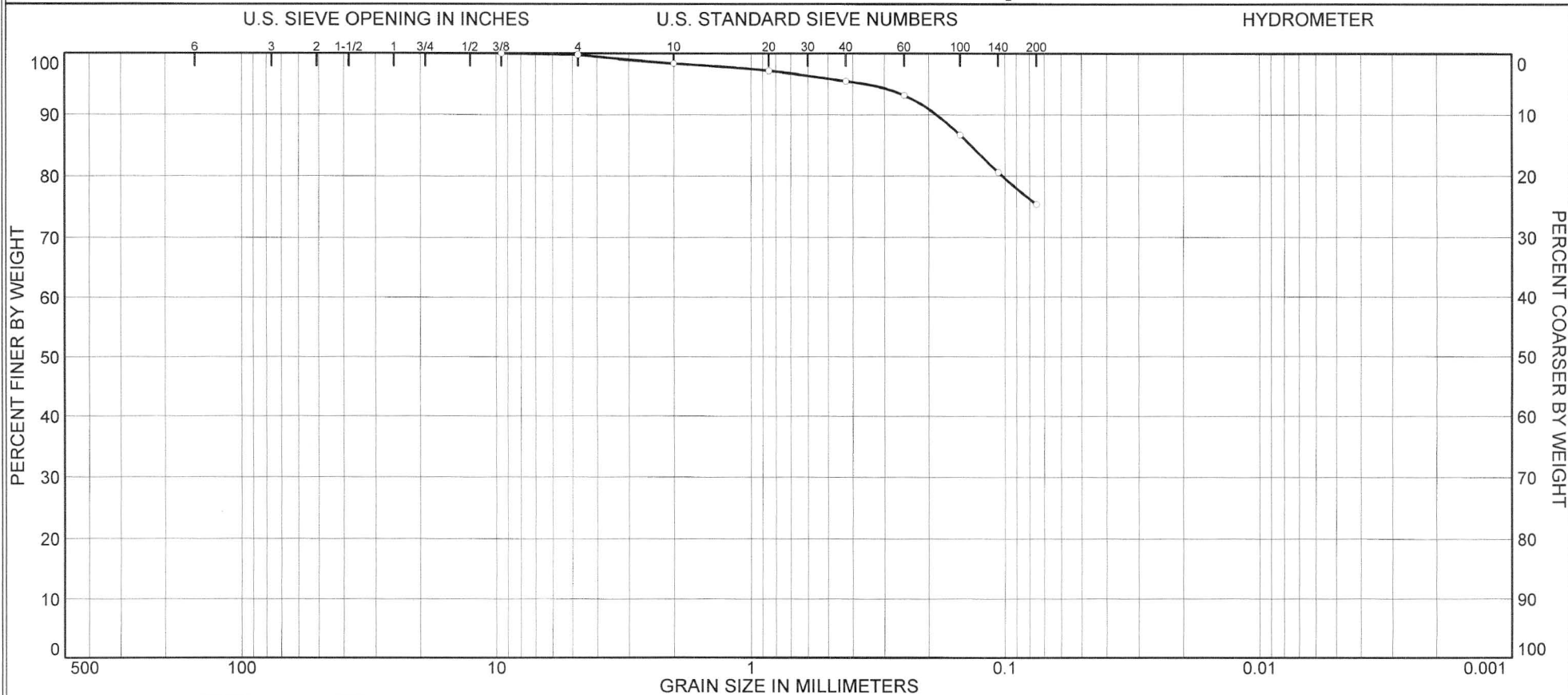


% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.1	0.4	13.1	86.4	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
B-3002	SS-27	123.5/95.4 ft.	10/18/07	MH	Silt (MH)		64	34

Client GPC c/o SNOG		MACTEC ENGINEERING AND CONSULTING, INC.	○ Tested by: EH Reviewed by: HJ
Project Vogtle Units 3 & 4 COL Project			
Project No. 6141-06-0286	Lab no. 8077		

Particle Size Distribution Report

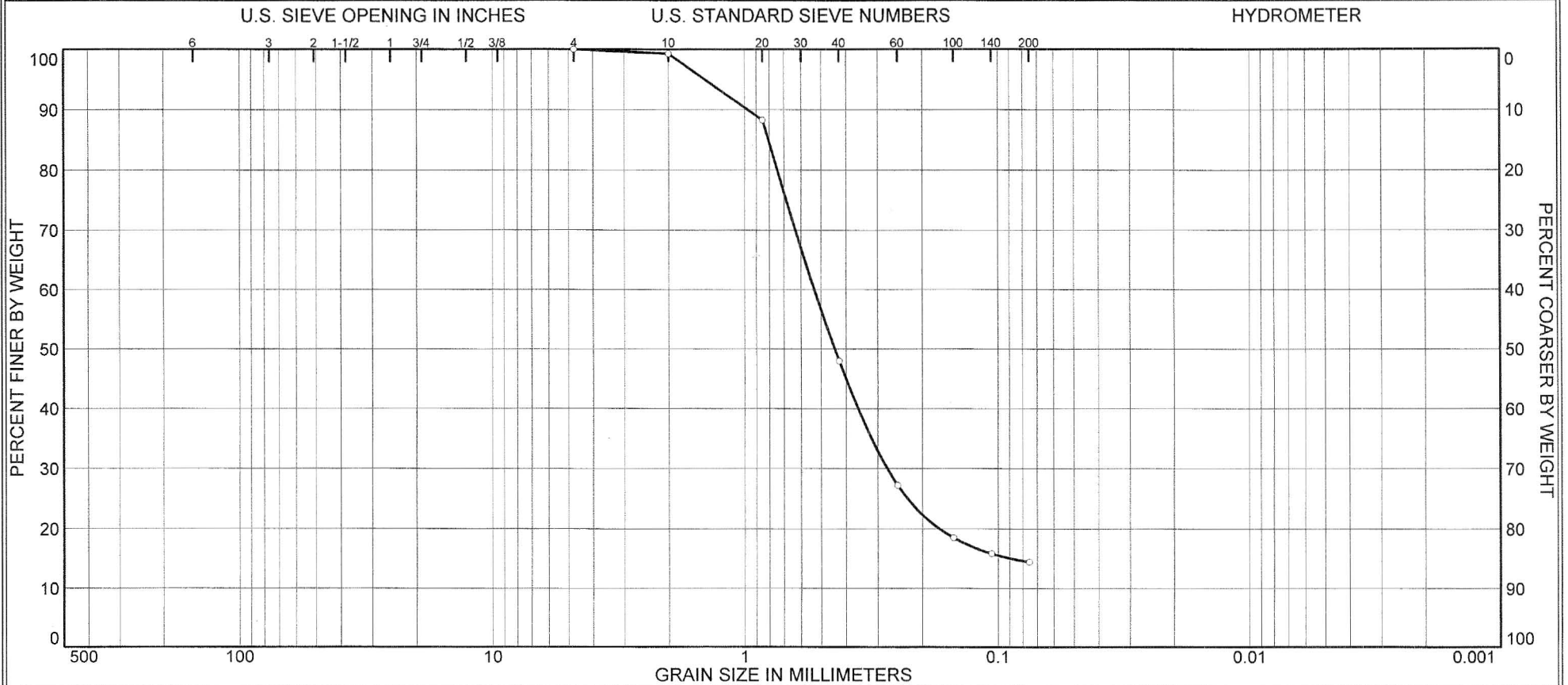


% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.2	1.4	2.9	20.1	75.4	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
B-3006	SS-34	148.5/69.1 ft.	10/18/07	CH	CLAY, with sand (CH)		56	25

Client GPC c/o SNOG		MACTEC ENGINEERING AND CONSULTING, INC.	○ Tested by: EH Reviewed by: HJ
Project Vogtle Units 3 & 4 COL Project			
Project No. 6141-06-0286	Lab no. 8078		

Particle Size Distribution Report

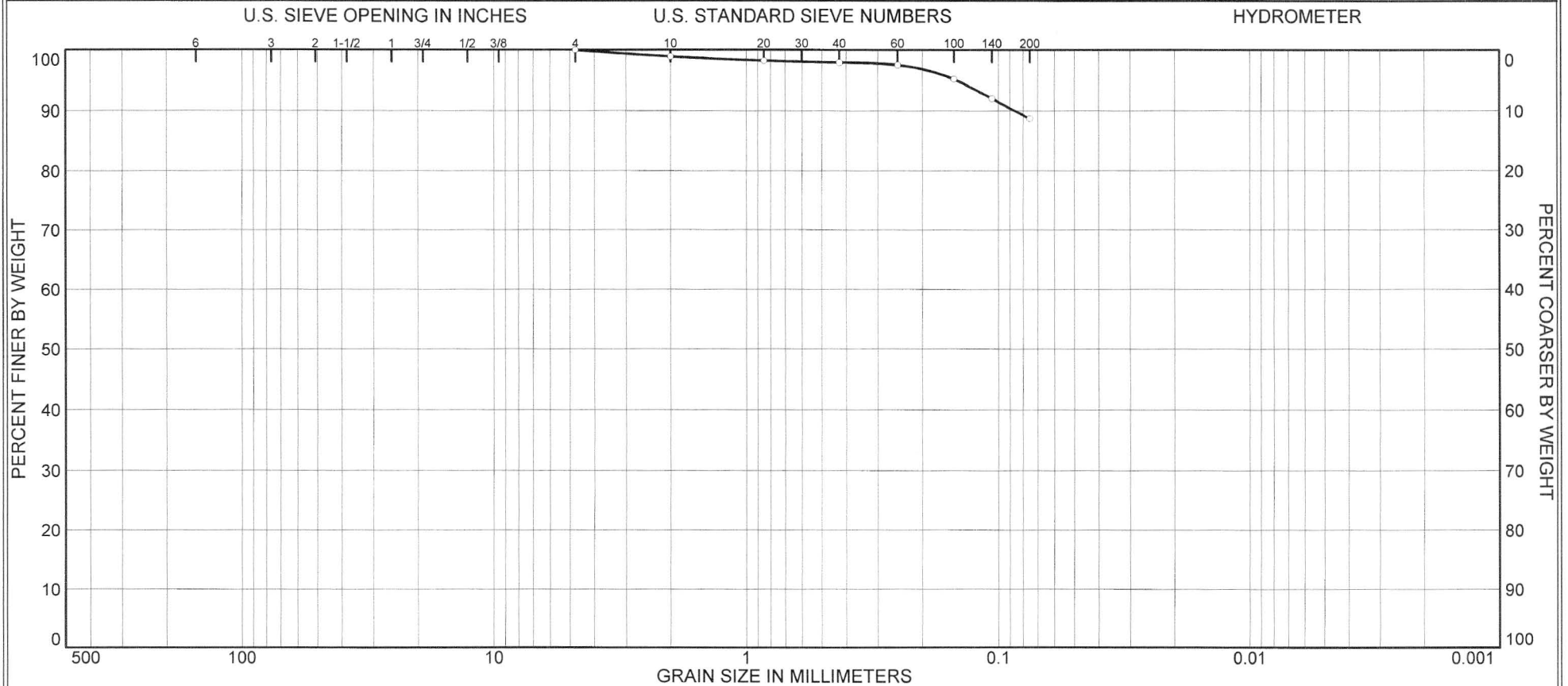


% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.7	51.3	33.6	14.4	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
B-3030	UD-3	40/181.99	1/19/2007		SAND, clayey (SC)			

Client GPC c/o SNOG		MACTEC ENGINEERING AND CONSULTING, INC.	○ Tested by: EH Reviewed by: HJ
Project Vogtle Units 3 & 4 COL Project			
Project No. 6141-06-0286	Lab no. 7591		

Particle Size Distribution Report

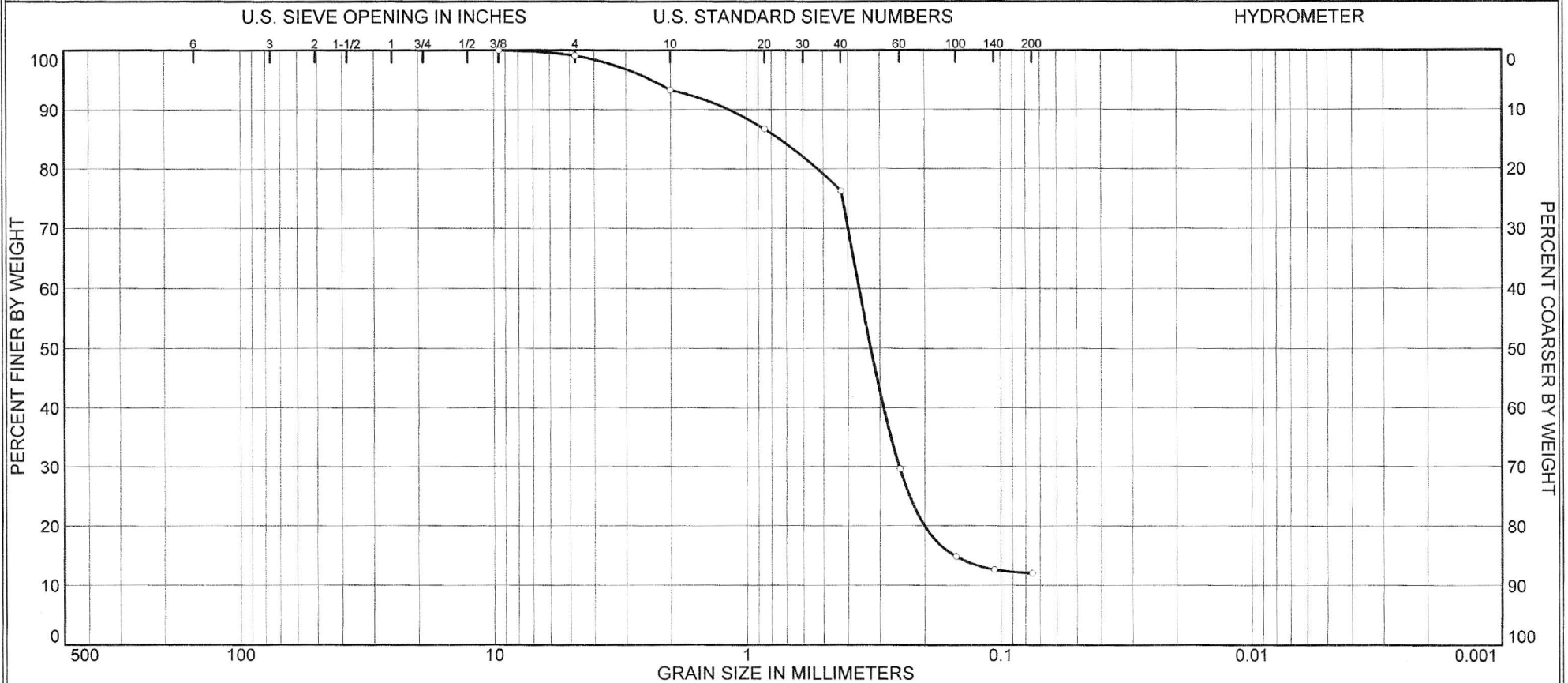


% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	1.1	1.0	9.2	88.7	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
B-4001	SS-27	128.5/90.4 ft.	10/18/07	CH	CLAY (CH)		56	29

Client GPC c/o SNOC		MACTEC ENGINEERING AND CONSULTING, INC.	☐ Tested by: EH Reviewed by: HJ
Project Vogtle Units 3 & 4 COL Project			
Project No. 6141-06-0286	Lab no. 8079		

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.9	5.8	17.0	64.3	12.0	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
B-4031	UD-3	38.5/183.63	2/19/07		SAND, silty (SM)			

Client GPC c/o SNOG		MACTEC ENGINEERING AND CONSULTING, INC.	☐ Tested by: EH ☐ Reviewqd by:HJ
Project Vogtle Units 3 & 4 COL Project			
Project No. 6141-06-0286	Lab no. 7612		



Determination of Carbonate Content of Soils

Project No.: [6141-06-0286](#)
 Project Name: Vogle COL

Tested By: BM
 Test Date: 10/18/2007

Reviewed By: JW
 Review Date: 11/1/2007

Sample Information				ASTM D 4373-02		ASTM D 3042-03
Boring No.	Sample No.	Depth (ft.)	Lab ID No.	Pre-washed Calcite Equivalent (%)	Post-washed Calcite Equivalent (%)	Soluble Material (%)
B-3002	SPT-27	123.5	8077	49	61	NA*
B-3006	SPT-34	148.5	8078	78	76	NA*
B-4001	SPT-27	128.5	8079	56	65	NA*

*NA: Not Assigned.

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