MACTEC

Vogtle Units 3 & 4 Engineered Fill Below Grade Test Pad Phase 1

Attachment C
Laboratory Test Data Sheets

Volume 1 of 1

Job No. 6141-06-0286

MACTEC ENGINEERING AND CONSULTING, INC.

March 14, 2008

MACTEC

March 14, 2008

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: **Geotechnical Data Report Attachment C – Laboratory Test Data Sheets**
Vogtle Units 3 & 4 Engineered Fill Below Grade Test Pad
Phase 1
Vogtle Electric Generating Plant
Burke County, Georgia
MACTEC Project Number 6141-06-0286

Dear Mr. McCallum:

MACTEC Engineering & Consulting, Inc. is pleased to submit Attachment C of the Final Data Report for the geotechnical exploration and laboratory testing for the Vogtle Units 3 & 4 Engineered Fill Below Grade Test Pad located adjacent to the existing Vogtle Electric Generating Plant near Waynesboro, Burke County, Georgia.

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.

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

For Matthew F. Cooke with permission

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

Stephen E. Woodham, E.I.T
Project Geotechnical Engineer

Pieter J. DePree
Principal Geotechnical Engineer
Registered Georgia 19637

DCN VG 441
Revision 0, 3/14/08

ATTACHMENT C

This Attachment is one of a number of attachments that are part of the following report which was prepared by MACTEC Engineering & Consulting Inc.:

Geotechnical Data Report
Vogtle Units 3 & 4 Engineered Fill Below Grade Test Pad
Phase 1
Vogtle Electric Generating Plant
Burke County, Georgia
Subsurface Investigation and Laboratory Testing
SNC Subcontract No. 7074425
MACTEC Job No. 6141-06-0286

For background and a description of scope of work contained in the report, please refer to the above referenced report. The report was addressed as follows:

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

The following list shows other Attachments to the above report and their included information:

Test Pad Specifications and Work Procedures…….……See Attachment A

Survey Report (Patterson and Dewar)...……See Attachment B

Geotechnical Boring Logs and SPT Energy Report.…… ……See Attachment D

Geophysical Testing Report ……..…….See Attachment E

ATTACHMENT C

Laboratory Test Data Sheets

Volume 1 of 1

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MOISTURE CONTENT

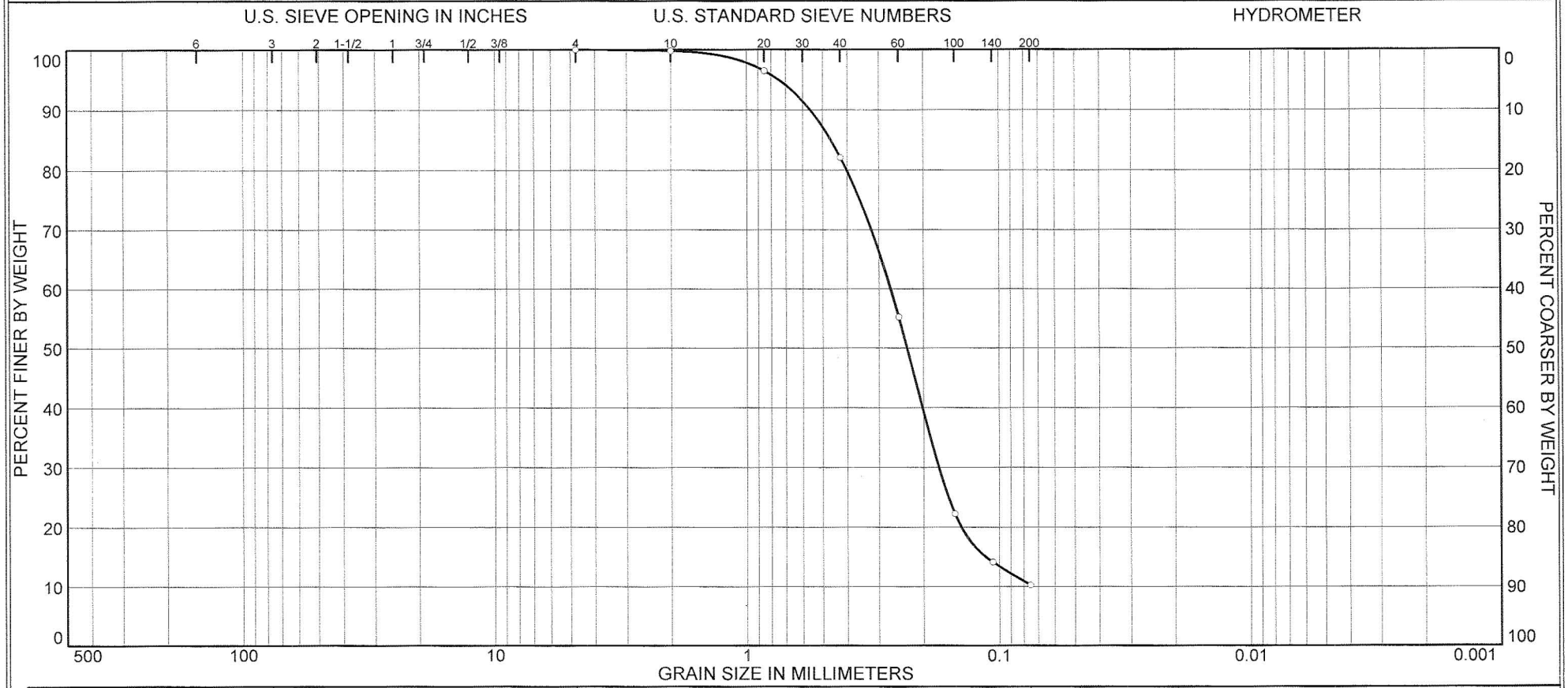
(ASTM D2216-98)

Project No **6141-06-0286**
Tested By **EH**
Test Date **12/10/2007**

Project Name **Vogtle COL Test Pad**
Reviewed By **HJ**
Review Date **12/12/07**
Record # 489

Boring No.	Sample No.	Depth (Ft)	Lab No.	Tare No.	Tare Wt. (grams)	Wet Soil + Tare (grams)	Dry Soil + Tare (grams)	Dry Soil Wt (grams)	Moisture Content (%)
G9-1	**Bag**	**0.5 Ft.**	8115	R-64	15.91	65.96	62.84	46.93	**6.6**
G9-2	**Bag**	**0.5 Ft.**	8116	V-80	16.81	64.12	60.96	44.15	**7.2**
G9-3	**Bag**	**0.5 Ft.**	8117	C-28	15.74	76.44	72.45	56.71	**7.0**
G9-4	**Bag**	**0.5 Ft.**	8118	R-79	16.43	75.38	71.26	54.83	**7.5**
G10-1	**Bag**	**0.5 Ft.**	8119	C-33	15.95	71.84	66.96	51.01	**9.6**
G10-2	**Bag**	**0.5 Ft.**	8120	V-55	16.62	71.09	66.82	50.20	**8.5**
G10-3	**Bag**	**0.5 Ft.**	8121	R-63	16.03	97.11	89.82	73.79	**9.9**
G10-4	**Bag**	**0.5 Ft.**	8122	C-21	15.79	80.63	75.85	60.06	**8.0**
P-8	**Bag**	**0.5 Ft.**	8123	R-52	15.87	96.10	91.01	75.14	**6.8**

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.2	17.7	71.9	10.2	

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	Test Pad Excavation Side Slope BS-1	BS-1	239.13'	N/A		Brownish Yellow Poorly graded sand with silt	2.9		

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54

MACTEC ENGINEERING AND CONSULTING, INC.

○ Tested by: MD Reviewed by: MC

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GPC c/o SNOC
Project: Vogtle Units 3 & 4 Test Pad Project
Project Number: 6141-06-0286.54

Sample Data

Source: Test Pad Excavation Side Slope BS-1
Sample No.: BS-1
Elev. or Depth: 239.13' **Sample Length(in./cm.):** N/A
Location: BS-1
Description: Brownish Yellow Poorly graded sand with silt
Date: N/A **Natural Moisture:** 2.9
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: MD Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	200.19
Tare =	64.23
Dry sample weight =	135.96

Tare for cumulative weight retained= .00

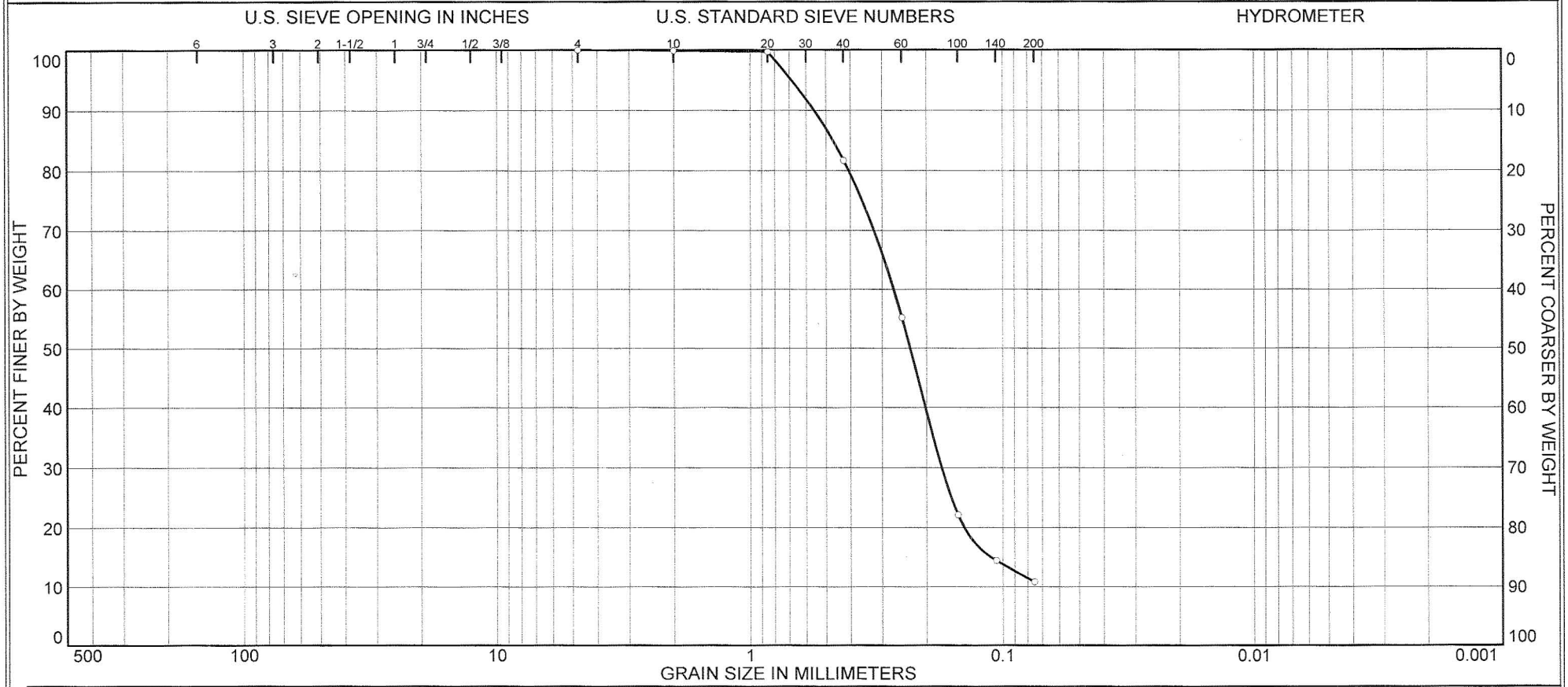
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.24	99.8
# 20	4.79	96.5
# 40	24.34	82.1
# 60	60.93	55.2
# 100	105.81	22.2
# 140	116.73	14.1
# 200	122.05	10.2

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 89.8 (% coarse = 0.2 % medium = 17.7 % fine = 71.9)
% FINES = 10.2

D_{85}= 0.46 D_{60}= 0.27 D_{50}= 0.23
D_{30}= 0.17 D_{15}= 0.11

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.1	18.2	70.9	10.8	

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	Test Pad Excavation Side Slope BS-2	BS-2	237.21'	N/A	SP-SM	Reddish Yellow Poorly graded sand with silt	4.0	NV	NP

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54

MACTEC ENGINEERING AND CONSULTING, INC.

○ Tested by: MD Reviewed by: MC

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GPC c/o SNOC
Project: Vogtle Units 3 & 4 Test Pad Project
Project Number: 6141-06-0286.54

Sample Data

Source: Test Pad Excavation Side Slope BS-2
Sample No.: BS-2
Elev. or Depth: 237.21' **Sample Length(in./cm.):** N/A
Location: BS-2
Description: Reddish Yellow Poorly graded sand with silt
Date: N/A **Natural Moisture:** 4.0
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SP-SM
Testing Remarks: Tested by: MD Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	200.26
Tare =	64.03
Dry sample weight =	136.23

Tare for cumulative weight retained= .00

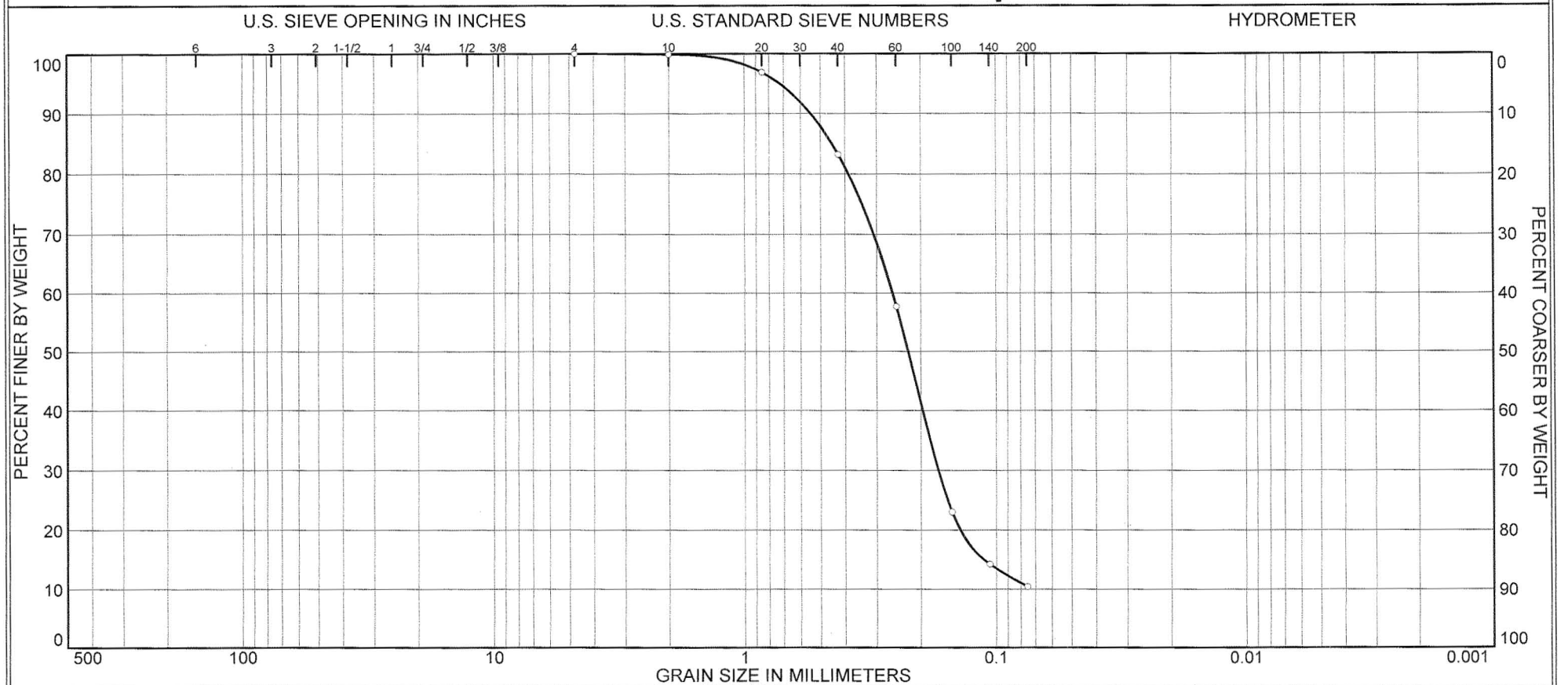
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.09	99.9
# 20	0.37	99.7
# 40	24.90	81.7
# 60	61.02	55.2
# 100	106.19	22.1
# 140	116.68	14.4
# 200	121.53	10.8

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 89.2 (% coarse = 0.1 % medium = 18.2 % fine = 70.9)
% FINES = 10.8

D_{85}= 0.47 D_{60}= 0.27 D_{50}= 0.23
D_{30}= 0.17 D_{15}= 0.11

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.1	16.7	72.8	10.4	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Excavation Side Slope BS-3	BS-3	235.09'	N/A		Yellowish Brown Poorly graded sand with silt	3.3		

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: MD Reviewed by: MC

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GPC c/o SNOC
Project: Vogtle Units 3 & 4 Test Pad Project
Project Number: 6141-06-0286.54

Sample Data

Source: Test Pad Excavation Side Slope BS-3
Sample No.: BS-3
Elev. or Depth: 235.09' **Sample Length(in./cm.):** N/A
Location: BS-3
Description: Yellowish Brown Poorly graded sand with silt
Date: N/A **Natural Moisture:** 3.3
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: MD Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	200.42
Tare =	70.10
Dry sample weight =	130.32

Tare for cumulative weight retained= .00

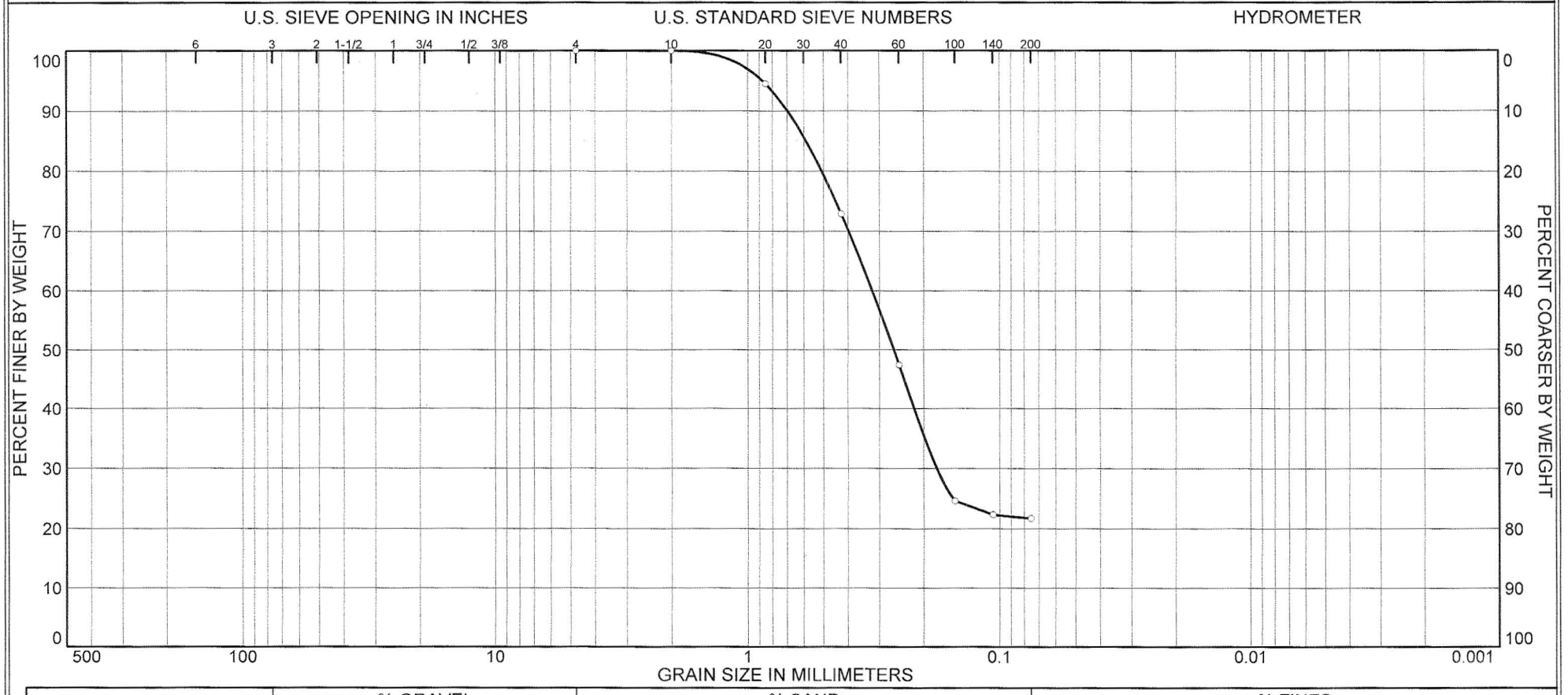
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.15	99.9
# 20	4.00	96.9
# 40	21.88	83.2
# 60	55.16	57.7
# 100	100.38	23.0
# 140	111.75	14.2
# 200	116.73	10.4

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 89.6 (% coarse = 0.1 % medium = 16.7 % fine = 72.8)
% FINES = 10.4

D_{85}= 0.45 D_{60}= 0.26 D_{50}= 0.22
D_{30}= 0.17 D_{15}= 0.11

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.0	27.1	51.2	21.7	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Excavation Side Slope BS-4	BS-4	231.67'	N/A	SC	Red Clayey sand	8.4	33	17

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: MD Reviewed by: MC

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GPC c/o SNOC
Project: Vogtle Units 3 & 4 Test Pad Project
Project Number: 6141-06-0286.54

Sample Data

Source: Test Pad Excavation Side Slope BS-4
Sample No.: BS-4
Elev. or Depth: 231.67' **Sample Length(in./cm.):** N/A
Location: BS-4
Description: Red Clayey sand
Date: N/A **Natural Moisture:** 8.4
Liquid Limit: 33 **Plastic Limit:** 17 **USCS Class.:** SC
Testing Remarks: Tested by: MD Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	200.48
Tare =	64.20
Dry sample weight =	136.28

Tare for cumulative weight retained= .00

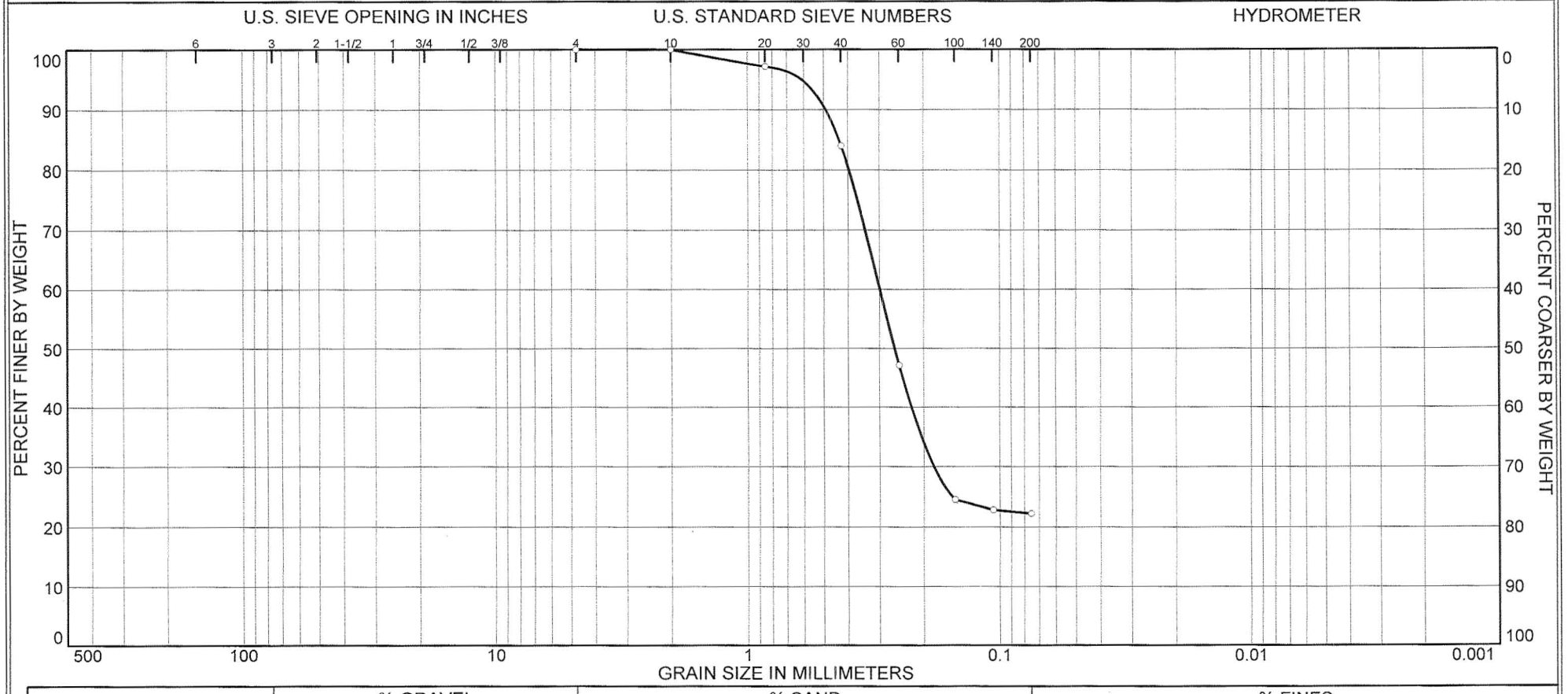
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.04	100.0
# 20	7.44	94.5
# 40	36.98	72.9
# 60	71.66	47.4
# 100	102.81	24.6
# 140	105.84	22.3
# 200	106.68	21.7

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 78.3 **(% coarse** = 0.0 **% medium** = 27.1 **% fine** = 51.2)
% FINES = 21.7

D_{85}= 0.59 D_{60}= 0.32 D_{50}= 0.26
D_{30}= 0.18

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.0	16.0	61.8	22.2	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Excavation Side Slope BS-5	BS-5	228.69'	N/A	SC	Red Clayey sand	11.6	31	17

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: MD Reviewed by: MC