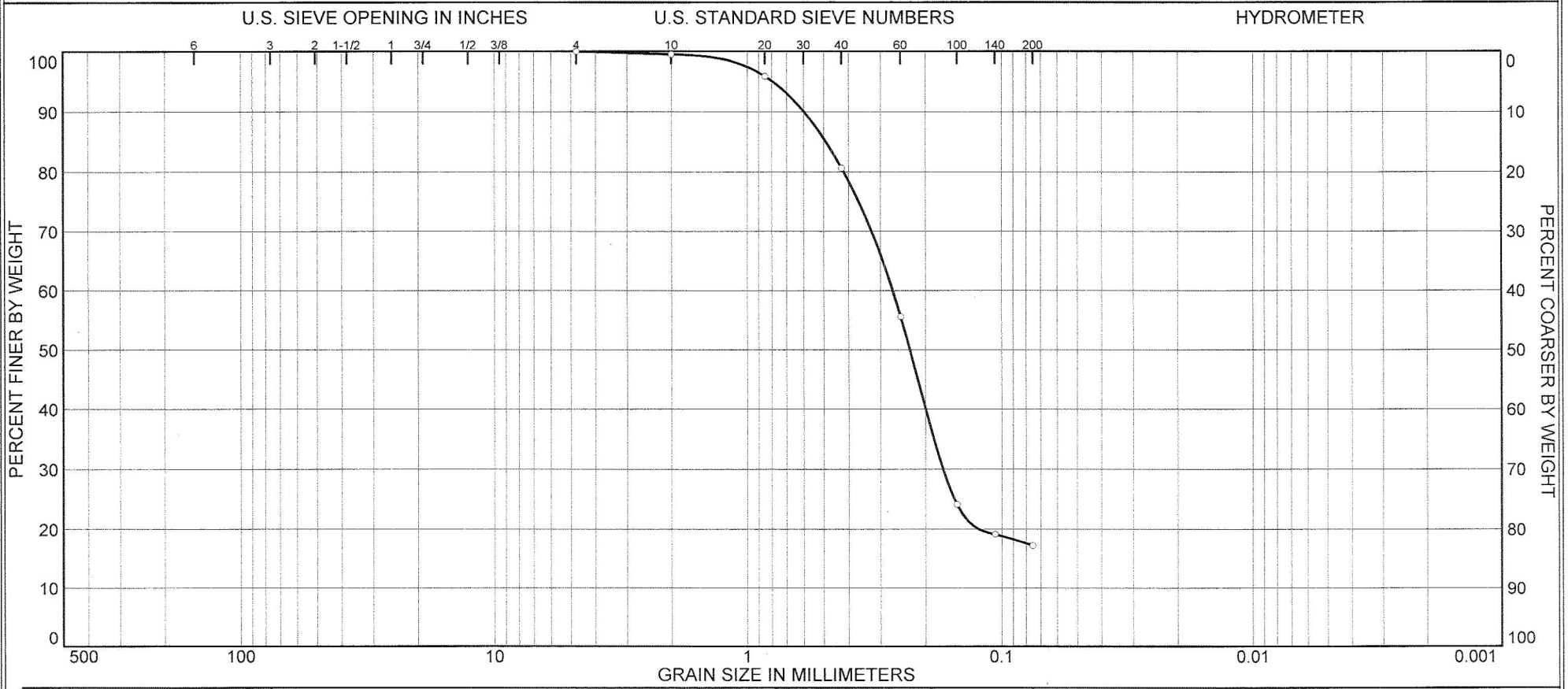
Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.5	18.9	63.4	17.2	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-1	P-1	225.42'	N/A	SM	Red Silty sand	8.9	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: SW 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 Backfill P-1
Sample No.: P-1
Elev. or Depth: 225.42' **Sample Length(in./cm.):** N/A
Location: P-1
Description: Red Silty sand
Date: N/A **Natural Moisture:** 8.9
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: SW Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	203.04
Tare =	70.15
Dry sample weight =	132.89

Tare for cumulative weight retained= .00

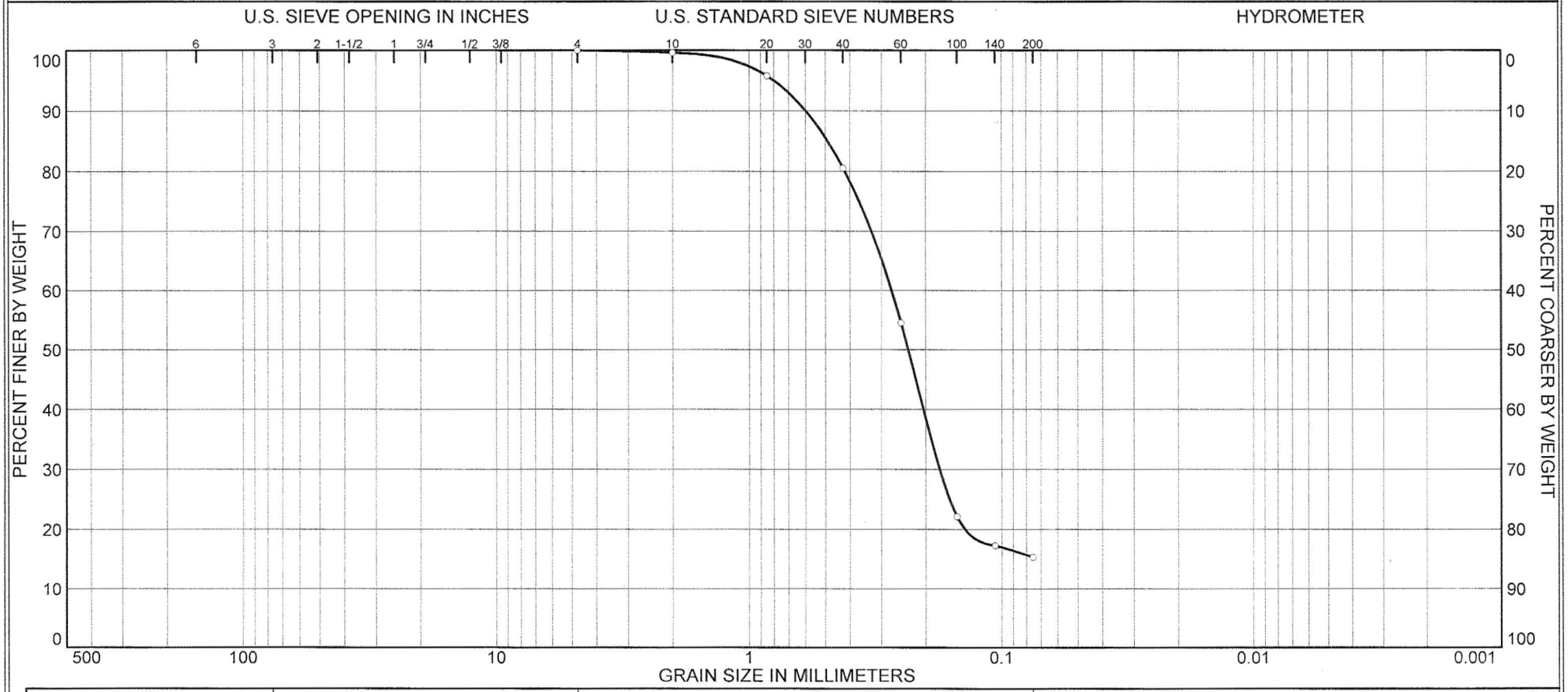
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.70	99.5
# 20	5.42	95.9
# 40	25.72	80.6
# 60	59.03	55.6
# 100	100.85	24.1
# 140	107.55	19.1
# 200	110.09	17.2

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 82.8 **(% coarse =** 0.5 **% medium =** 18.9 **% fine =** 63.4**)**
% FINES = 17.2

D_{85}= 0.49 D_{60}= 0.27 D_{50}= 0.23
D_{30}= 0.17

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.4	19.1	65.2	15.3	

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	Test Pad Backfill P-2	P-2	225.99'	N/A	SM	Red Silty sand	7.0	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: SW/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 Backfill P-2
Sample No.: P-2
Elev. or Depth: 225.99' **Sample Length(in./cm.):** N/A
Location: P-2
Description: Red Silty sand
Date: N/A **Natural Moisture:** 7.0
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: SW/MD Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	203.67
Tare =	64.36
Dry sample weight =	139.31

Tare for cumulative weight retained= .00

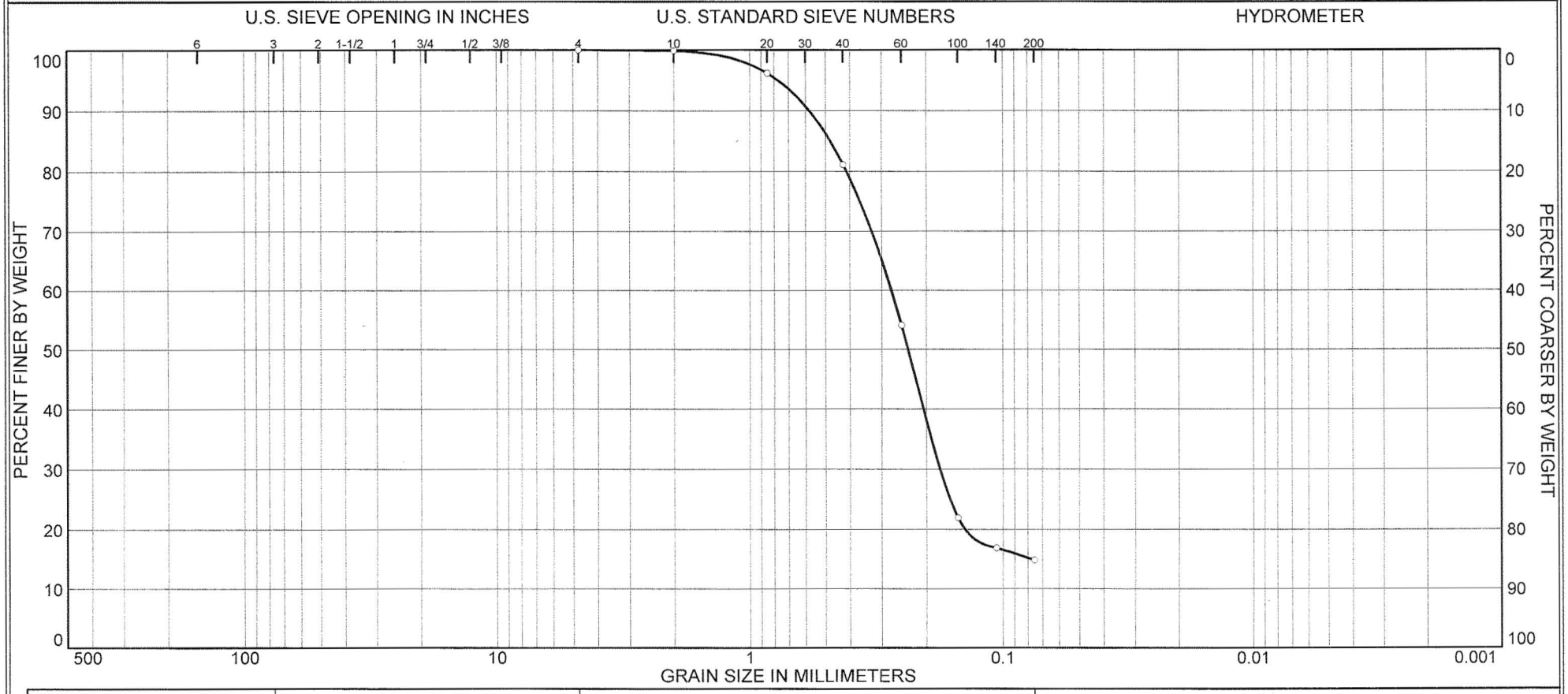
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.62	99.6
# 20	5.89	95.8
# 40	27.11	80.5
# 60	63.39	54.5
# 100	108.49	22.1
# 140	115.34	17.2
# 200	118.00	15.3

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 84.7 (% coarse = 0.4 % medium = 19.1 % fine = 65.2)
% FINES = 15.3

D_{85}= 0.49 D_{60}= 0.27 D_{50}= 0.23
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	0.1	18.8	66.3	14.8	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-4	P-4	227.05'	N/A	SM	Red Silty sand	6.5	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: SW/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 Backfill P-4
Sample No.: P-4
Elev. or Depth: 227.05' **Sample Length(in./cm.):** N/A
Location: P-4
Description: Red Silty sand
Date: N/A **Natural Moisture:** 6.5
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: SW/MD Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	224.29
Tare =	82.99
Dry sample weight =	141.30

Tare for cumulative weight retained= .00

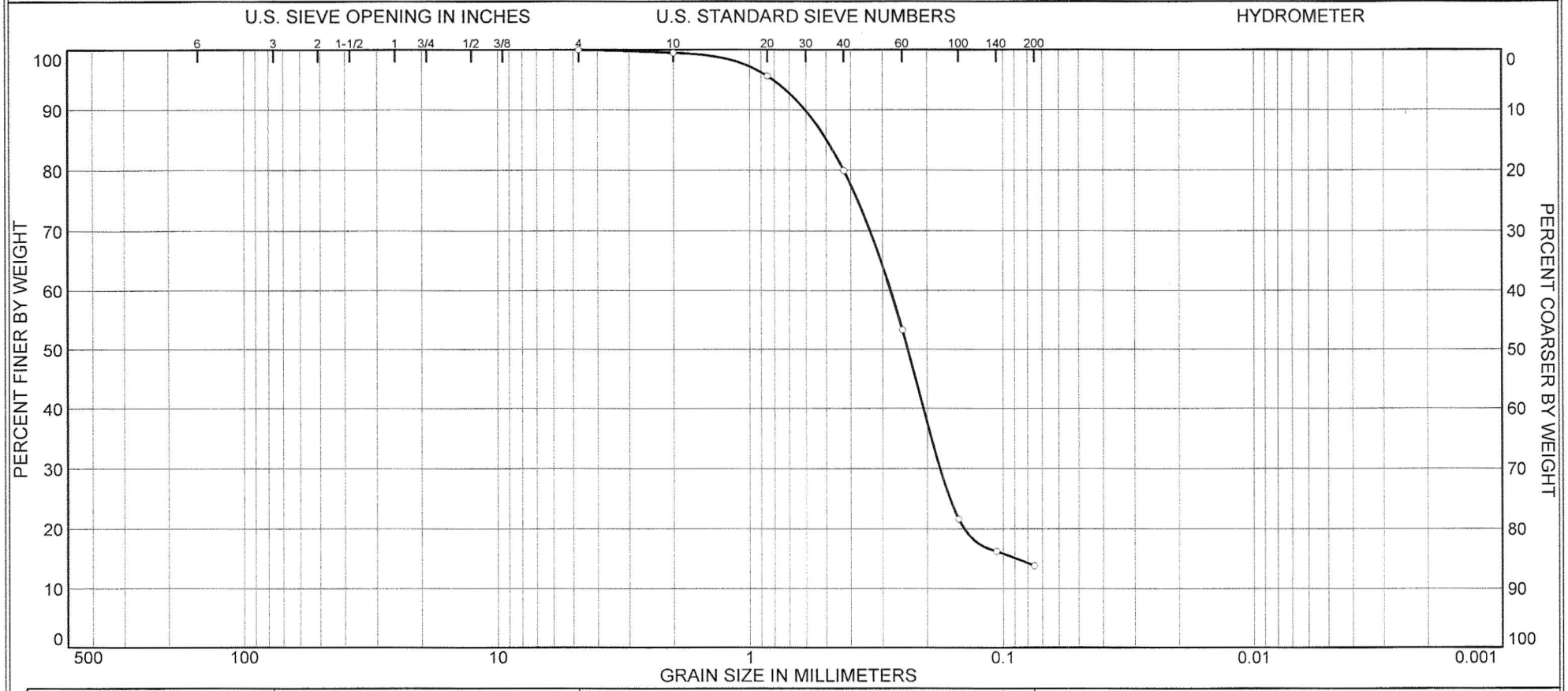
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.15	99.9
# 20	5.38	96.2
# 40	26.75	81.1
# 60	64.81	54.1
# 100	110.32	21.9
# 140	117.58	16.8
# 200	120.44	14.8

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 85.2 **(% coarse =** 0.1 **% medium =** 18.8 **% fine =** 66.3**)**
% FINES = 14.8

D_{85}= 0.48 D_{60}= 0.27 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.08

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.5	19.6	66.1	13.8	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-6	P-6	228.02'	N/A	SM	Red Silty sand	6.2	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/SW 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 Backfill P-6
Sample No.: P-6
Elev. or Depth: 228.02' **Sample Length(in./cm.):** N/A
Location: P-6
Description: Red Silty sand
Date: N/A **Natural Moisture:** 6.2
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: MD/SW Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	203.80
Tare =	64.35
Dry sample weight =	139.45

Tare for cumulative weight retained= .00

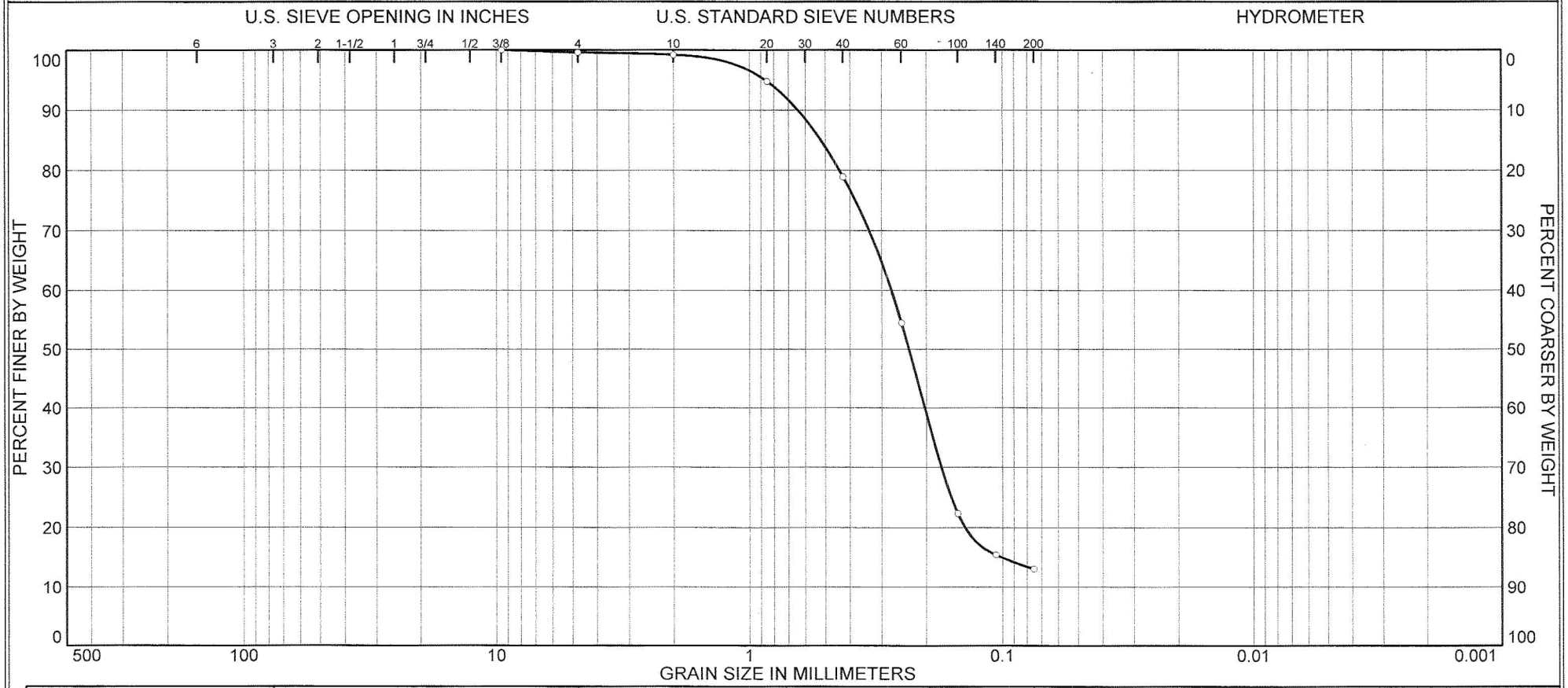
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.68	99.5
# 20	6.13	95.6
# 40	28.04	79.9
# 60	65.14	53.3
# 100	109.34	21.6
# 140	116.91	16.2
# 200	120.16	13.8

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 86.2 (% coarse = 0.5 % medium = 19.6 % fine = 66.1)
% FINES = 13.8

D_{85}= 0.50 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.09

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.4	0.4	20.3	65.9	13.0	

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	Test Pad Backfill P-8	P-8 Bag	229.00'	N/A	SM	Red Silty sand	6.8	NV	NP

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 | 8123

MACTEC ENGINEERING AND CONSULTING, INC.

○ Tested by: EH Reviewed by: HJ

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 Backfill P-8
Sample No.: P-8 Bag
Elev. or Depth: 229.00' **Sample Length(in./cm.):** 8123
Location: P-8
Description: Red Silty sand
Date: N/A **Natural Moisture:** 6.8
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	205.19
Tare =	111.25
Dry sample weight =	93.94

Tare for cumulative weight retained= .00

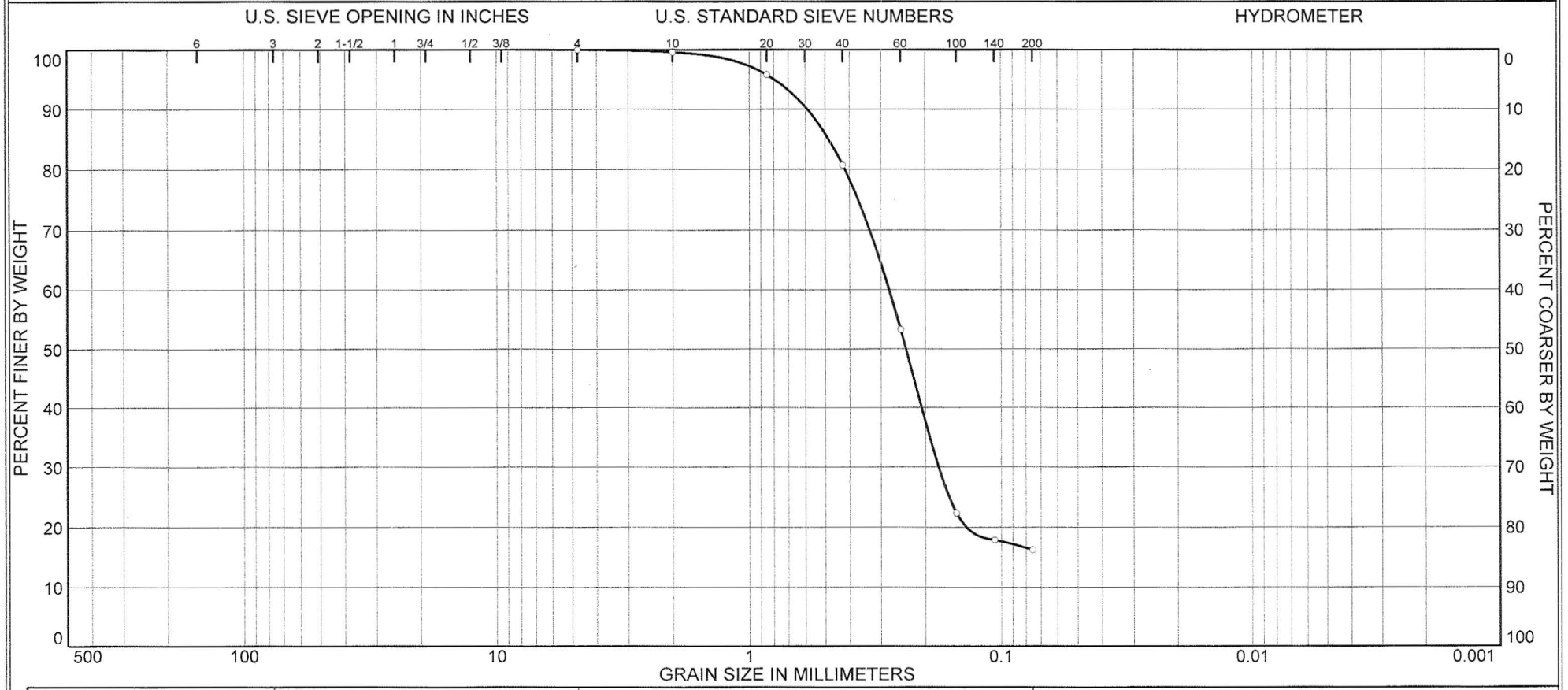
Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.36	99.6
# 10	0.77	99.2
# 20	4.89	94.8
# 40	19.86	78.9
# 60	42.71	54.5
# 100	73.03	22.3
# 140	79.47	15.4
# 200	81.77	13.0

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =** 0.4 **(% coarse =** **% fine =** 0.4)
% SAND = 86.6 **(% coarse =** 0.4 **% medium =** 20.3 **% fine =** 65.9)
% FINES = 13.0

D_{85}= 0.52 D_{60}= 0.27 D_{50}= 0.23
D_{30}= 0.17 D_{15}= 0.10

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.4	18.9	64.5	16.2	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-10	P-10	230.01'	N/A	SM	Red Silty sand	6.9	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: SW 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 Backfill P-10
Sample No.: P-10
Elev. or Depth: 230.01' **Sample Length(in./cm.):** N/A
Location: P-10
Description: Red Silty sand
Date: N/A **Natural Moisture:** 6.9
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: SW Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	201.56
Tare =	64.35
Dry sample weight =	137.21

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.57	99.6
# 20	5.77	95.8
# 40	26.42	80.7
# 60	64.11	53.3
# 100	106.60	22.3
# 140	112.83	17.8
# 200	114.94	16.2

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 83.8 (% coarse = 0.4 % medium = 18.9 % fine = 64.5)
% FINES = 16.2

D_{85}= 0.48 D_{60}= 0.28 D_{50}= 0.24
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	0.2	19.6	67.0	13.2	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-12	P-12	230.97'	N/A	SM	Red Silty sand	9.2	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: SW/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 Backfill P-12
Sample No.: P-12
Elev. or Depth: 230.97' **Sample Length(in./cm.):** N/A
Location: P-12
Description: Red Silty sand
Date: N/A **Natural Moisture:** 9.2
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: SW/MD Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	202.87
Tare =	64.33
Dry sample weight =	138.54

Tare for cumulative weight retained= .00

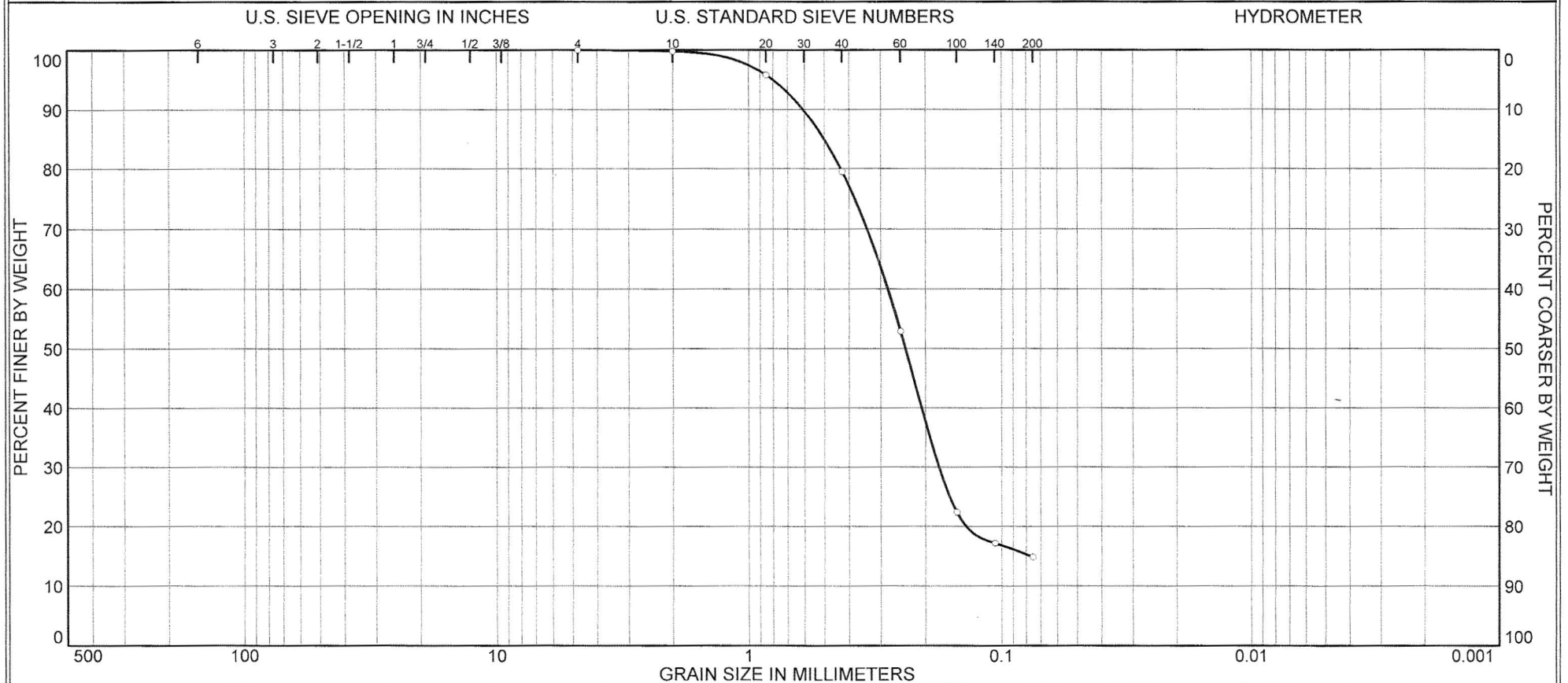
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.29	99.8
# 20	5.55	96.0
# 40	27.46	80.2
# 60	64.03	53.8
# 100	108.91	21.4
# 140	116.89	15.6
# 200	120.29	13.2

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 86.8 **(% coarse** = 0.2 **% medium** = 19.6 **% fine** = 67.0)
% FINES = 13.2

D_{85}= 0.49 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.10

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.2	20.3	64.7	14.8	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-15	P-15	232.43'	N/A	SM	Red Silty sand	8.7	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/SW 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 Backfill P-15
Sample No.: P-15
Elev. or Depth: 232.43' **Sample Length(in./cm.):** N/A
Location: P-15
Description: Red Silty sand
Date: N/A **Natural Moisture:** 8.7
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: MD/SW Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	204.41
Tare =	64.33
Dry sample weight =	140.08

Tare for cumulative weight retained= .00

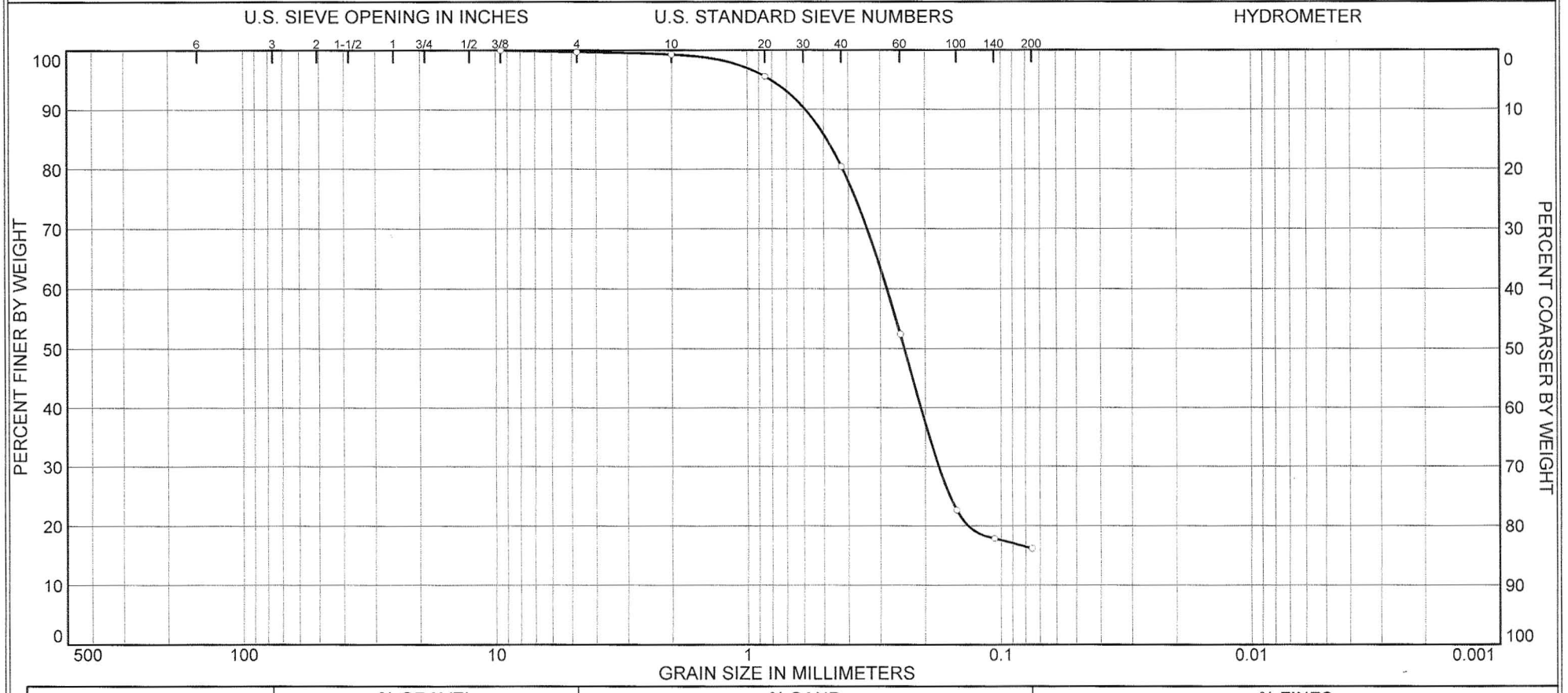
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.29	99.8
# 20	5.94	95.8
# 40	28.69	79.5
# 60	65.96	52.9
# 100	108.89	22.3
# 140	116.10	17.1
# 200	119.40	14.8

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 85.2 **(% coarse** = 0.2 **% medium** = 20.3 **% fine** = 64.7)
% FINES = 14.8

D_{85}= 0.50 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.08

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.3	0.4	18.9	64.3	16.1	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
SW Corner of Test Pad P-16	P-16	232.92	n/a	SM	Red Silty sand	7.2	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/SW 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: SW Corner of Test Pad P-16
Sample No.: P-16
Elev. or Depth: 232.92 **Sample Length(in./cm.):** n/a
Location:
Description: Red Silty sand
Date: n/a **Natural Moisture:**
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: MD/SW Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	203.39
Tare =	64.36
Dry sample weight =	139.03

Tare for cumulative weight retained= .00

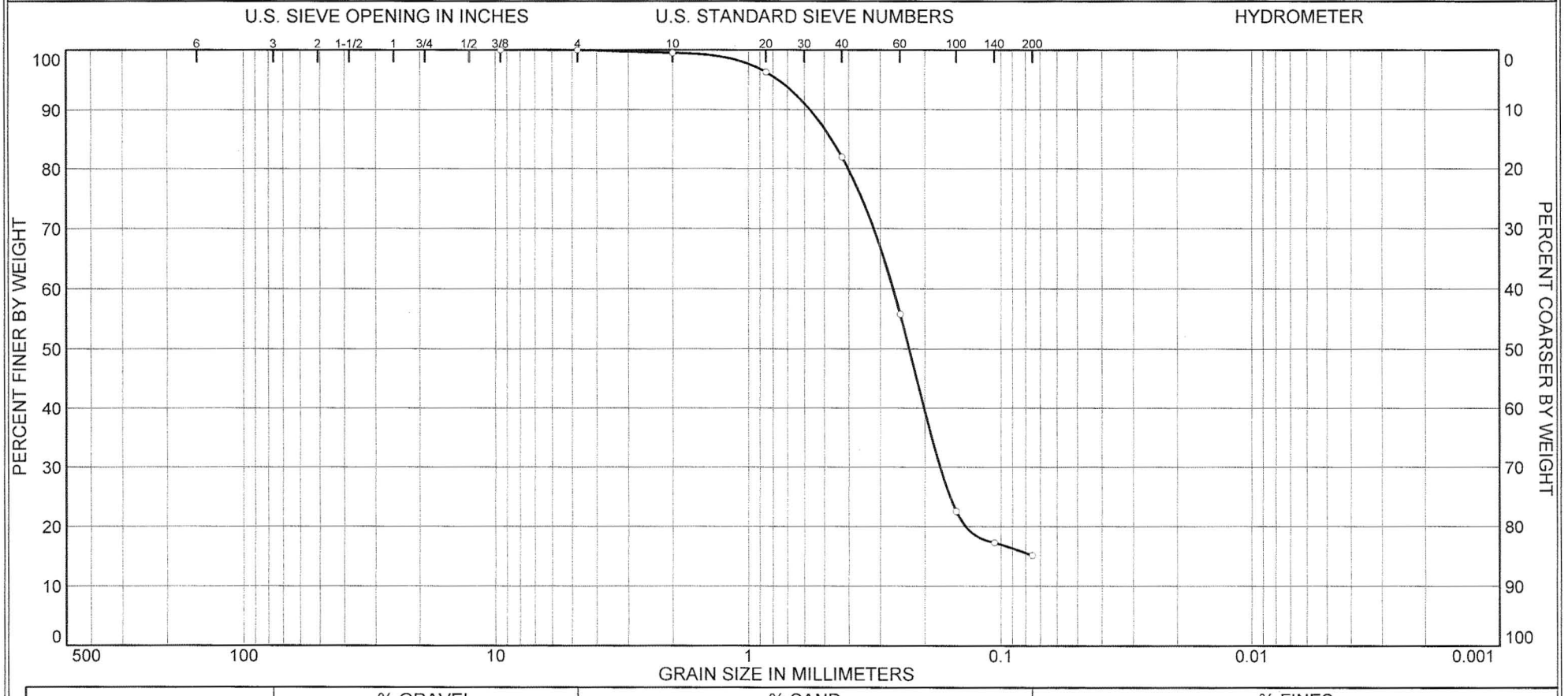
Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.36	99.7
# 10	0.92	99.3
# 20	6.17	95.6
# 40	27.31	80.4
# 60	66.21	52.4
# 100	107.59	22.6
# 140	114.30	17.8
# 200	116.68	16.1

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =** 0.3 **(% coarse =** **% fine =** 0.3)
% SAND = 83.6 **(% coarse =** 0.4 **% medium =** 18.9 **% fine =** 64.3)
% FINES = 16.1

D_{85}= 0.49 D_{60}= 0.28 D_{50}= 0.24
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	0.5	17.6	66.8	15.1	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-20	P-20	234.98'	N/A	SM	Red Silty sand	8.7	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/SW 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 Backfill P-20
Sample No.: P-20
Elev. or Depth: 234.98' **Sample Length(in./cm.):** N/A
Location: P-20
Description: Red Silty sand
Date: N/A **Natural Moisture:** 8.7
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: MD/SW Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	200.50
Tare =	64.34
Dry sample weight =	136.16

Tare for cumulative weight retained= .00

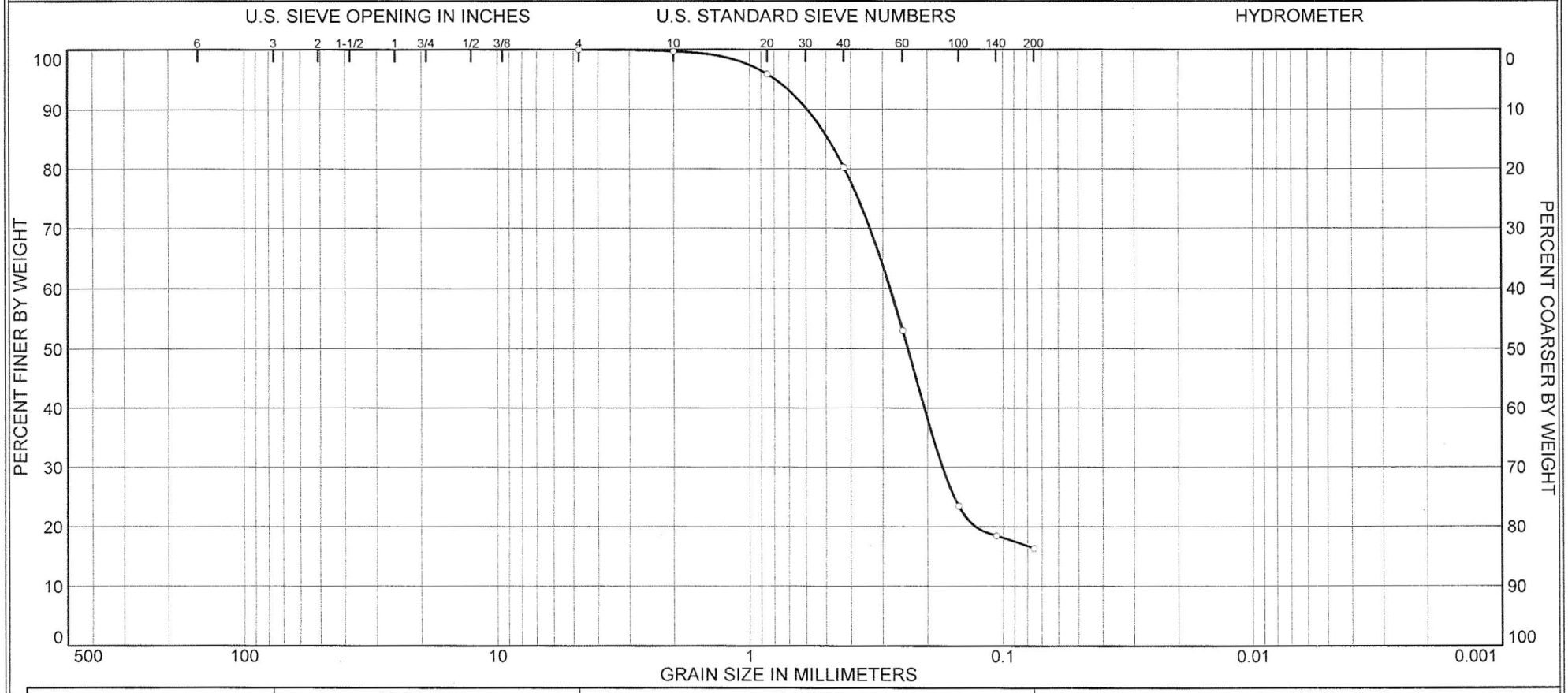
Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.00	100.0
# 10	0.63	99.5
# 20	5.09	96.3
# 40	24.68	81.9
# 60	60.16	55.8
# 100	105.57	22.5
# 140	112.74	17.2
# 200	115.63	15.1

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 84.9 **(% coarse** = 0.5 **% medium** = 17.6 **% fine** = 66.8)
% FINES = 15.1

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

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.3	19.5	64.0	16.2	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-22A	P-22A	235.97'	N/A	SM	Red Silty sand	8.4	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/SW Reviewed by: HJ

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 Backfill P-22A
Sample No.: P-22A
Elev. or Depth: 235.97' **Sample Length(in./cm.):** N/A
Location: P-22A
Description: Red Silty sand
Date: N/A **Natural Moisture:** 8.4
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: MD/SW Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	204.35
Tare =	64.35
Dry sample weight =	140.00

Tare for cumulative weight retained= .00

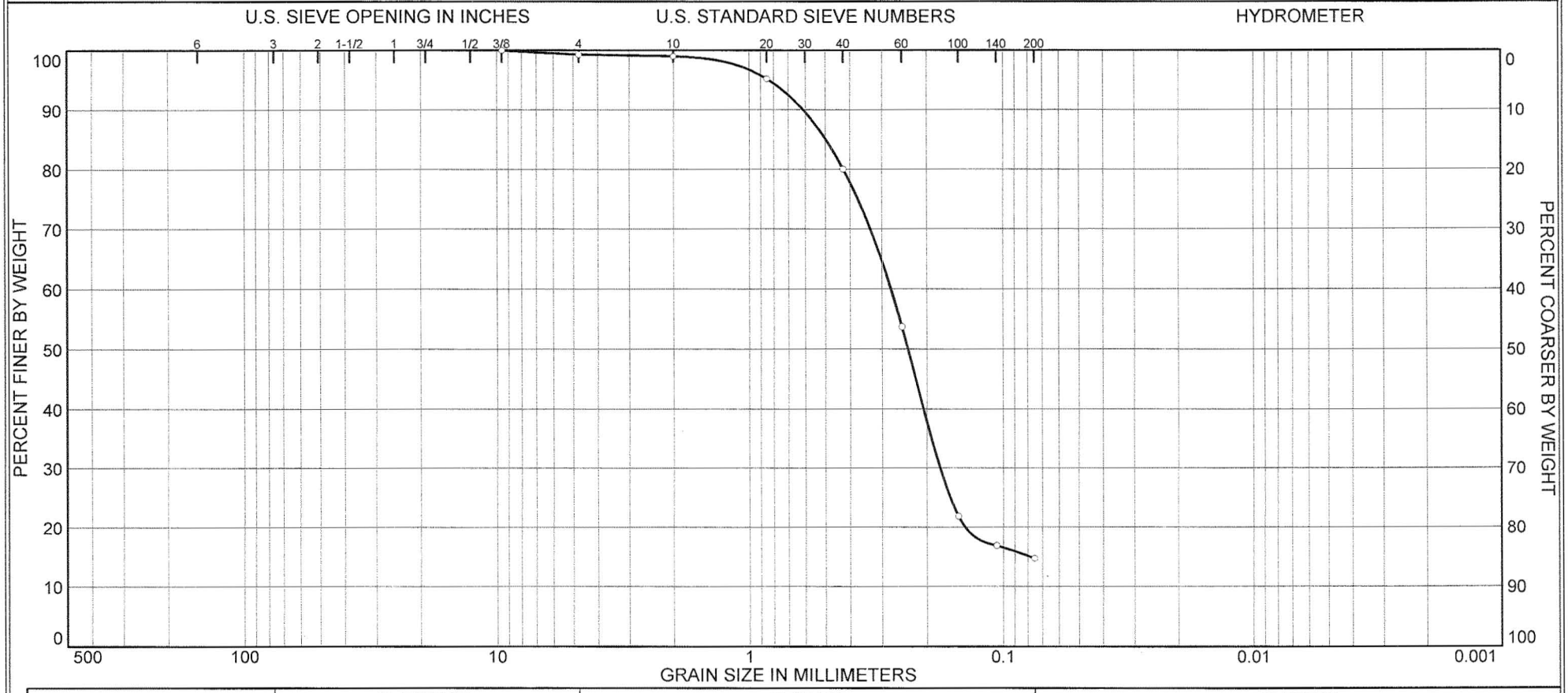
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.37	99.7
# 20	5.75	95.9
# 40	27.66	80.2
# 60	65.84	53.0
# 100	107.30	23.4
# 140	114.23	18.4
# 200	117.32	16.2

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 83.8 (% coarse = 0.3 % medium = 19.5 % fine = 64.0)
% FINES = 16.2

D_{85}= 0.49 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.17

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.7	0.3	19.0	65.3	14.7	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-26	P-26	237.95'	N/A	SM	Red Silty sand	9.3	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/SW 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 Backfill P-26
Sample No.: P-26
Elev. or Depth: 237.95' **Sample Length(in./cm.):** N/A
Location: P-26
Description: Red Silty sand
Date: N/A **Natural Moisture:** 9.3
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: MD/SW Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	201.75
Tare =	64.33
Dry sample weight =	137.42

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.90	99.3
# 10	1.32	99.0
# 20	6.62	95.2
# 40	27.54	80.0
# 60	63.60	53.7
# 100	107.41	21.8
# 140	114.33	16.8
# 200	117.20	14.7

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =** 0.7 **(% coarse =** **% fine =** 0.7)
% SAND = 84.6 **(% coarse =** 0.3 **% medium =** 19.0 **% fine =** 65.3)
% FINES = 14.7

D_{85}= 0.50 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.08

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.2	22.0	67.8	10.0	

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	Test Pad Backfill P-31	P-31	240.42'	N/A	SP-SM	Tan Poorly graded sand with silt	7.8	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: SW/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 Backfill P-31
Sample No.: P-31
Elev. or Depth: 240.42' **Sample Length(in./cm.):** N/A
Location: P-31
Description: Tan Poorly graded sand with silt
Date: N/A **Natural Moisture:** 7.8
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SP-SM
Testing Remarks: Tested by: SW/MD Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	200.43
Tare =	64.30
Dry sample weight =	136.13

Tare for cumulative weight retained= .00

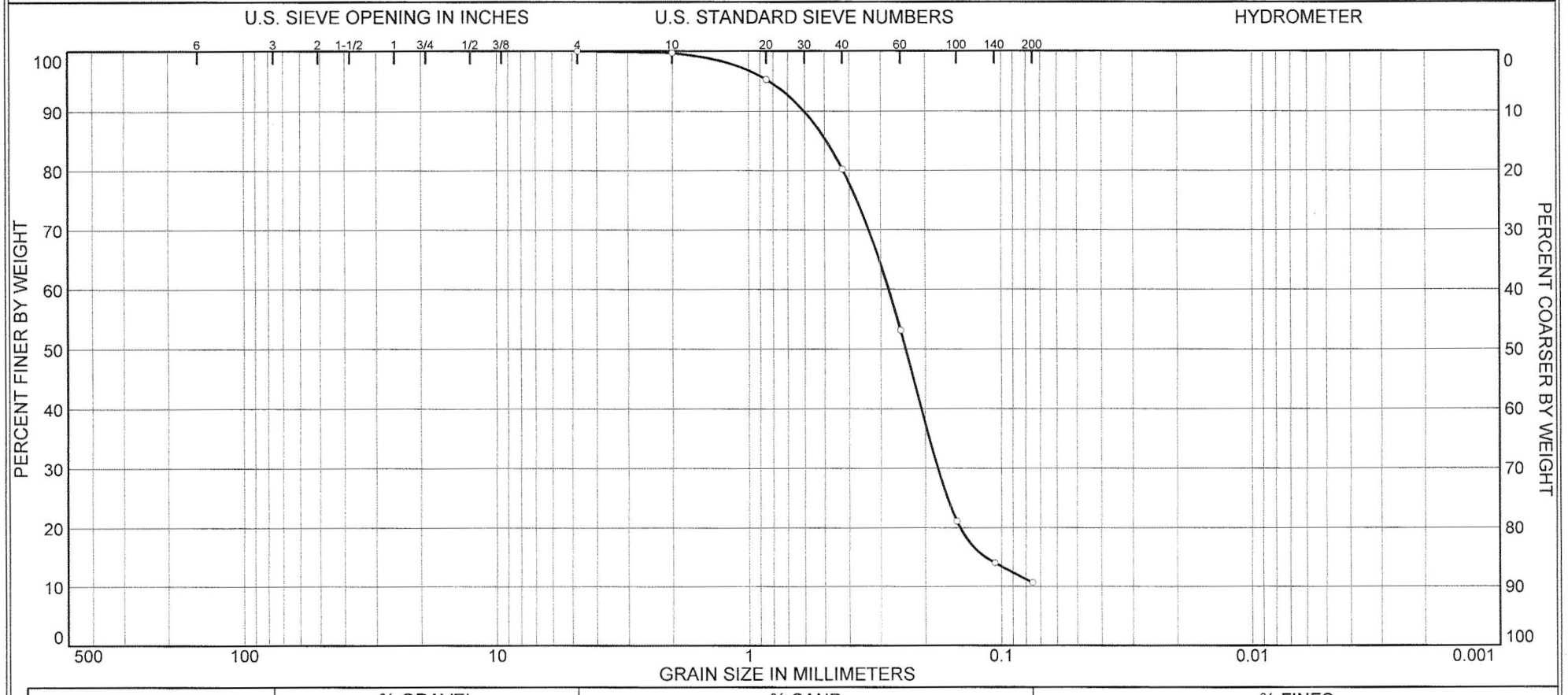
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.31	99.8
# 20	7.13	94.8
# 40	30.20	77.8
# 60	67.09	50.7
# 100	108.50	20.3
# 140	117.66	13.6
# 200	122.47	10.0

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 90.0 (% coarse = 0.2 % medium = 22.0 % fine = 67.8)
% FINES = 10.0

D_{85}= 0.53 D_{60}= 0.29 D_{50}= 0.25
D_{30}= 0.18 D_{15}= 0.12 D_{10}= 0.08
C_c= 1.5172 C_u= 3.8893

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.3	19.5	69.6	10.6	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-35	P-35	242.44'	N/A	SP-SM	Brown Poorly graded sand with silt	6.7	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: SW 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 Backfill P-35
Sample No.: P-35
Elev. or Depth: 242.44' **Sample Length(in./cm.):** N/A
Location: P-35
Description: Brown Poorly graded sand with silt
Date: N/A **Natural Moisture:** 6.7
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SP-SM
Testing Remarks: Tested by: SW Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	201.30
Tare =	64.34
Dry sample weight =	136.96

Tare for cumulative weight retained= .00

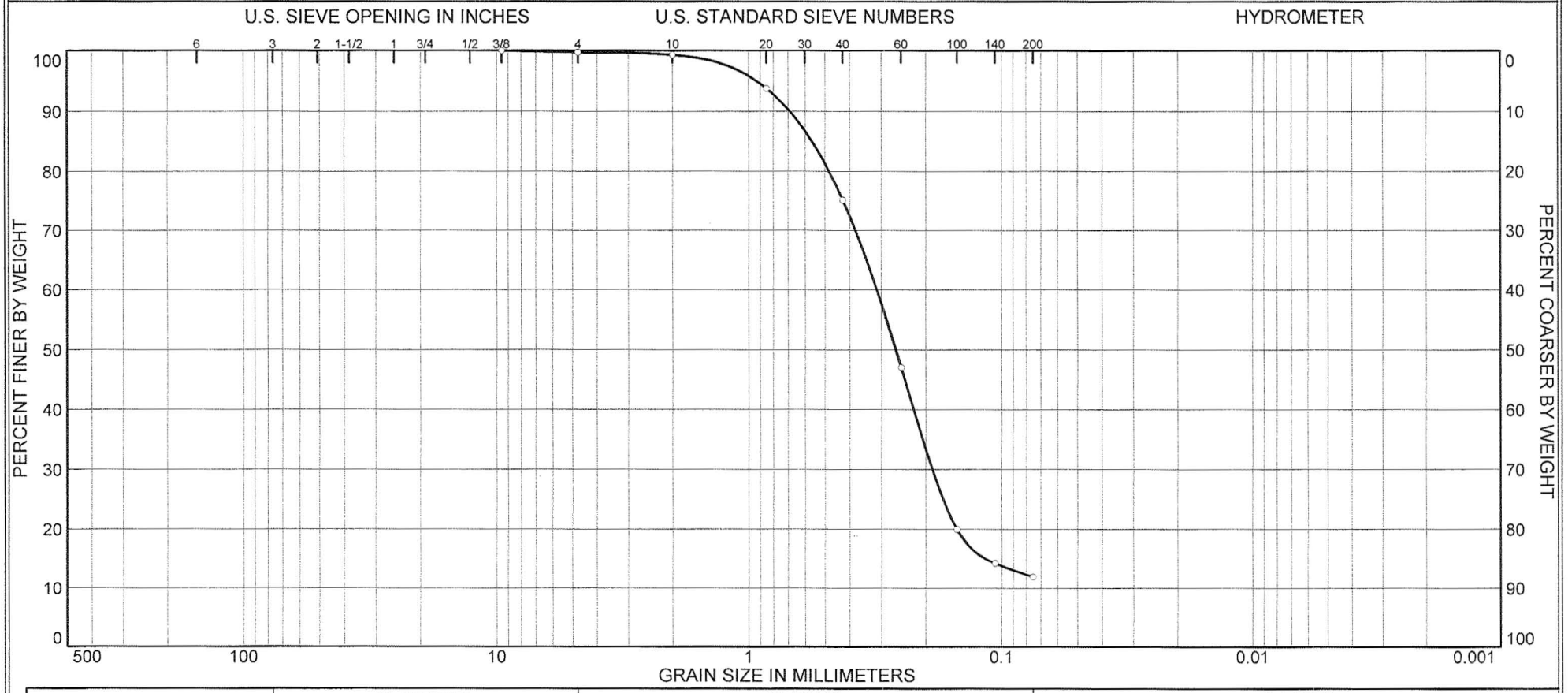
Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.38	99.7
# 20	6.40	95.3
# 40	27.11	80.2
# 60	64.23	53.1
# 100	108.11	21.1
# 140	117.76	14.0
# 200	122.38	10.6

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 89.4 (% coarse = 0.3 % medium = 19.5 % fine = 69.6)
% FINES = 10.6

D_{85}= 0.49 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.12

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.3	0.4	24.2	63.2	11.9	

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-39	P-39	244.48'	N/A	SP-SM	Light Brown Poorly graded sand with silt	7.8	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 Backfill P-39
Sample No.: P-39
Elev. or Depth: 244.48' **Sample Length(in./cm.):** N/A
Location: P-39
Description: Light Brown Poorly graded sand with silt
Date: N/A **Natural Moisture:** 7.8
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=	203.61
Tare =	70.10
Dry sample weight =	133.51

Tare for cumulative weight retained= .00

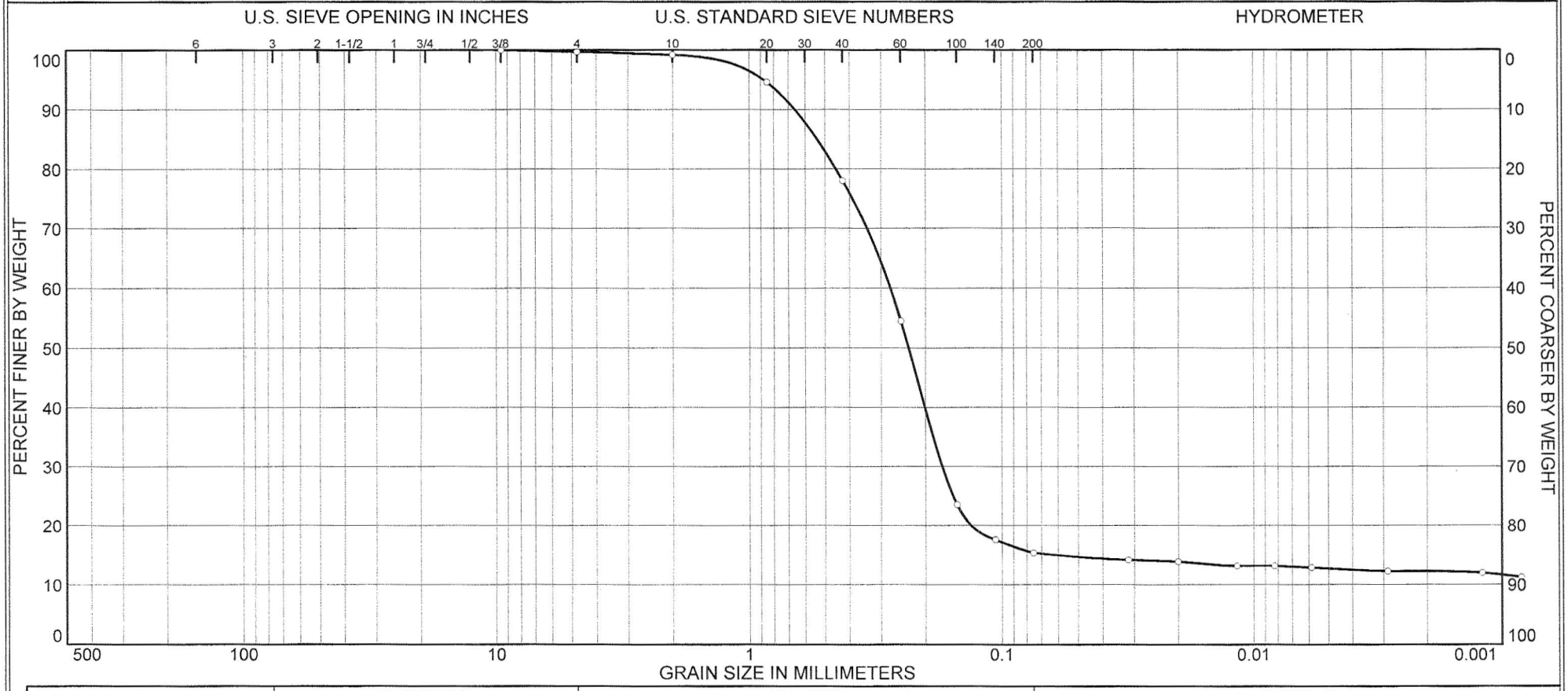
Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.38	99.7
# 10	0.93	99.3
# 20	8.22	93.8
# 40	33.28	75.1
# 60	70.81	47.0
# 100	106.99	19.9
# 140	114.54	14.2
# 200	117.57	11.9

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =** 0.3 **(% coarse =** **% fine =** 0.3)
% SAND = 87.8 **(% coarse =** 0.4 **% medium =** 24.2 **% fine =** 63.2)
% FINES = 11.9

D_{85}= 0.56 D_{60}= 0.31 D_{50}= 0.26
D_{30}= 0.19 D_{15}= 0.12

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.3	0.5	21.2	62.7	2.7	12.6

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-1	P-1 Jar	225.42'	N/A	SM	Reddish Brown Silty sand		NV	NP

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 | 8148

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by: HJ

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 Backfill P-1
Sample No.: P-1 Jar
Elev. or Depth: 225.42' **Sample Length(in./cm.):** 8148
Location: P-1
Description: Reddish Brown Silty sand
Date: N/A **Natural Moisture:**
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	298.43
Tare =	141.67
Dry sample weight =	156.76

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.49	99.7
# 10	1.19	99.2
# 20	8.48	94.6
# 40	34.42	78.0
# 60	71.32	54.5
# 100	119.86	23.5
# 140	129.25	17.5
# 200	132.81	15.3

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 15.3
Weight of hydrometer sample: 23.95
Calculated biased weight= 156.54
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.7
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.0	27.0	22.3	0.0130	27.0	11.9	0.0316	14.1
5.00	23.0	26.5	21.8	0.0130	26.5	11.9	0.0200	13.8
15.00	23.0	25.5	20.8	0.0130	25.5	12.1	0.0116	13.1
30.00	23.0	25.5	20.8	0.0130	25.5	12.1	0.0082	13.1
60.00	23.0	25.0	20.3	0.0130	25.0	12.2	0.0058	12.8

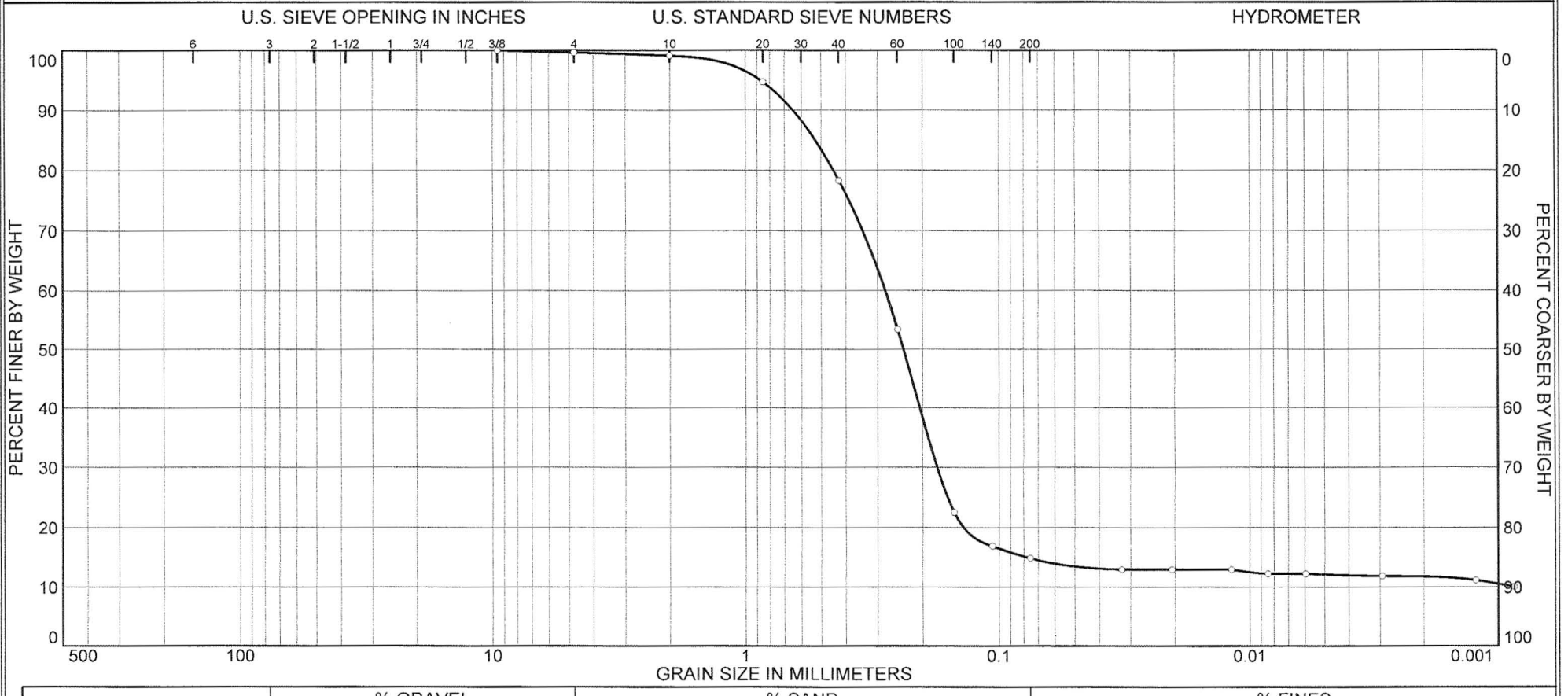
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
250.00	23.0	24.0	19.3	0.0130	24.0	12.4	0.0029	12.2
1440.00	23.3	23.5	18.8	0.0129	23.5	12.4	0.0012	11.9
3041.00	22.8	22.5	17.7	0.0130	22.5	12.6	0.0008	11.2

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL = 0.3 (% coarse = % fine = 0.3)
% SAND = 84.4 (% coarse = 0.5 % medium = 21.2 % fine = 62.7)
% SILT = 2.7 % CLAY = 12.6 (% CLAY COLLOIDS = 11.6)

D_{85}= 0.54 D_{60}= 0.28 D_{50}= 0.23
D_{30}= 0.17 D_{15}= 0.06

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.4	0.5	20.8	63.5	2.7	12.1

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-2	P-2 Jar	225.99'	N/A		Reddish Brown Silty sand			

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 8149

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by: HJ

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 Backfill P-2
Sample No.: P-2 Jar
Elev. or Depth: 225.99' **Sample Length(in./cm.):** 8149
Location: P-2
Description: Reddish Brown Silty sand
Date: N/A **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	283.70
Tare =	143.05
Dry sample weight =	140.65

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.51	99.6
# 10	1.20	99.1
# 20	7.52	94.7
# 40	30.49	78.3
# 60	65.55	53.4
# 100	109.05	22.5
# 140	117.03	16.8
# 200	119.90	14.8

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 14.8
Weight of hydrometer sample: 20.75
Calculated biased weight= 140.20
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.7
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.0	23.0	18.3	0.0130	23.0	12.5	0.0324	12.9
5.00	23.0	23.0	18.3	0.0130	23.0	12.5	0.0205	12.9
15.00	23.0	23.0	18.3	0.0130	23.0	12.5	0.0118	12.9
30.00	23.0	22.0	17.3	0.0130	22.0	12.7	0.0084	12.2
60.00	23.0	22.0	17.3	0.0130	22.0	12.7	0.0060	12.2

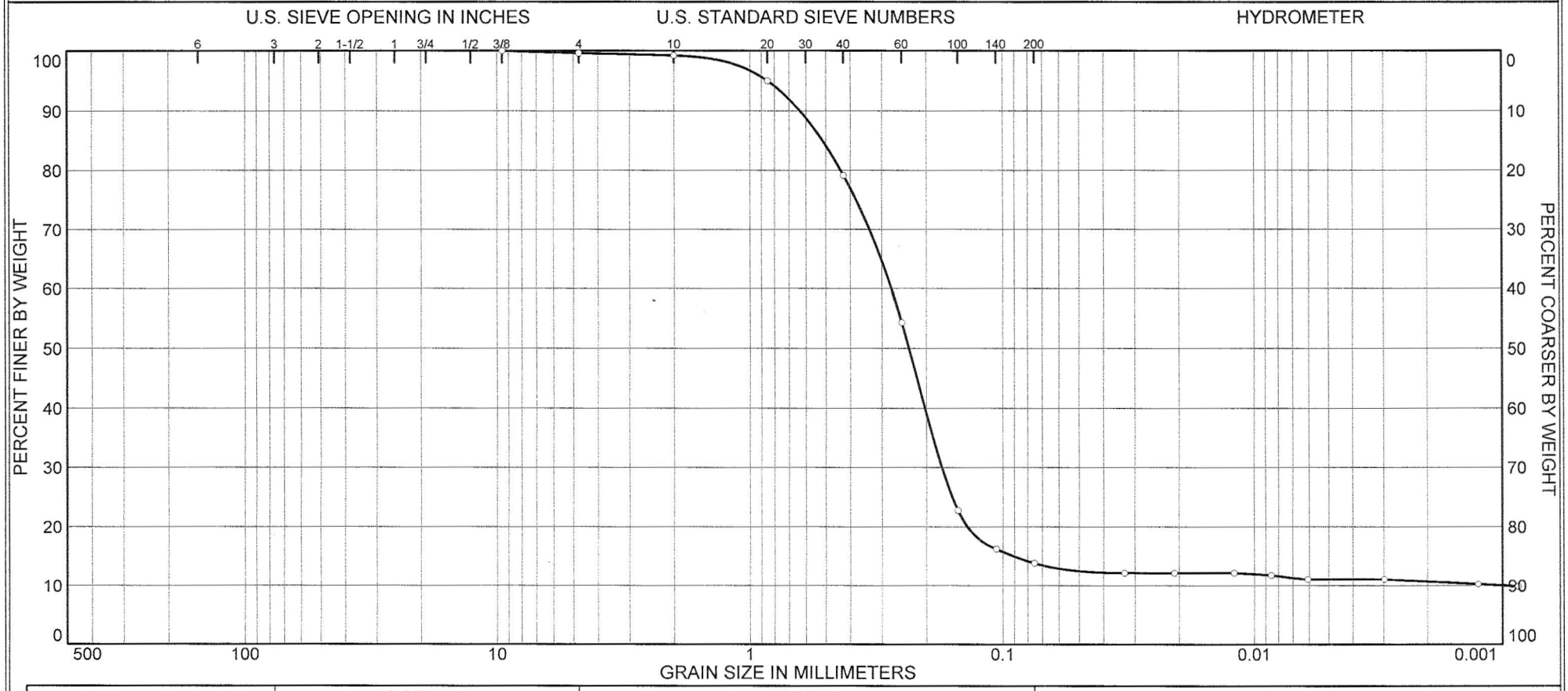
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
250.00	23.0	21.5	16.8	0.0130	21.5	12.8	0.0029	11.8
1440.00	22.8	20.5	15.7	0.0130	20.5	12.9	0.0012	11.1
3000.00	22.8	19.0	14.2	0.0130	19.0	13.2	0.0009	10.0

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =** 0.4 **(% coarse =** **% fine =** 0.4**)**
% SAND = 84.8 **(% coarse =** 0.5 **% medium =** 20.8 **% fine =** 63.5**)**
% SILT = 2.7 **% CLAY =** 12.1 **(% CLAY COLLOIDS =** 10.5**)**

D_{85}= 0.53 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.08 D_{10}= 0.00
C_c= 127.3884 C_u= 324.8506

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.4	0.4	20.1	65.3	2.8	11.0

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-4	P-4 Jar	227.05'	N/A		Reddish Brown Silty sand			

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 8150

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by:HJ

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 Backfill P-4
Sample No.: P-4 Jar
Elev. or Depth: 227.05' **Sample Length(in./cm.):** 8150
Location: P-4
Description: Reddish Brown Silty sand
Date: N/A **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: EH Reviewed by:HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	226.10
Tare =	97.14
Dry sample weight =	128.96

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.57	99.6
# 10	1.09	99.2
# 20	6.45	95.0
# 40	26.93	79.1
# 60	58.94	54.3
# 100	99.74	22.7
# 140	108.08	16.2
# 200	111.21	13.8

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 13.8
Weight of hydrometer sample: 17.75
Calculated biased weight= 128.62
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.7
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.0	20.5	15.8	0.0130	20.5	12.9	0.0330	12.1
5.00	23.0	20.5	15.8	0.0130	20.5	12.9	0.0208	12.1
15.00	23.0	20.5	15.8	0.0130	20.5	12.9	0.0120	12.1
30.00	23.0	20.0	15.3	0.0130	20.0	13.0	0.0085	11.7
60.00	23.0	19.0	14.3	0.0130	19.0	13.2	0.0061	11.0

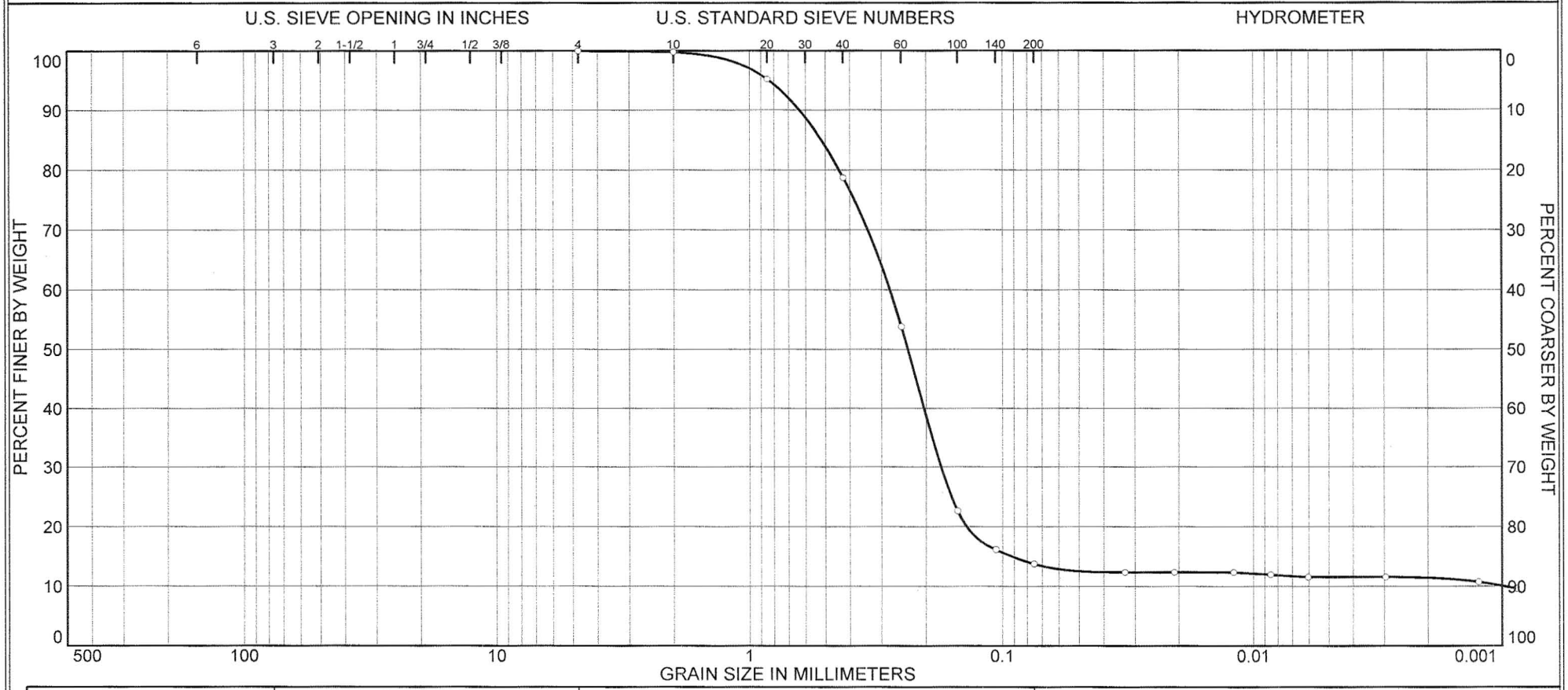
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
250.00	23.0	19.0	14.3	0.0130	19.0	13.2	0.0030	11.0
1440.00	22.8	18.0	13.2	0.0130	18.0	13.3	0.0013	10.2
3025.00	22.8	17.5	12.7	0.0130	17.5	13.4	0.0009	9.8

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =** 0.4 **(% coarse =** **% fine =** 0.4**)**
% SAND = 85.8 **(% coarse =** 0.4 **% medium =** 20.1 **% fine =** 65.3**)**
% SILT = 2.8 **% CLAY =** 11.0 **(% CLAY COLLOIDS =** 10.0**)**

D_{85}= 0.52 D_{60}= 0.27 D_{50}= 0.23
D_{30}= 0.17 D_{15}= 0.09 D_{10}= 0.00
C_c= 105.7179 C_u= 265.1591

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.2	21.1	65.0	2.2	11.5

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	Test Pad Backfill P-6	P-6 Jar	228.02'	N/A		Reddish Brown Silty sand			

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 8151

MACTEC ENGINEERING AND CONSULTING, INC.

○ Tested by: EH Reviewed by: HJ

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 Backfill P-6
Sample No.: P-6 Jar
Elev. or Depth: 228.02' **Sample Length(in./cm.):** 8151
Location: P-6
Description: Reddish Brown Silty sand
Date: N/A **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	272.85
Tare =	141.93
Dry sample weight =	130.92

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.25	99.8
# 20	6.26	95.2
# 40	27.85	78.7
# 60	60.51	53.8
# 100	101.34	22.6
# 140	109.82	16.1
# 200	112.98	13.7

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 13.7
Weight of hydrometer sample: 17.94
Calculated biased weight= 130.95
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.7
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.0	21.0	16.3	0.0130	21.0	12.9	0.0328	12.3
5.00	23.0	21.0	16.3	0.0130	21.0	12.9	0.0208	12.3
15.00	23.0	21.0	16.3	0.0130	21.0	12.9	0.0120	12.3
30.00	23.0	20.5	15.8	0.0130	20.5	12.9	0.0085	11.9
60.00	23.0	20.0	15.3	0.0130	20.0	13.0	0.0060	11.5
250.00	23.0	20.0	15.3	0.0130	20.0	13.0	0.0030	11.5

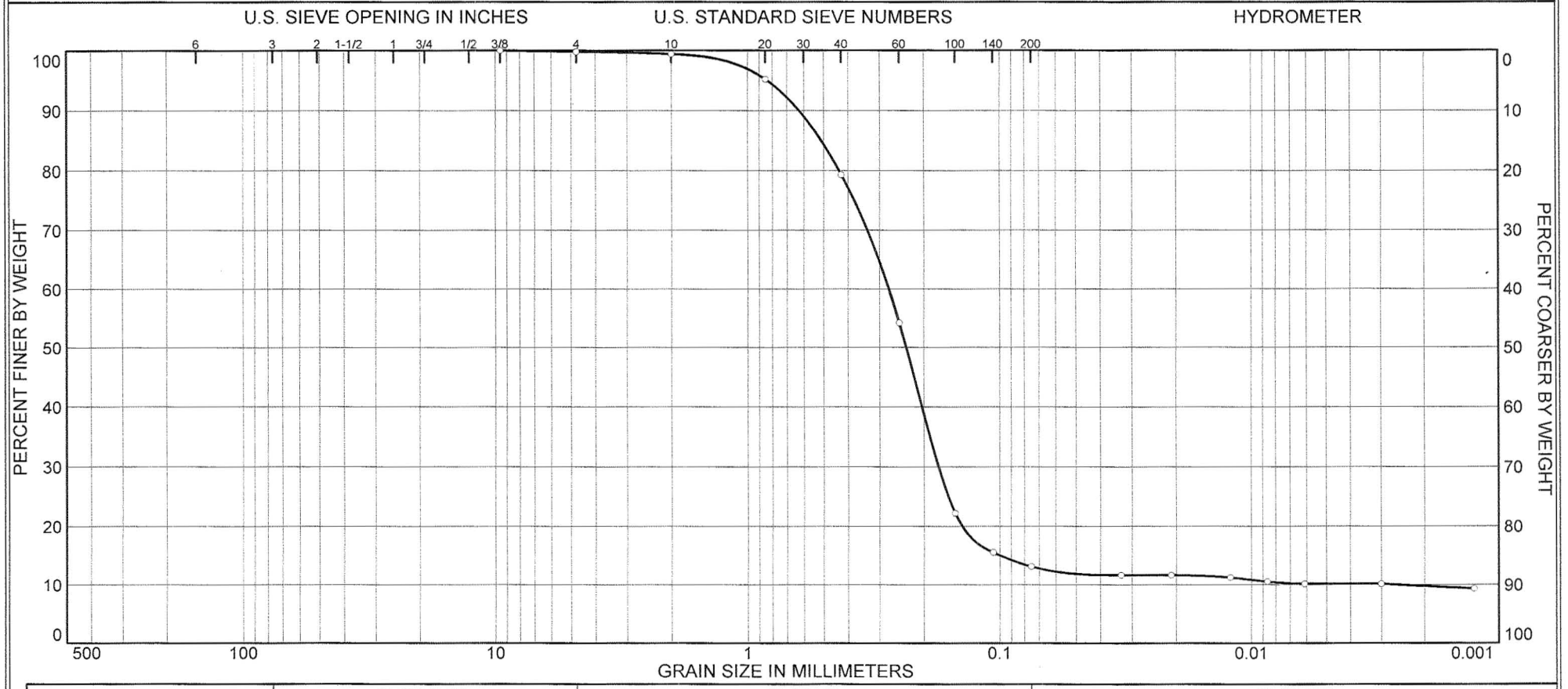
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1440.00	22.8	19.0	14.2	0.0130	19.0	13.2	0.0012	10.7
2975.00	22.8	17.5	12.7	0.0130	17.5	13.4	0.0009	9.6

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 86.3 **(% coarse =** 0.2 **% medium =** 21.1 **% fine =** 65.0**)**
% SILT = 2.2 **% CLAY =** 11.5 **(% CLAY COLLOIDS =** 10.1**)**

D_{85}= 0.52 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.17 D_{15}= 0.09 D_{10}= 0.00
C_c= 111.3385 C_u= 282.7735

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.2	0.4	20.1	66.2	3.0	10.1

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-8	P-8 Jar	229.00'	N/A		Reddish Brown Silty sand			

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 8152

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by: HJ

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 Backfill P-8
Sample No.: P-8 Jar
Elev. or Depth: 229.00' **Sample Length(in./cm.):** 8152
Location: P-8
Description: Reddish Brown Silty sand
Date: N/A **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	274.29
Tare =	144.70
Dry sample weight =	129.59

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.32	99.8
# 10	0.78	99.4
# 20	6.20	95.2
# 40	26.88	79.3
# 60	59.37	54.2
# 100	100.80	22.2
# 140	109.47	15.5
# 200	112.56	13.1

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 13.1
Weight of hydrometer sample: 17.03
Calculated biased weight= 130.00
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.7
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.0	20.0	15.3	0.0130	20.0	13.0	0.0331	11.6
5.00	23.0	20.0	15.3	0.0130	20.0	13.0	0.0209	11.6
15.00	23.0	19.5	14.8	0.0130	19.5	13.1	0.0121	11.2
30.00	23.0	18.5	13.8	0.0130	18.5	13.3	0.0086	10.5
60.00	23.0	18.0	13.3	0.0130	18.0	13.3	0.0061	10.1

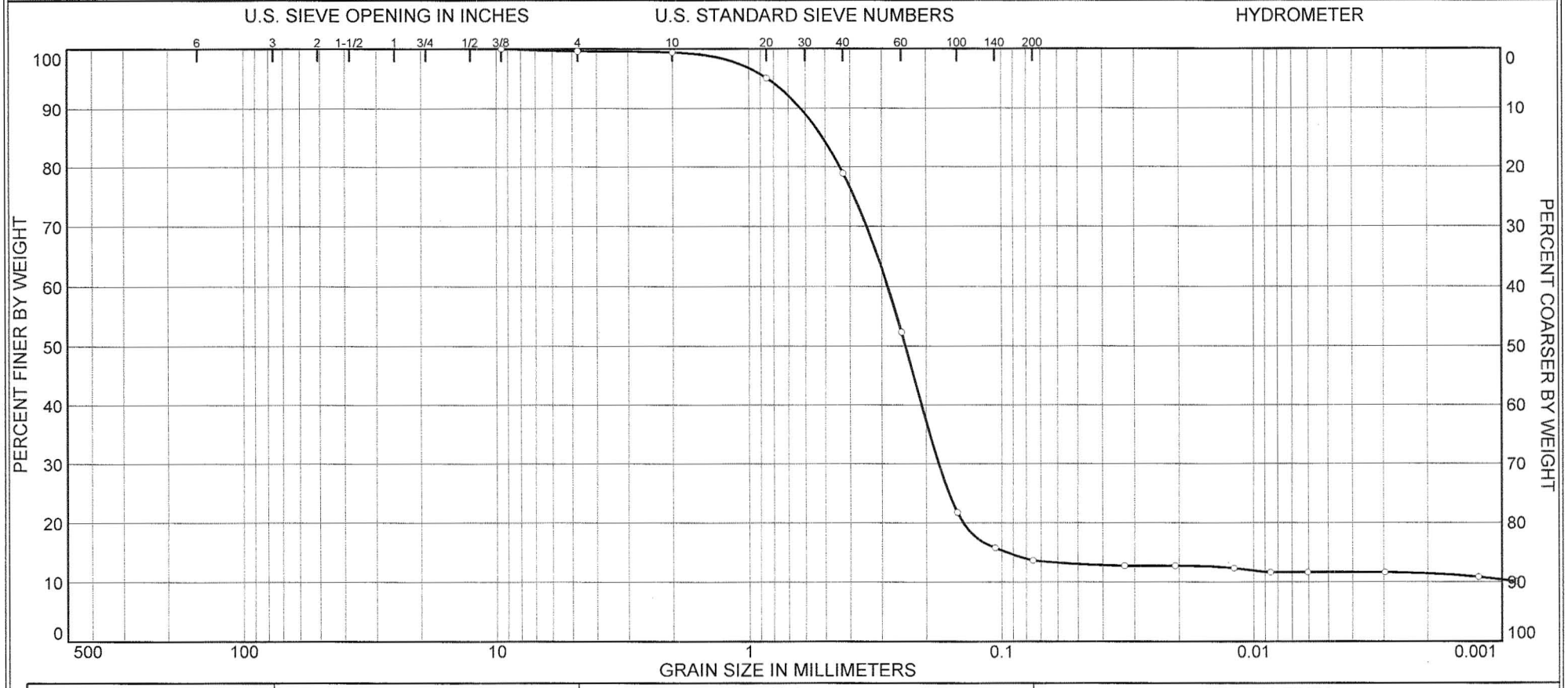
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
250.00	23.0	18.0	13.3	0.0130	18.0	13.3	0.0030	10.1
1440.00	22.8	17.0	12.2	0.0130	17.0	13.5	0.0013	9.3

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =** 0.2 **(% coarse =** **% fine =** 0.2)
% SAND = 86.7 **(% coarse =** 0.4 **% medium =** 20.1 **% fine =** 66.2)
% SILT = 3.0 **% CLAY =** 10.1

D_{85}= 0.51 D_{60}= 0.28 D_{50}= 0.23
D_{30}= 0.17 D_{15}= 0.10 D_{10}= 0.00
C_C= 41.3177 C_u= 102.4163

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.4	0.2	20.5	65.3	2.0	11.6

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	Test Pad Backfill P-10	P-10 Jar	230.01'	N/A		Reddish Brown Silty sand			

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 | 8153

MACTEC ENGINEERING AND CONSULTING, INC.

○ Tested by: EH Reviewed by: HJ

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 Backfill P-10
Sample No.: P-10 Jar
Elev. or Depth: 230.01' **Sample Length(in./cm.):** 8153
Location: P-10
Description: Reddish Brown Silty sand
Date: N/A **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	227.43
Tare =	96.48
Dry sample weight =	130.95

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.46	99.6
# 10	0.74	99.4
# 20	6.42	95.1
# 40	27.66	78.9
# 60	62.51	52.3
# 100	102.57	21.7
# 140	110.36	15.7
# 200	113.20	13.6

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 13.6
Weight of hydrometer sample: 17.75
Calculated biased weight= 130.51
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.7
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.0	21.5	16.8	0.0130	21.5	12.8	0.0327	12.7
5.00	23.0	21.5	16.8	0.0130	21.5	12.8	0.0207	12.7
15.00	23.0	21.0	16.3	0.0130	21.0	12.9	0.0120	12.3
30.00	23.0	20.0	15.3	0.0130	20.0	13.0	0.0085	11.6
60.00	23.0	20.0	15.3	0.0130	20.0	13.0	0.0060	11.6

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
250.00	23.0	20.0	15.3	0.0130	20.0	13.0	0.0030	11.6
1440.00	22.8	19.0	14.2	0.0130	19.0	13.2	0.0012	10.8
2953.00	22.8	18.0	13.2	0.0130	18.0	13.3	0.0009	10.0

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL = 0.4 (% coarse = % fine = 0.4)
% SAND = 86.0 (% coarse = 0.2 % medium = 20.5 % fine = 65.3)
% SILT = 2.0 % CLAY = 11.6 (% CLAY COLLOIDS = 10.3)

D_{85}= 0.51 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.10 D_{10}= 0.00
C_C= 127.7559 C_u= 325.0099

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.2	0.4	21.1	64.9	2.7	10.7

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	Test Pad Backfill P-12	P-12 Jar	230.97'	N/A		Reddish Brown Silty sand			

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 8154

MACTEC ENGINEERING AND CONSULTING, INC.

○ Tested by: EH Reviewed by: HJ

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 Backfill P-12
Sample No.: P-12 Jar
Elev. or Depth: 230.97' **Sample Length(in./cm.):** 8154
Location: P-12
Description: Reddish Brown Silty sand
Date: N/A **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	260.22
Tare =	144.78
Dry sample weight =	115.44

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.27	99.8
# 10	0.72	99.4
# 20	6.02	94.8
# 40	25.01	78.3
# 60	54.01	53.2
# 100	89.94	22.1
# 140	97.27	15.7
# 200	99.98	13.4

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 13.4
Weight of hydrometer sample: 15.46
Calculated biased weight= 115.37
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.7
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.0	18.5	13.8	0.0130	18.5	13.3	0.0334	11.8
5.00	23.0	18.0	13.3	0.0130	18.0	13.3	0.0212	11.4
15.00	23.0	18.0	13.3	0.0130	18.0	13.3	0.0122	11.4
30.00	23.0	18.0	13.3	0.0130	18.0	13.3	0.0086	11.4
60.00	23.0	17.5	12.8	0.0130	17.5	13.4	0.0061	10.9

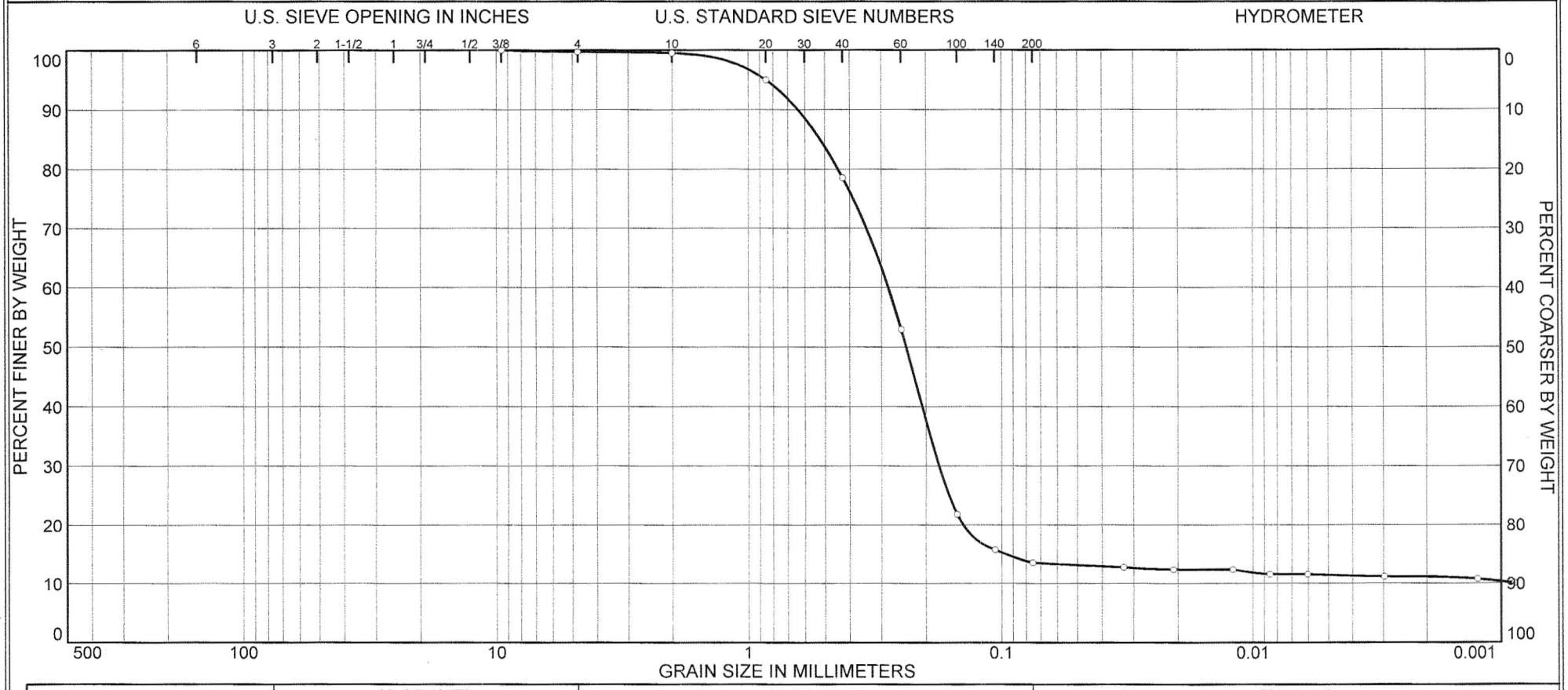
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
250.00	23.0	17.0	12.3	0.0130	17.0	13.5	0.0030	10.5
1440.00	22.8	16.0	11.2	0.0130	16.0	13.7	0.0013	9.6

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =** 0.2 **(% coarse =** **% fine =** 0.2)
% SAND = 86.4 **(% coarse =** 0.4 **% medium =** 21.1 **% fine =** 64.9)
% SILT = 2.7 **% CLAY =** 10.7

D_{85}= 0.53 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.10 D_{10}= 0.00
C_c= 63.0213 C_u= 160.3804

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.3	0.2	21.0	65.0	2.1	11.4

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-15	P-15 Jar	232.43'	N/A		Reddish Brown Silty sand			

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 8155

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by: HJ

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 Backfill P-15
Sample No.: P-15 Jar
Elev. or Depth: 232.43' **Sample Length(in./cm.):** 8155
Location: P-15
Description: Reddish Brown Silty sand
Date: N/A **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	274.22
Tare =	143.33
Dry sample weight =	130.89

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.41	99.7
# 10	0.65	99.5
# 20	6.50	95.0
# 40	28.09	78.5
# 60	61.70	52.9
# 100	102.30	21.8
# 140	110.31	15.7
# 200	113.21	13.5

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 13.5
Weight of hydrometer sample: 17.68
Calculated biased weight= 130.96
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.7
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.0	21.5	16.8	0.0130	21.5	12.8	0.0327	12.7
5.00	23.0	21.0	16.3	0.0130	21.0	12.9	0.0208	12.3
15.00	23.0	21.0	16.3	0.0130	21.0	12.9	0.0120	12.3
30.00	23.0	20.0	15.3	0.0130	20.0	13.0	0.0085	11.5
60.00	23.0	20.0	15.3	0.0130	20.0	13.0	0.0060	11.5

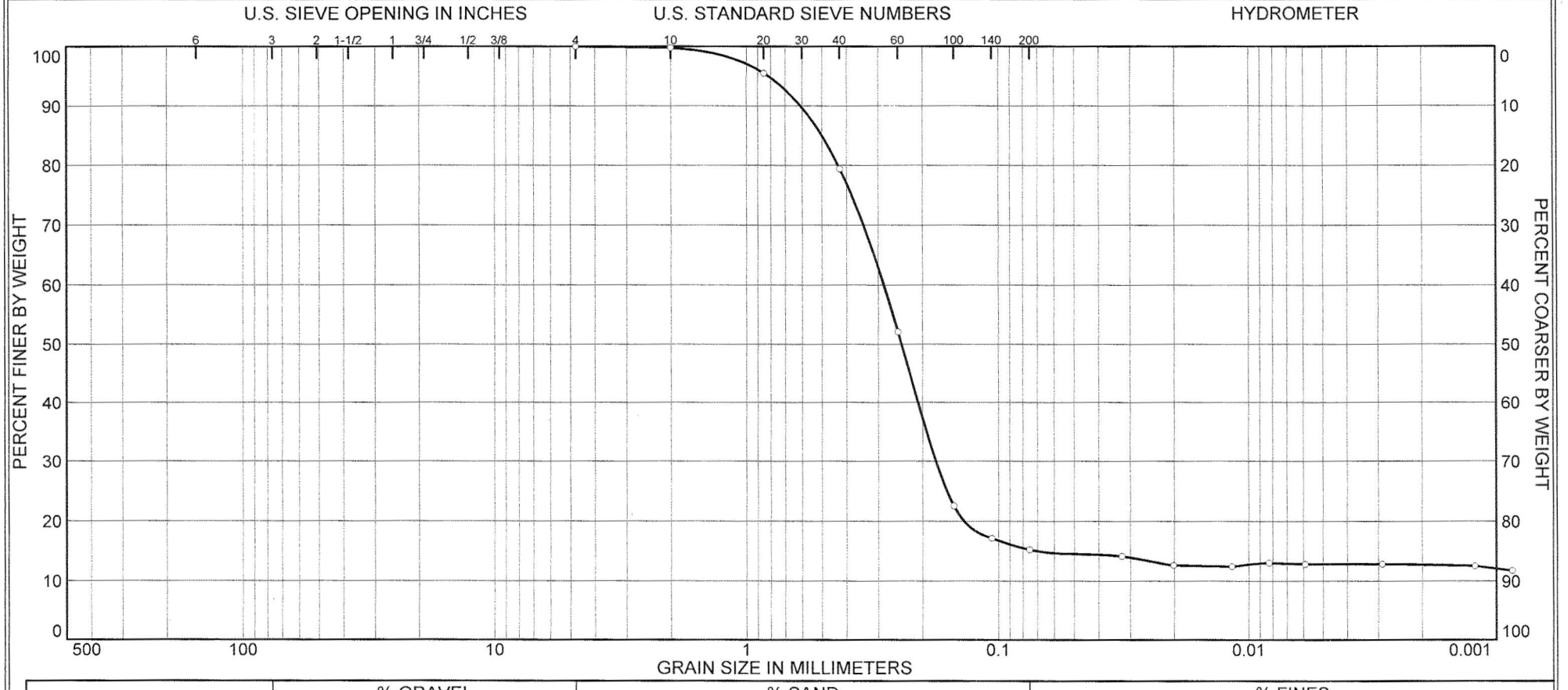
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
250.00	23.0	19.5	14.8	0.0130	19.5	13.1	0.0030	11.1
1440.00	22.7	19.0	14.2	0.0130	19.0	13.2	0.0012	10.7
2905.00	22.7	18.0	13.2	0.0130	18.0	13.3	0.0009	10.0

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =** 0.3 **(% coarse =** **% fine =** 0.3)
% SAND = 86.2 **(% coarse =** 0.2 **% medium =** 21.0 **% fine =** 65.0)
% SILT = 2.1 **% CLAY =** 11.4 **(% CLAY COLLOIDS =** 10.3)

D_{85}= 0.52 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.10 D_{10}= 0.00
C_C= 126.2276 C_u= 319.3904

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.2	20.4	64.2	2.4	12.8

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-16	P-16	232.92'	N/A	SM	Red Brown Silty sand	7.5	NV	NP

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 8156

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by: HJ

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 Backfill P-16
Sample No.: P-16
Elev. or Depth: 232.92' **Sample Length(in./cm.):** 8156
Location: P-16
Description: Red Brown Silty sand
Date: N/A **Natural Moisture:** 7.5
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	284.61
Tare =	144.41
Dry sample weight =	140.20

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.34	99.8
# 20	6.35	95.5
# 40	28.90	79.4
# 60	67.09	52.1
# 100	108.68	22.5
# 140	116.20	17.1
# 200	118.85	15.2

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 15.2
Weight of hydrometer sample: 21.35
Calculated biased weight= 140.46
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.711
Specific gravity correction factor= 0.987
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	22.0	25.0	20.0	0.0131	25.0	12.2	0.0323	14.1
5.00	25.0	22.0	17.9	0.0126	22.0	12.7	0.0201	12.6
15.00	24.5	22.0	17.7	0.0127	22.0	12.7	0.0117	12.4
30.00	24.0	23.0	18.6	0.0128	23.0	12.5	0.0082	13.0
60.00	23.0	23.0	18.3	0.0129	23.0	12.5	0.0059	12.8
250.00	23.0	23.0	18.3	0.0129	23.0	12.5	0.0029	12.8

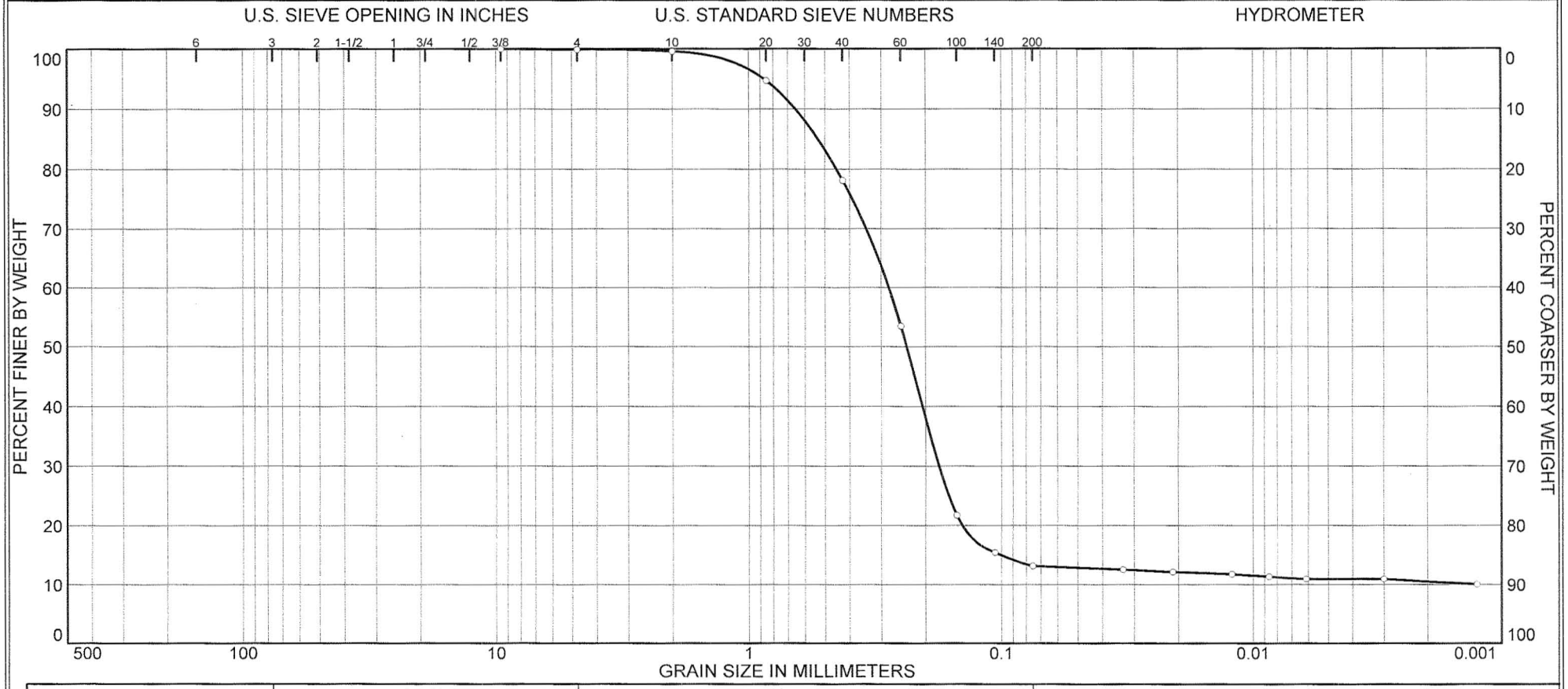
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1440.00	22.0	22.8	17.8	0.0131	22.8	12.6	0.0012	12.5
2888.00	22.8	21.5	16.7	0.0129	21.5	12.8	0.0009	11.7

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 84.8 (% coarse = 0.2 % medium = 20.4 % fine = 64.2)
% SILT = 2.4 % CLAY = 12.8 (% CLAY COLLOIDS = 12.0)

D_{85}= 0.50 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.07

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.1	0.3	21.5	65.0	2.2	10.9

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-20	P-20 Jar	234.98'	N/A		Reddish Brown Silty sand			

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 | 8157

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by: HJ

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 Backfill P-20
Sample No.: P-20 Jar
Elev. or Depth: 234.98' **Sample Length(in./cm.):** 8157
Location: P-20
Description: Reddish Brown Silty sand
Date: N/A **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	265.51
Tare =	144.76
Dry sample weight =	120.75

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.15	99.9
# 10	0.54	99.6
# 20	6.40	94.7
# 40	26.40	78.1
# 60	56.22	53.4
# 100	94.49	21.7
# 140	102.16	15.4
# 200	104.95	13.1

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 13.1
Weight of hydrometer sample: 15.80
Calculated biased weight= 120.61
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.7
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	23.0	20.0	15.3	0.0130	20.0	13.0	0.0331	12.5
5.00	23.0	19.5	14.8	0.0130	19.5	13.1	0.0210	12.1
15.00	23.0	19.0	14.3	0.0130	19.0	13.2	0.0121	11.7
30.00	23.0	18.5	13.8	0.0130	18.5	13.3	0.0086	11.3
60.00	23.0	18.0	13.3	0.0130	18.0	13.3	0.0061	10.9

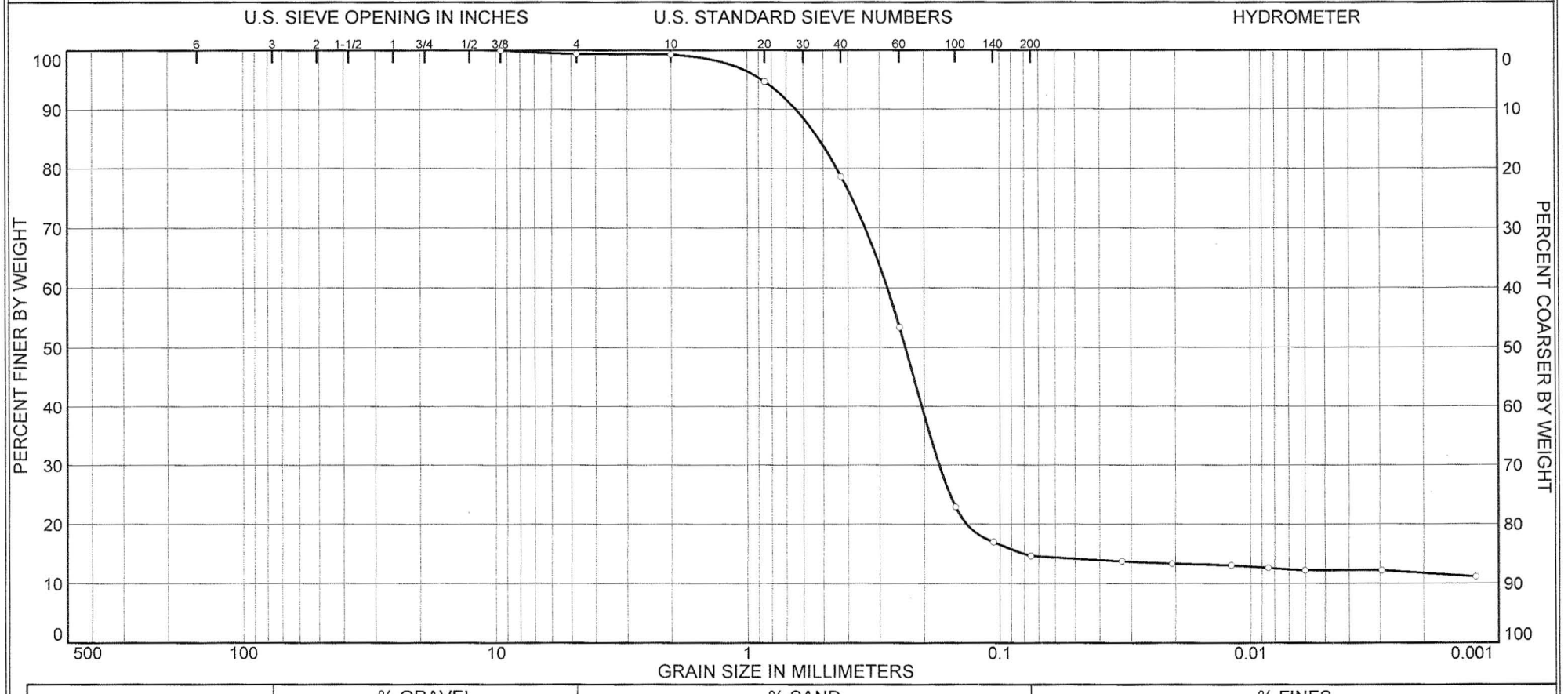
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
250.00	23.0	18.0	13.3	0.0130	18.0	13.3	0.0030	10.9
1440.00	22.8	17.0	12.2	0.0130	17.0	13.5	0.0013	10.0

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =** 0.1 **(% coarse =** **% fine =** 0.1)
% SAND = 86.8 **(% coarse =** 0.3 **% medium =** 21.5 **% fine =** 65.0)
% SILT = 2.2 **% CLAY =** 10.9

D_{85}= 0.53 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.18 D_{15}= 0.10 D_{10}= 0.00
C_c= 88.6374 C_u= 222.1721

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.6	0.1	20.7	64.0	2.4	12.2

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-22A	P-22A Jar	235.97'	N/A		Red Silty sand			

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 | 8209

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by: HJ

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 Backfill P-22A
Sample No.: P-22A Jar
Elev. or Depth: 235.97' **Sample Length(in./cm.):** 8209
Location: P-22A
Description: Red Silty sand
Date: N/A **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	147.48
Tare =	16.62
Dry sample weight =	130.86

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
.375 inch	0.00	100.0
# 4	0.74	99.4
# 10	0.98	99.3
# 20	7.00	94.7
# 40	28.01	78.6
# 60	60.97	53.4
# 100	100.93	22.9
# 140	108.81	16.9
# 200	111.69	14.6

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 14.6
Weight of hydrometer sample: 19.17
Calculated biased weight= 131.30
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.7
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	22.8	23.0	18.2	0.0130	23.0	12.5	0.0325	13.7
5.00	22.8	22.5	17.7	0.0130	22.5	12.6	0.0206	13.3
15.00	22.8	22.0	17.2	0.0130	22.0	12.7	0.0119	13.0
30.00	22.8	21.5	16.7	0.0130	21.5	12.8	0.0085	12.6
60.00	22.8	21.0	16.2	0.0130	21.0	12.9	0.0060	12.2

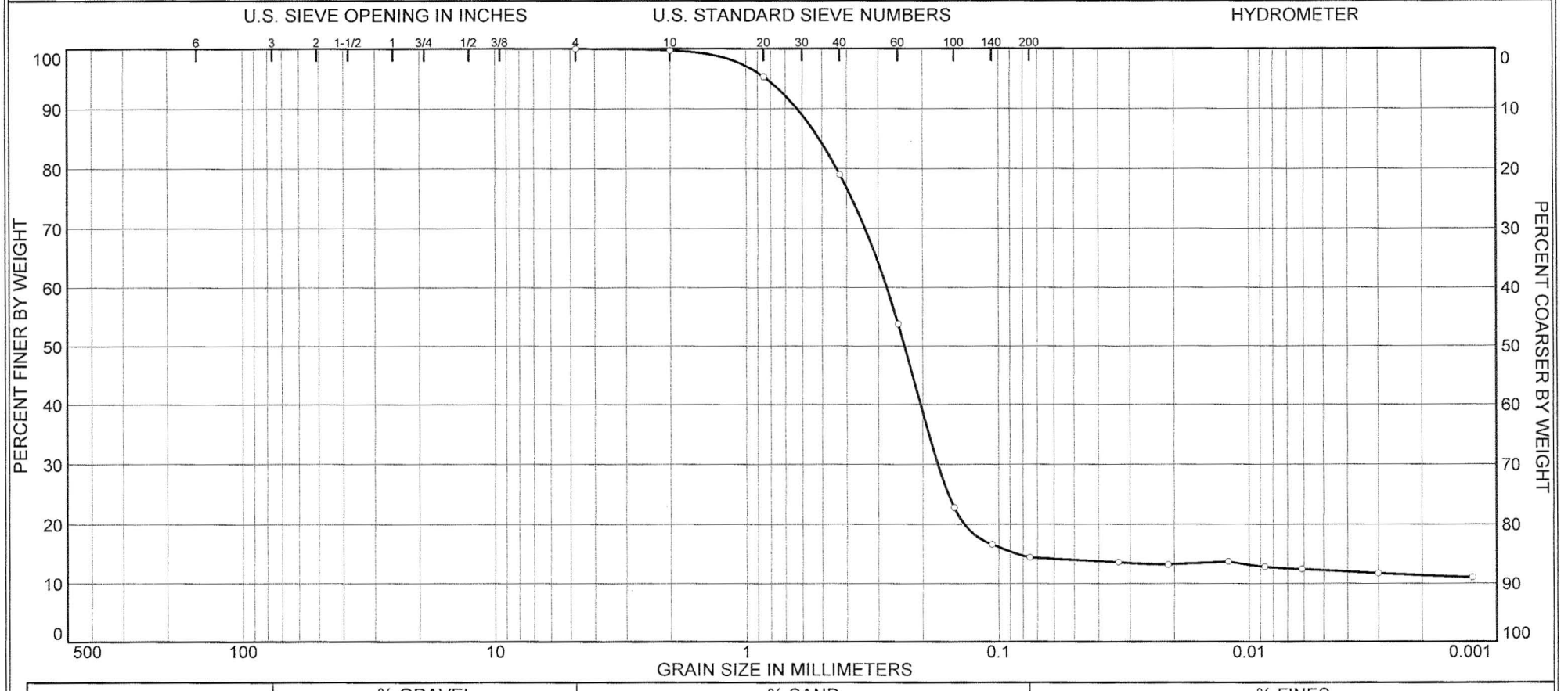
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
250.00	22.8	21.0	16.2	0.0130	21.0	12.9	0.0029	12.2
1440.00	23.1	19.5	14.8	0.0129	19.5	13.1	0.0012	11.1

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL = 0.6 (% coarse = % fine = 0.6)
% SAND = 84.8 (% coarse = 0.1 % medium = 20.7 % fine = 64.0)
% SILT = 2.4 % CLAY = 12.2

D_{85}= 0.52 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.17 D_{15}= 0.08

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.3	20.7	64.6	2.2	12.2

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-26	P-26 Bucket	237.95'	N/A	SM	Reddish Brown Silty sand		NV	NP

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 | 8210

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by: HJ

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 Backfill P-26
Sample No.: P-26 Bucket
Elev. or Depth: 237.95' **Sample Length(in./cm.):** 8210
Location: P-26
Description: Reddish Brown Silty sand
Date: N/A **Natural Moisture:**
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SM
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	140.48
Tare =	15.31
Dry sample weight =	125.17

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.38	99.7
# 20	5.89	95.3
# 40	26.34	79.0
# 60	57.80	53.8
# 100	96.63	22.8
# 140	104.42	16.6
# 200	107.16	14.4

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 14.4
Weight of hydrometer sample: 18.01
Calculated biased weight= 125.07
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.672
Specific gravity correction factor= 0.995
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	22.2	22.0	17.1	0.0132	22.0	12.7	0.0332	13.6
5.00	22.2	21.5	16.6	0.0132	21.5	12.8	0.0211	13.2
15.00	22.2	22.2	17.3	0.0132	22.2	12.7	0.0121	13.7
30.00	22.2	21.0	16.1	0.0132	21.0	12.9	0.0086	12.8
60.00	22.5	20.5	15.6	0.0131	20.5	12.9	0.0061	12.4
250.00	22.8	19.5	14.7	0.0131	19.5	13.1	0.0030	11.7

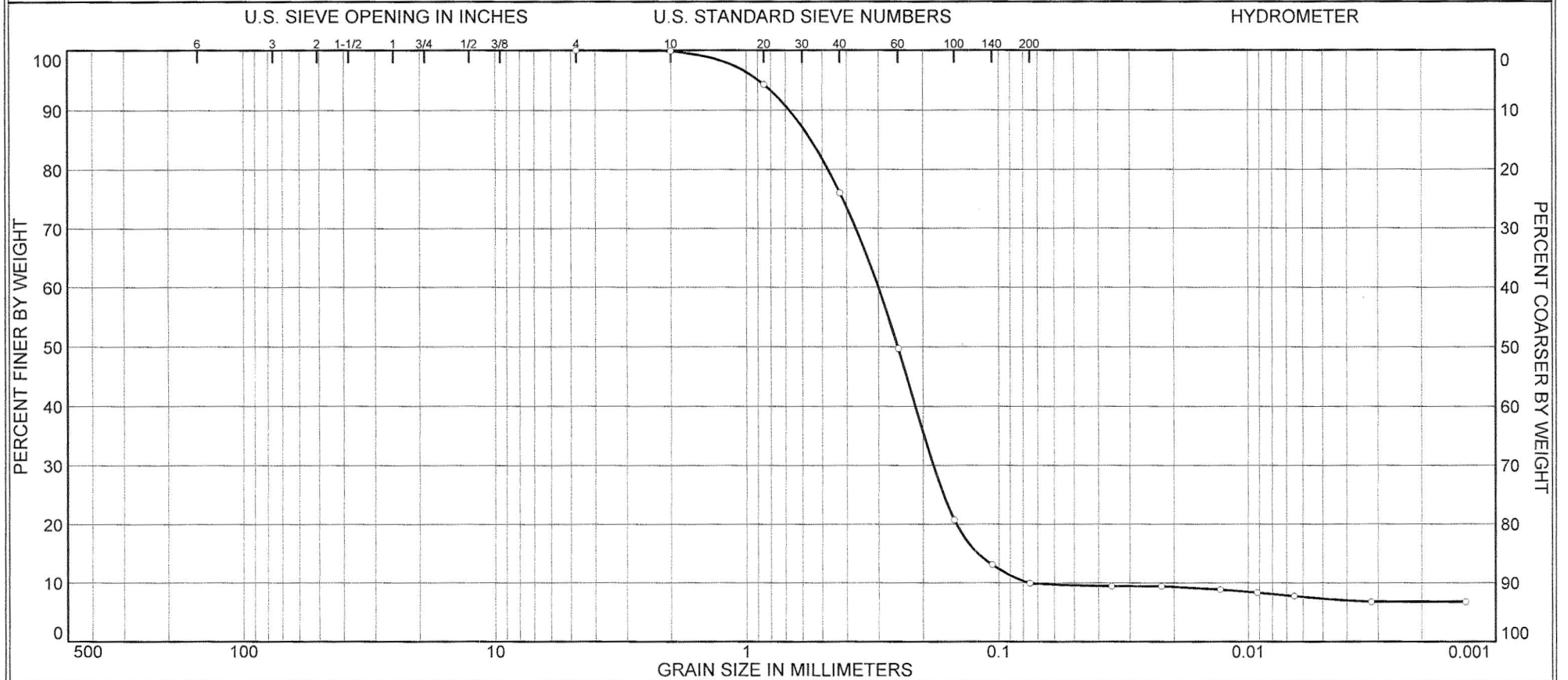
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1440.00	23.1	18.5	13.8	0.0131	18.5	13.3	0.0013	11.0

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 85.6 (% coarse = 0.3 % medium = 20.7 % fine = 64.6)
% SILT = 2.2 % CLAY = 12.2

D_{85}= 0.51 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.17 D_{15}= 0.08

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.1	23.9	66.1	2.6	7.3

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-31	P-31 Jar-1	240.42'	N/A		Red Poorly graded sand with silt			

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 | 8293

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by: HJ

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 Backfill P-31
Sample No.: P-31 Jar-1
Elev. or Depth: 240.42' **Sample Length(in./cm.):** 8293
Location: P-31
Description: Red Poorly graded sand with silt
Date: N/A **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	102.48
Tare =	16.19
Dry sample weight =	86.29

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.10	99.9
# 20	4.88	94.3
# 40	20.69	76.0
# 60	43.39	49.7
# 100	68.39	20.7
# 140	75.10	13.0
# 200	77.77	9.9

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 9.9
Weight of hydrometer sample: 8.52
Calculated biased weight= 86.06
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.7
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	20.6	13.5	8.2	0.0133	13.5	14.1	0.0354	9.4
5.00	20.6	13.5	8.2	0.0133	13.5	14.1	0.0224	9.4
15.00	20.6	13.0	7.7	0.0133	13.0	14.2	0.0130	8.8
30.00	20.6	12.5	7.2	0.0133	12.5	14.2	0.0092	8.3
60.00	20.8	12.0	6.7	0.0133	12.0	14.3	0.0065	7.7
250.00	21.4	11.0	5.9	0.0132	11.0	14.5	0.0032	6.7

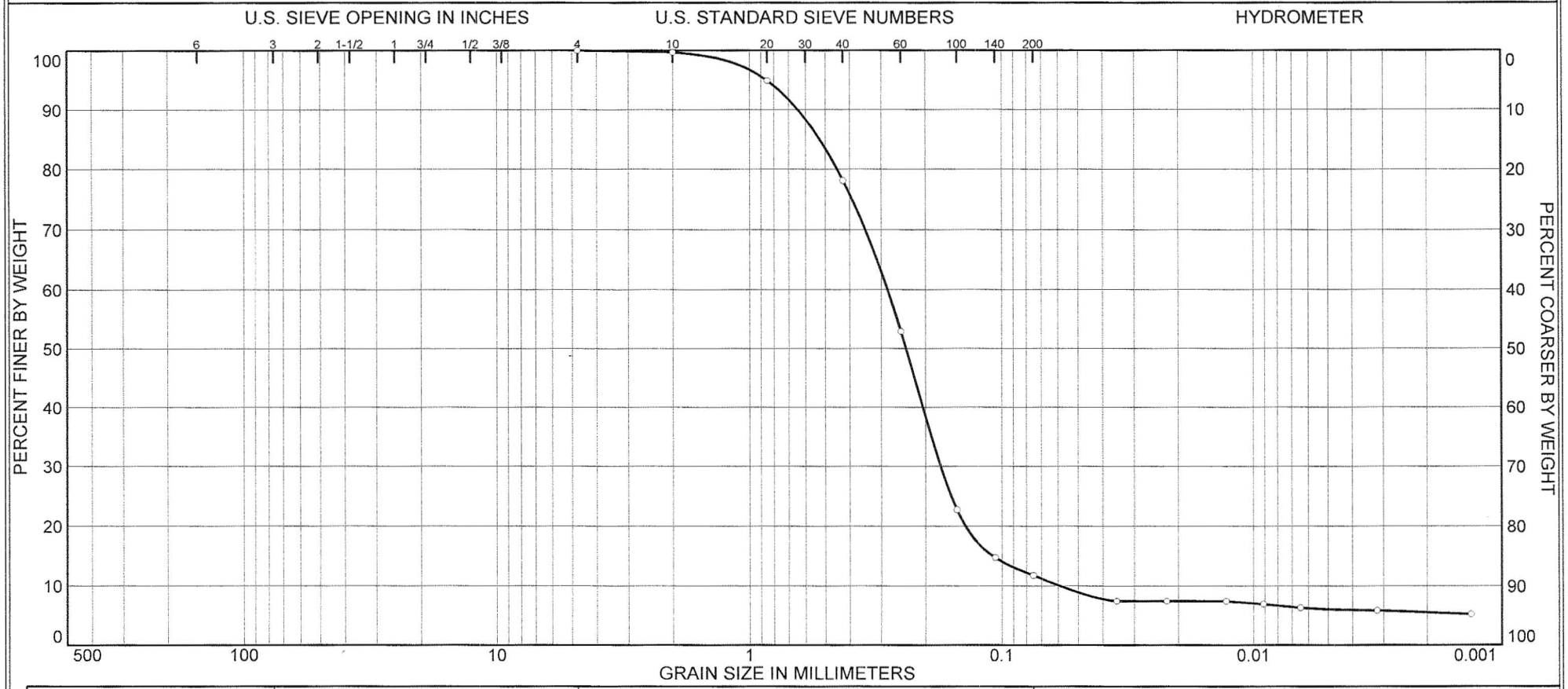
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1440.00	21.4	11.0	5.9	0.0132	11.0	14.5	0.0013	6.7

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = **% GRAVEL =**
% SAND = 90.1 **(% coarse =** 0.1 **% medium =** 23.9 **% fine =** 66.1**)**
% SILT = 2.6 **% CLAY =** 7.3

D_{85}= 0.55 D_{60}= 0.30 D_{50}= 0.25
D_{30}= 0.18 D_{15}= 0.12 D_{10}= 0.08
C_C= 1.4407 C_u= 3.9261

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.3	21.6	66.4	5.7	6.0

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-35	P-35	242.44'	N/A	SP-SM	Red Poorly graded sand with silt	6.8	NV	NP

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 8254

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by: HJ

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 Backfill P-35
Sample No.: P-35
Elev. or Depth: 242.44' **Sample Length(in./cm.):** 8254
Location: P-35
Description: Red Poorly graded sand with silt
Date: N/A **Natural Moisture:** 6.8
Liquid Limit: NV **Plastic Limit:** NP **USCS Class.:** SP-SM
Testing Remarks: Tested by: EH Reviewed by: HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	73.81
Tare =	15.69
Dry sample weight =	58.12

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.19	99.7
# 20	2.94	94.9
# 40	12.70	78.1
# 60	27.39	52.9
# 100	44.91	22.7
# 140	49.55	14.7
# 200	51.32	11.7

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 11.7
Weight of hydrometer sample: 10.93
Calculated biased weight= 93.42
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.698
Specific gravity correction factor= 0.989
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	21.9	12.0	7.0	0.0131	12.0	14.3	0.0352	7.4
5.00	21.9	12.0	7.0	0.0131	12.0	14.3	0.0222	7.4
15.00	21.9	12.0	7.0	0.0131	12.0	14.3	0.0128	7.4
30.00	21.9	11.5	6.5	0.0131	11.5	14.4	0.0091	6.9
60.00	21.9	11.0	6.0	0.0131	11.0	14.5	0.0065	6.3
250.00	21.9	10.5	5.5	0.0131	10.5	14.6	0.0032	5.8

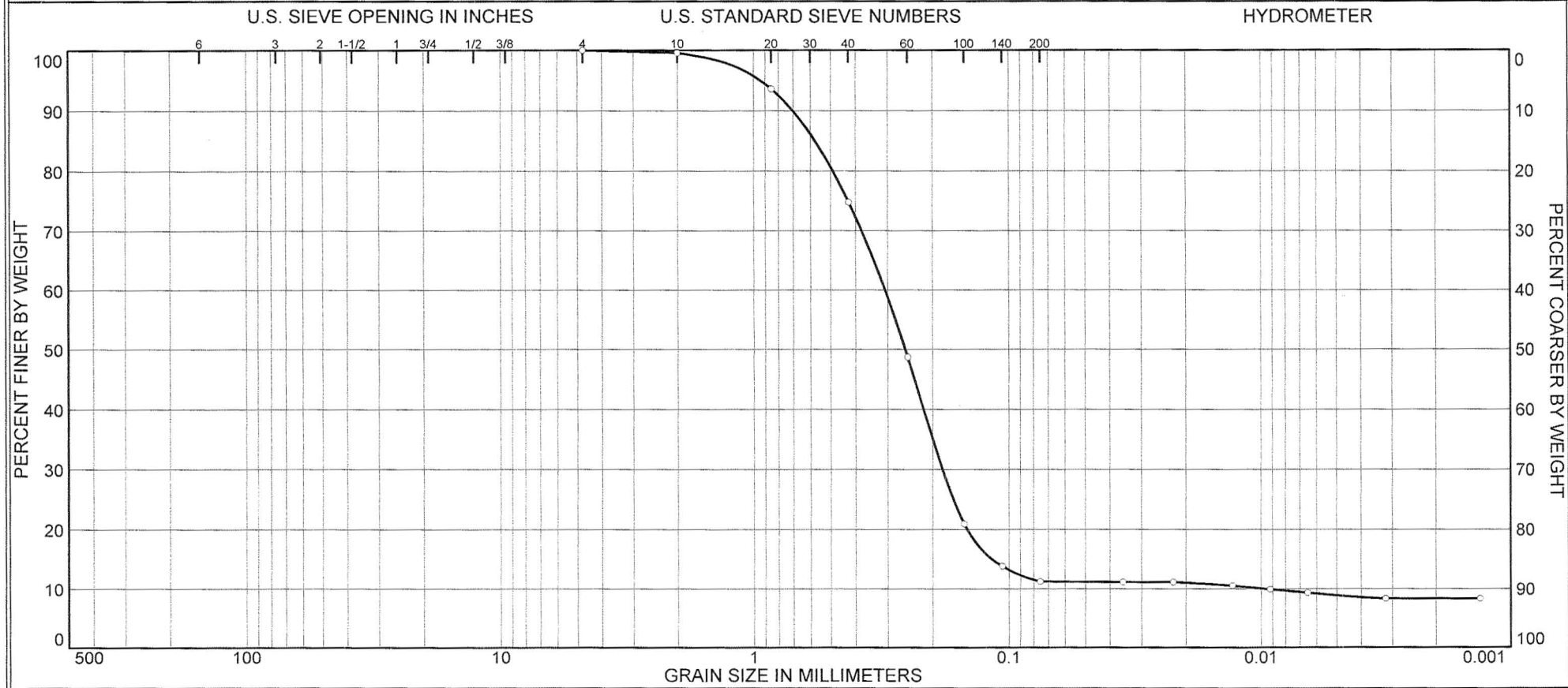
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1450.00	21.4	10.0	4.9	0.0132	10.0	14.7	0.0013	5.2

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 88.3 (% coarse = 0.3 % medium = 21.6 % fine = 66.4)
% SILT = 5.7 % CLAY = 6.0

D_{85}= 0.53 D_{60}= 0.28 D_{50}= 0.24
D_{30}= 0.17 D_{15}= 0.11 D_{10}= 0.06
C_c= 1.8067 C_u= 4.7802

Particle Size Distribution Report



% COBBLES	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
0.0	0.0	0.0	0.4	24.8	63.6	2.3	8.9

SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
Test Pad Backfill P-39	P-39 Jar-2	244.48'	N/A		Red Poorly graded sand with silt			

Client GPC c/o SNOC

Project Vogtle Units 3 & 4 Test Pad Project

Project No. 6141-06-0286.54 8292

MACTEC ENGINEERING AND CONSULTING, INC.

Tested by: EH Reviewed by; HJ

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 Backfill P-39
Sample No.: P-39 Jar-2
Elev. or Depth: 244.48' **Sample Length(in./cm.):** 8292
Location: P-39
Description: Red Poorly graded sand with silt
Date: N/A **Natural Moisture:**
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: EH Reviewed by; HJ

Mechanical Analysis Data

	Initial
Dry sample and tare=	98.51
Tare =	15.65
Dry sample weight =	82.86

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.33	99.6
# 20	5.27	93.6
# 40	20.84	74.8
# 60	42.52	48.7
# 100	65.55	20.9
# 140	71.39	13.8
# 200	73.61	11.2

Hydrometer Analysis Data

Separation sieve is #200
Percent -#200 based upon complete sample= 11.2
Weight of hydrometer sample: 9.25
Calculated biased weight= 82.59
Automatic temperature correction
Composite correction at 20 deg C = -5.4

Meniscus correction only= 0
Specific gravity of solids= 2.677
Specific gravity correction factor= 0.994
Hydrometer type: 152H
Effective depth L= 16.294964 - 0.164 x Rm

Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
2.00	20.6	14.5	9.2	0.0134	14.5	13.9	0.0354	11.1
5.00	20.6	14.5	9.2	0.0134	14.5	13.9	0.0224	11.1
15.00	20.6	14.0	8.7	0.0134	14.0	14.0	0.0130	10.5
30.00	20.8	13.5	8.2	0.0134	13.5	14.1	0.0092	9.9
60.00	20.8	13.0	7.7	0.0134	13.0	14.2	0.0065	9.3
250.00	21.4	12.0	6.9	0.0133	12.0	14.3	0.0032	8.3

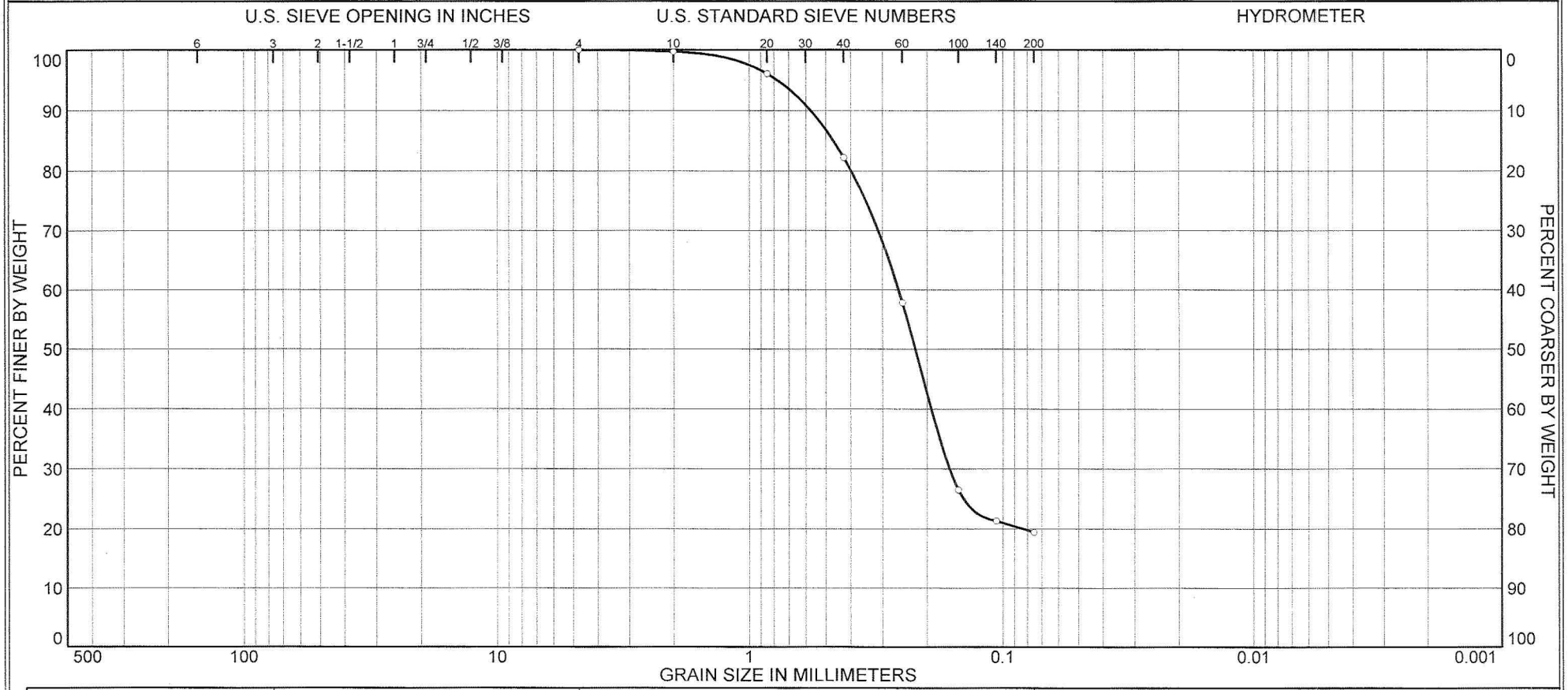
Elapsed time, min	Temp, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
1440.00	21.4	12.0	6.9	0.0133	12.0	14.3	0.0013	8.3

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 88.8 (% coarse = 0.4 % medium = 24.8 % fine = 63.6)
% SILT = 2.3 % CLAY = 8.9

D_{85}= 0.57 D_{60}= 0.31 D_{50}= 0.26
D_{30}= 0.18 D_{15}= 0.12 D_{10}= 0.01
C_c= 11.1891 C_u= 31.6226

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.3	17.5	62.8	19.4	

	SOURCE	SAMPLE #	DEPTH/ELEV.	DATE SAMPLED	USCS	MATERIAL DESCRIPTION	NM %	LL	PL
○	Subgrade Test Center of Pad Before Lift 1. D-0	D-0	224.85'	N/A		Red Silty sand	5.7		

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: Subgrade Test Center of Pad Before Lift 1. D-0
Sample No.: D-0
Elev. or Depth: 224.85' **Sample Length(in./cm.):** N/A
Location: D-0
Description: Red Silty sand
Date: N/A **Natural Moisture:** 5.7
Liquid Limit: **Plastic Limit:** **USCS Class.:**
Testing Remarks: Tested by: MD Reviewed by: MC

Mechanical Analysis Data

	Initial
Dry sample and tare=	180.14
Tare =	8.22
Dry sample weight =	171.92

Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 4	0.00	100.0
# 10	0.59	99.7
# 20	6.70	96.1
# 40	30.60	82.2
# 60	72.48	57.8
# 100	126.44	26.5
# 140	135.34	21.3
# 200	138.62	19.4

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL =
% SAND = 80.6 (% coarse = 0.3 % medium = 17.5 % fine = 62.8)
% FINES = 19.4

D_{85}= 0.47 D_{60}= 0.26 D_{50}= 0.22
D_{30}= 0.16