GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite A-2/S-03
Sample Number: 20150063 Trp
Material Description: Discrete Composite Sediment
Testing Remarks: material retained on # 10 sieve: mix of wood & stone
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
77.06	11.71	1	0.00	0.00	100.0	0.0
		#4	11.71	11.71	100.0	0.0
		#10	12.42	11.71	98.9	1.1
50.00	0.00	#230	205.13	167.90	25.3	74.7

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 98.9
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 21.72
Dry weight and tare = 21.60
Tare weight = 1.32
Hygroscopic moisture = 0.6%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.3	17.0	11.5	0.0133	17.5	13.4	0.0344	22.8	77.2
5.00	22.3	15.0	9.5	0.0133	15.5	13.8	0.0220	18.9	81.1
15.00	22.4	14.5	9.0	0.0132	15.0	13.8	0.0127	17.9	82.1
30.00	22.4	14.0	8.5	0.0132	14.5	13.9	0.0090	16.9	83.1
60.00	22.6	12.5	7.1	0.0132	13.0	14.2	0.0064	14.0	86.0
250.00	23.2	10.5	5.2	0.0131	11.0	14.5	0.0032	10.4	89.6
1440.00	21.5	9.5	3.8	0.0134	10.0	14.7	0.0014	7.5	92.5

Fractional Components

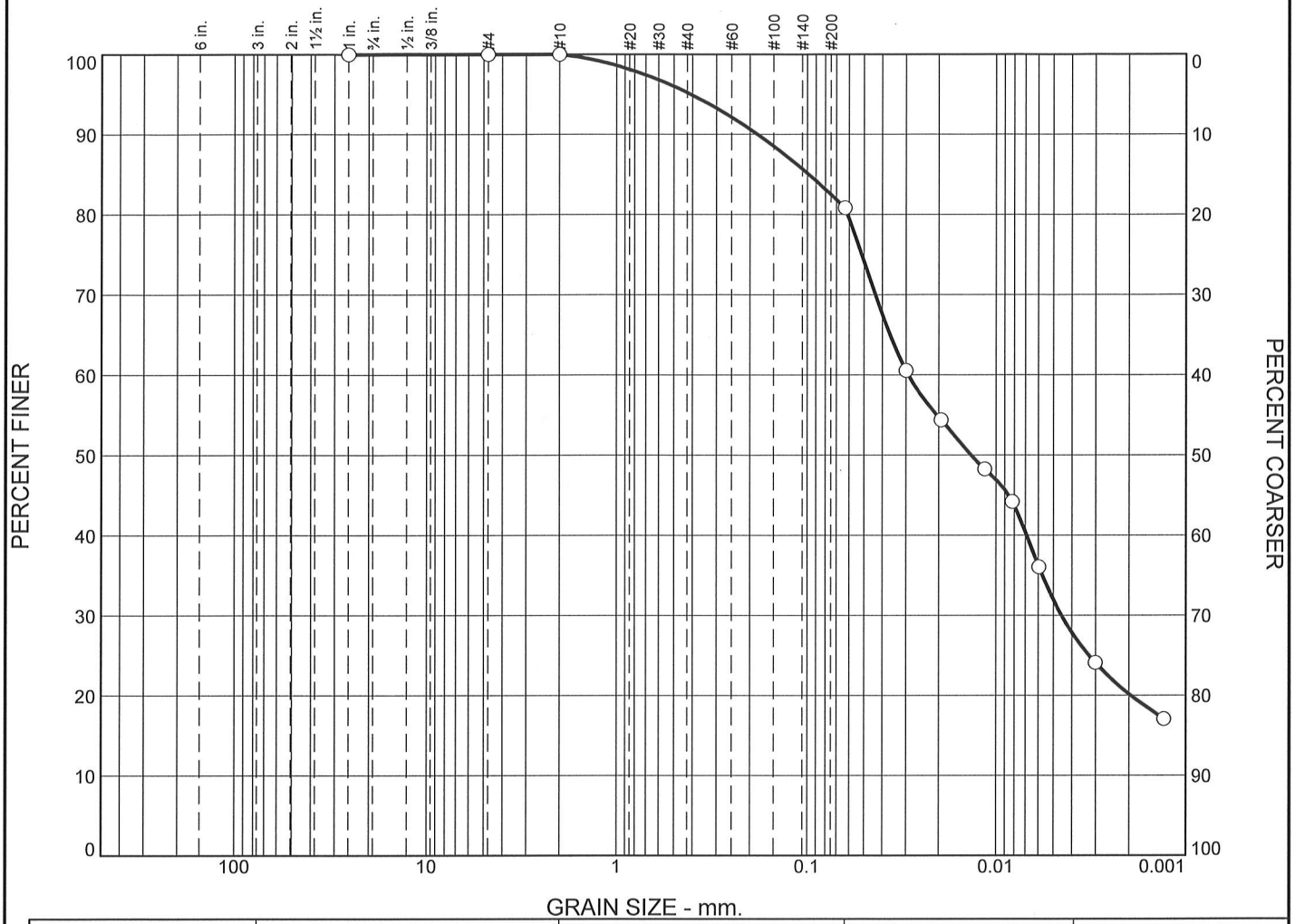
Cobbles	Gravel	Sand	Silt	Clay
0.0	1.1	73.6	14.1	11.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0028	0.0071	0.0253	0.0963	0.2360	0.3379	0.6985	0.8572	1.0788	1.4299

Fineness Modulus	C_u	C_c
1.38	119.62	9.71

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	19.2	53.3	27.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0982	0.0292	0.0135	0.0045				

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-04 **Sample Number:** 20150064

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure S-04

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-04
Sample Number: 20150064
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
67.01	11.52	1	0.00	0.00	100.0	0.0
		#4	11.52	11.52	100.0	0.0
		#10	11.52	11.52	100.0	0.0
50.00	0.00	#230	181.03	171.44	80.8	19.2

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 12.59
Dry weight and tare = 12.32
Tare weight = 1.35
Hygroscopic moisture = 2.4%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.6	36.0	29.6	0.0132	36.5	10.3	0.0300	60.5	39.5
5.00	22.6	33.0	26.6	0.0132	33.5	10.8	0.0194	54.4	45.6
15.00	22.6	30.0	23.6	0.0132	30.5	11.3	0.0115	48.3	51.7
30.00	22.7	28.0	21.6	0.0132	28.5	11.6	0.0082	44.2	55.8
60.00	22.8	24.0	17.6	0.0132	24.5	12.3	0.0060	36.1	63.9
250.00	23.4	18.0	11.8	0.0131	18.5	13.3	0.0030	24.1	75.9
1440.00	21.7	15.0	8.3	0.0134	15.5	13.8	0.0013	17.1	82.9

Fractional Components

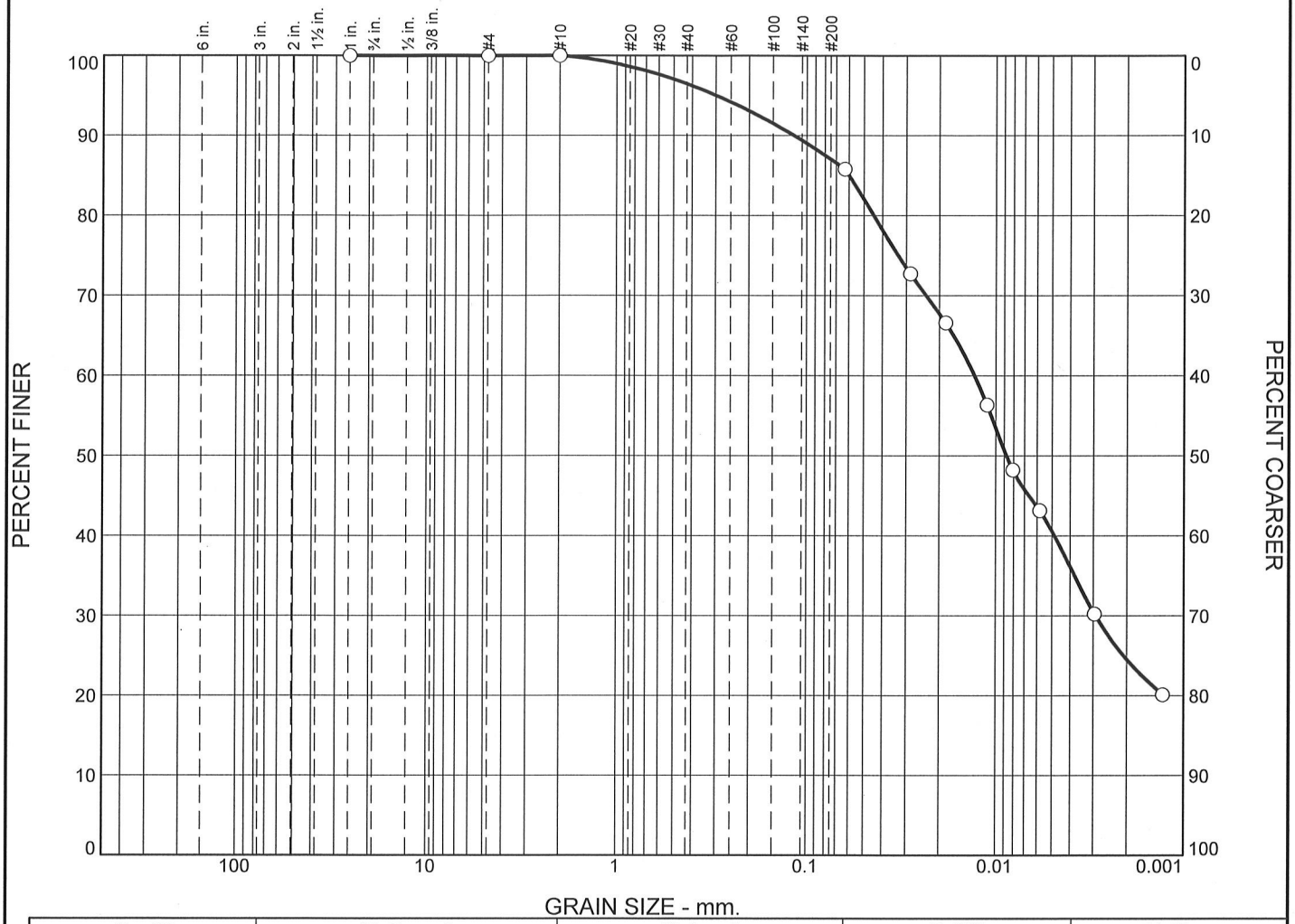
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	19.2	53.3	27.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0020	0.0045	0.0135	0.0292	0.0612	0.0982	0.1828	0.4085

Fineness Modulus
0.22

RF

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	14.2	50.2	35.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0598	0.0130	0.0088	0.0029				

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-05 **Sample Number:** 20150065

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure S-05

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-05
Sample Number: 20150065
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
70.56	11.53	1	0.00	0.00	100.0	0.0
		#4	11.53	11.53	100.0	0.0
		#10	11.53	11.53	100.0	0.0
50.00	0.00	#230	177.54	170.44	85.8	14.2

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 11.20
Dry weight and tare = 10.98
Tare weight = 1.35
Hygroscopic moisture = 2.3%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.6	42.0	35.6	0.0132	42.5	9.3	0.0285	72.7	27.3
5.00	22.6	39.0	32.6	0.0132	39.5	9.8	0.0185	66.6	33.4
15.00	22.6	34.0	27.6	0.0132	34.5	10.6	0.0111	56.4	43.6
30.00	22.7	30.0	23.6	0.0132	30.5	11.3	0.0081	48.2	51.8
60.00	22.8	27.5	21.1	0.0132	28.0	11.7	0.0058	43.2	56.8
250.00	23.4	21.0	14.8	0.0131	21.5	12.8	0.0030	30.2	69.8
1440.00	21.7	16.5	9.8	0.0134	17.0	13.5	0.0013	20.1	79.9

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	14.2	50.2	35.6

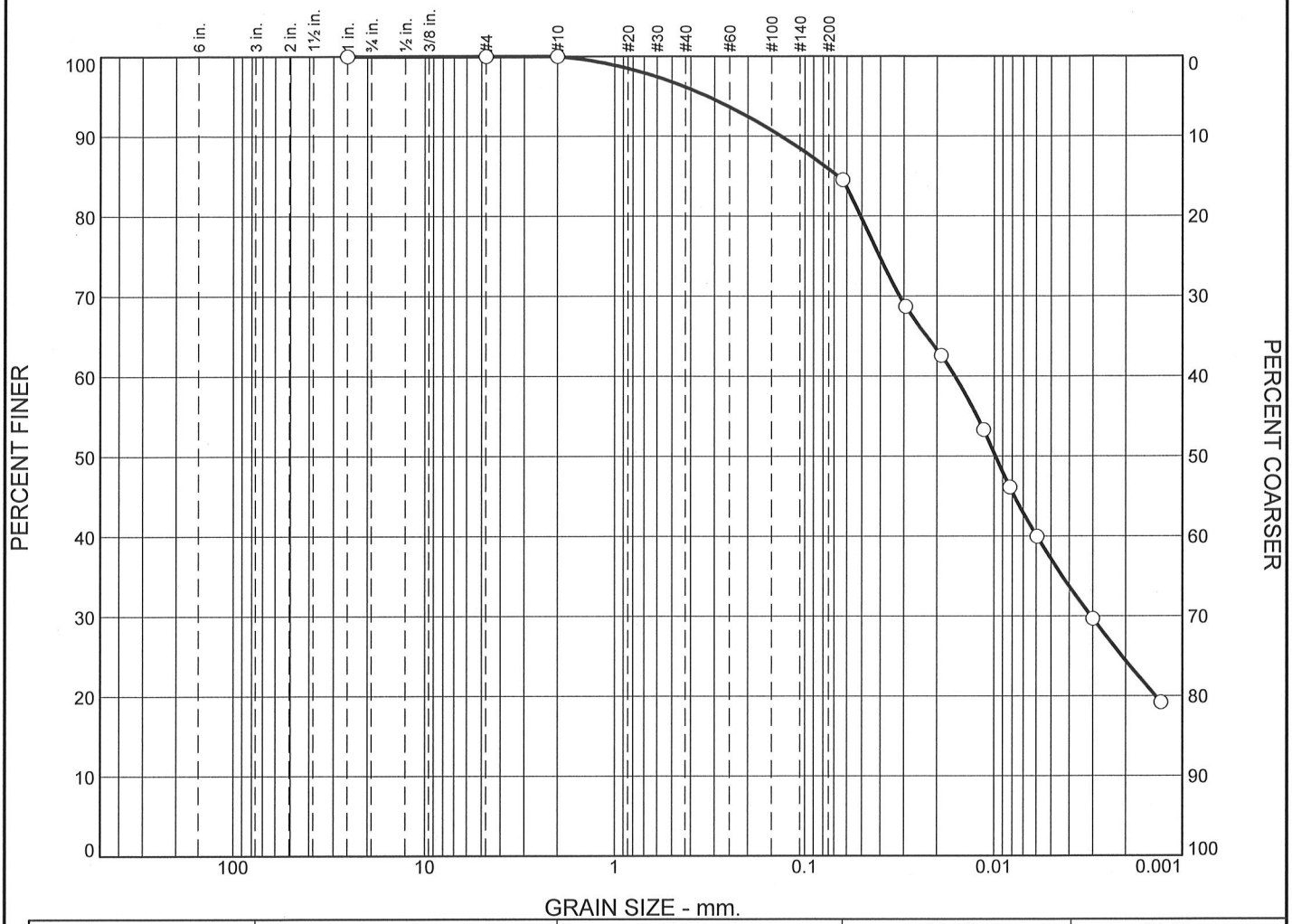
D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0029	0.0088	0.0130	0.0444	0.0598	0.1168	0.2985

Fineness Modulus
0.17

RF

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	15.5	51.1	33.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0669	0.0161	0.0098	0.0031				

Material Description	USCS	AASHTO
○ Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite B **Sample Number:** 20150099

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp B

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite B
Sample Number: 20150099
Material Description: Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
69.63	11.46	1	0.00	0.00	100.0	0.0
		#4	11.46	11.46	100.0	0.0
		#10	11.46	11.46	100.0	0.0
50.00	0.00	#230	172.07	164.33	84.5	15.5

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 10.43
Dry weight and tare = 10.17
Tare weight = 1.35
Hygroscopic moisture = 2.9%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	21.9	40.0	33.4	0.0133	40.5	9.7	0.0293	68.7	31.3
5.00	22.0	37.0	30.4	0.0133	37.5	10.1	0.0190	62.6	37.4
15.00	22.0	32.5	25.9	0.0133	33.0	10.9	0.0113	53.3	46.7
30.00	22.0	29.0	22.4	0.0133	29.5	11.5	0.0082	46.1	53.9
60.00	22.1	26.0	19.4	0.0133	26.5	11.9	0.0059	40.0	60.0
250.00	22.1	21.0	14.4	0.0133	21.5	12.8	0.0030	29.7	70.3
1440.00	21.7	16.0	9.3	0.0134	16.5	13.6	0.0013	19.2	80.8

Fractional Components

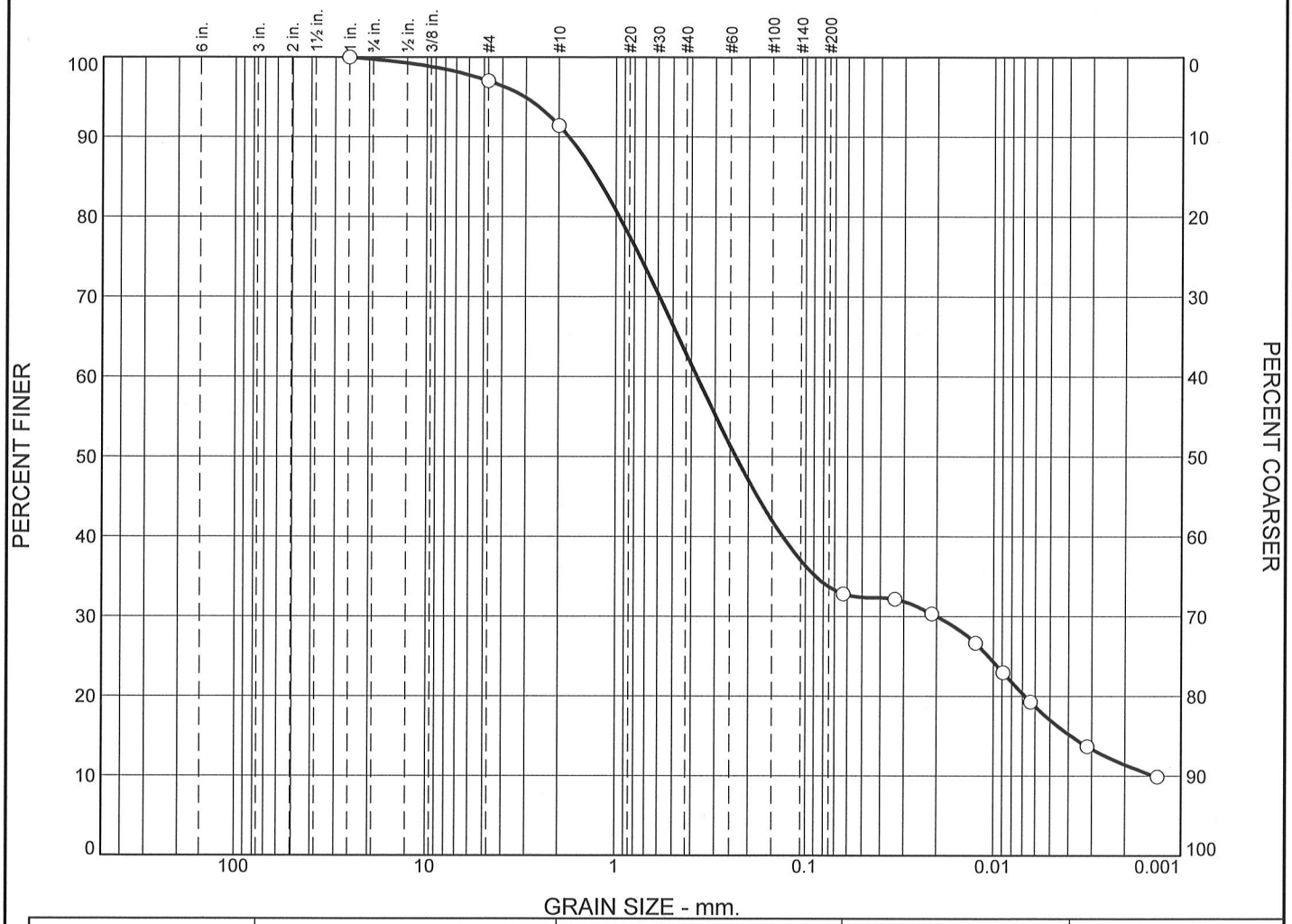
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	15.5	51.1	33.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0014	0.0031	0.0098	0.0161	0.0508	0.0669	0.1338	0.3283

Fineness Modulus
0.18

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	8.6	58.6	17.7	15.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.2670	0.3736	0.2325	0.0200	0.0039	0.0014	0.77	270.15

Material Description	USCS	AASHTO
○ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite B-1/S-05a **Sample Number:** 20150066

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp B-1

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite B-1/S-05a
Sample Number: 20150066
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
80.98	11.86	1	0.00	0.00	100.0	0.0
		#4	13.92	11.86	97.0	3.0
		#10	15.73	11.86	91.4	8.6
50.00	0.00	#230	212.65	180.61	32.8	67.2

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 91.4
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 16.39
Dry weight and tare = 16.25
Tare weight = 1.35
Hygroscopic moisture = 0.9%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -5
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.1	22.0	17.4	0.0133	22.5	12.6	0.0334	32.2	67.8
5.00	22.1	21.0	16.4	0.0133	21.5	12.8	0.0212	30.3	69.7
15.00	22.2	19.0	14.5	0.0133	19.5	13.1	0.0124	26.7	73.3
30.00	22.2	17.0	12.5	0.0133	17.5	13.4	0.0089	23.0	77.0
60.00	22.2	15.0	10.5	0.0133	15.5	13.8	0.0064	19.3	80.7
250.00	22.1	12.0	7.4	0.0133	12.5	14.2	0.0032	13.7	86.3
1440.00	21.8	10.0	5.4	0.0133	10.5	14.6	0.0013	9.9	90.1

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	8.6	58.6	17.7	15.1

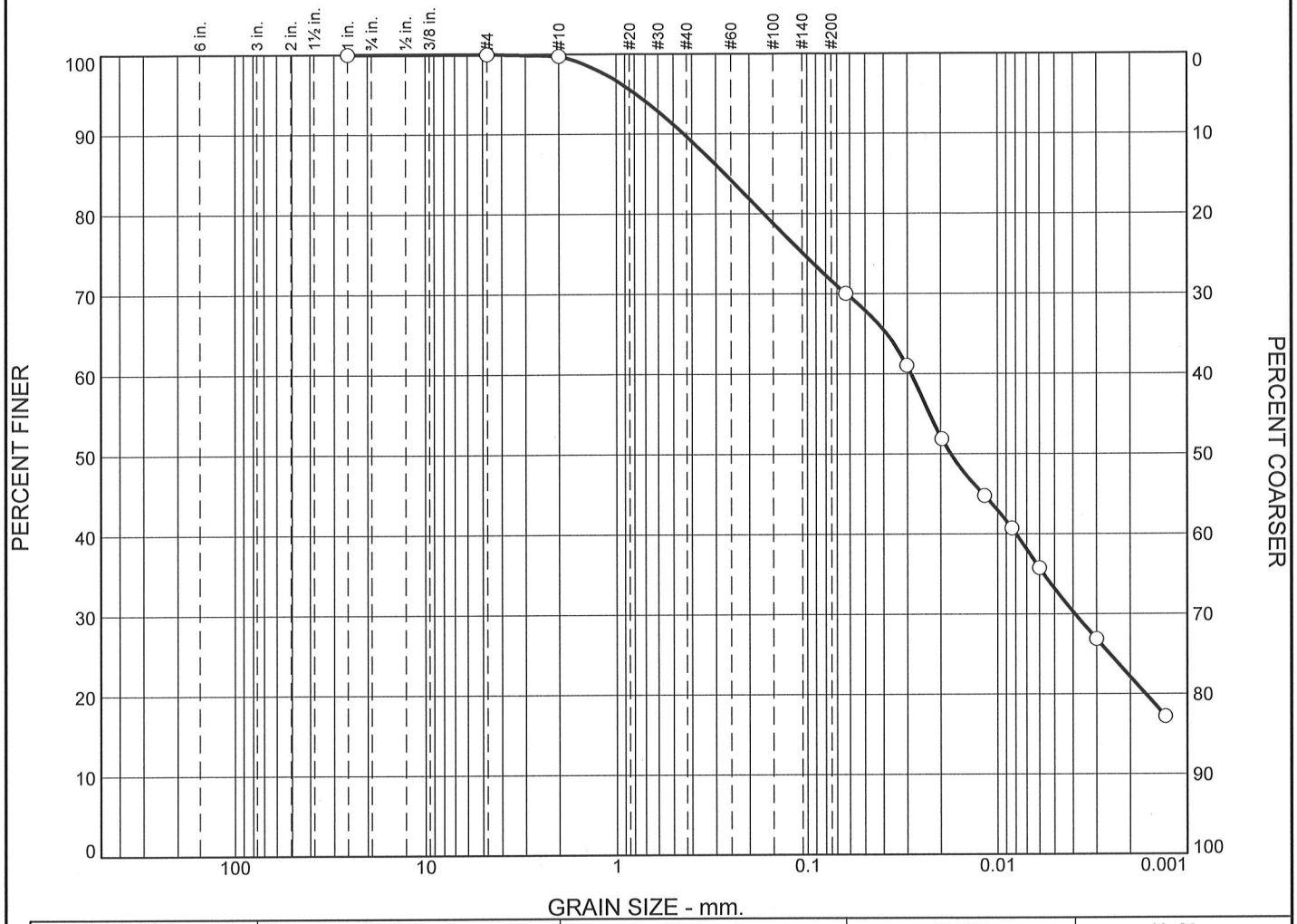
D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0014	0.0039	0.0068	0.0200	0.2325	0.3736	0.9595	1.2670	1.7755	3.0612

Fineness Modulus	C_u	C_c
1.60	270.15	0.77

RF

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.3	29.7	40.0	30.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2684	0.0286	0.0177	0.0039				

Material Description	USCS	AASHTO
○ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite C/S-06 **Sample Number:** 20150067

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp C

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite C/S-06
Sample Number: 20150067
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
65.98	11.27	1	0.00	0.00	100.0	0.0
		#4	11.27	11.27	100.0	0.0
		#10	11.41	11.27	99.7	0.3
50.00	0.00	#230	183.63	168.74	70.0	30.0

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.7
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 13.70
Dry weight and tare = 13.48
Tare weight = 1.34
Hygroscopic moisture = 1.8%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.6	35.5	30.1	0.0132	36.0	10.4	0.0301	61.0	39.0
5.00	22.6	31.0	25.6	0.0132	31.5	11.1	0.0197	51.9	48.1
15.00	22.6	27.5	22.1	0.0132	28.0	11.7	0.0117	44.8	55.2
30.00	22.6	25.5	20.1	0.0132	26.0	12.0	0.0084	40.7	59.3
60.00	22.8	23.0	17.6	0.0132	23.5	12.4	0.0060	35.8	64.2
250.00	23.3	18.5	13.2	0.0131	19.0	13.2	0.0030	26.9	73.1
1440.00	22.3	14.0	8.5	0.0133	14.5	13.9	0.0013	17.2	82.8

Fractional Components

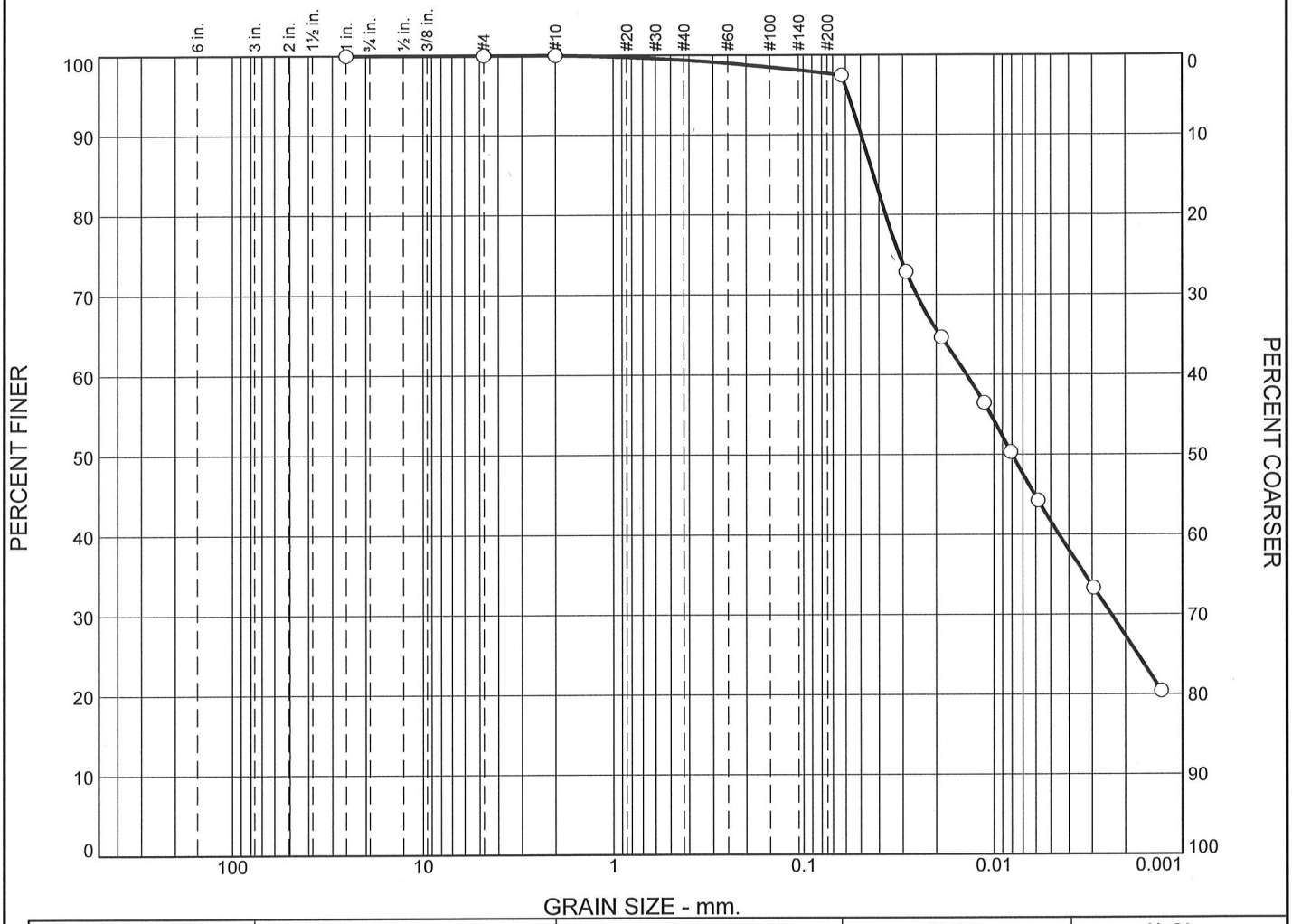
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.3	29.7	40.0	30.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0017	0.0039	0.0177	0.0286	0.1679	0.2684	0.4406	0.7868

Fineness Modulus
0.45

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	2.5	59.8	37.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0428	0.0139	0.0080	0.0024				

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-07 **Sample Number:** 20150068

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure S-07

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-07
Sample Number: 20150068
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
65.10	11.68	1	0.00	0.00	100.0	0.0
		#4	11.68	11.68	100.0	0.0
		#10	11.68	11.68	100.0	0.0
50.00	0.00	#230	173.80	172.53	97.5	2.5

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 9.00
Dry weight and tare = 8.81
Tare weight = 1.35
Hygroscopic moisture = 2.5%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.6	41.0	35.6	0.0132	41.5	9.5	0.0288	72.9	27.1
5.00	22.6	37.0	31.6	0.0132	37.5	10.1	0.0188	64.7	35.3
15.00	22.6	33.0	27.6	0.0132	33.5	10.8	0.0112	56.5	43.5
30.00	22.6	30.0	24.6	0.0132	30.5	11.3	0.0081	50.3	49.7
60.00	22.8	27.0	21.6	0.0132	27.5	11.8	0.0058	44.3	55.7
250.00	23.4	21.5	16.3	0.0131	22.0	12.7	0.0029	33.4	66.6
1440.00	22.3	15.5	10.0	0.0133	16.0	13.7	0.0013	20.5	79.5

Fractional Components

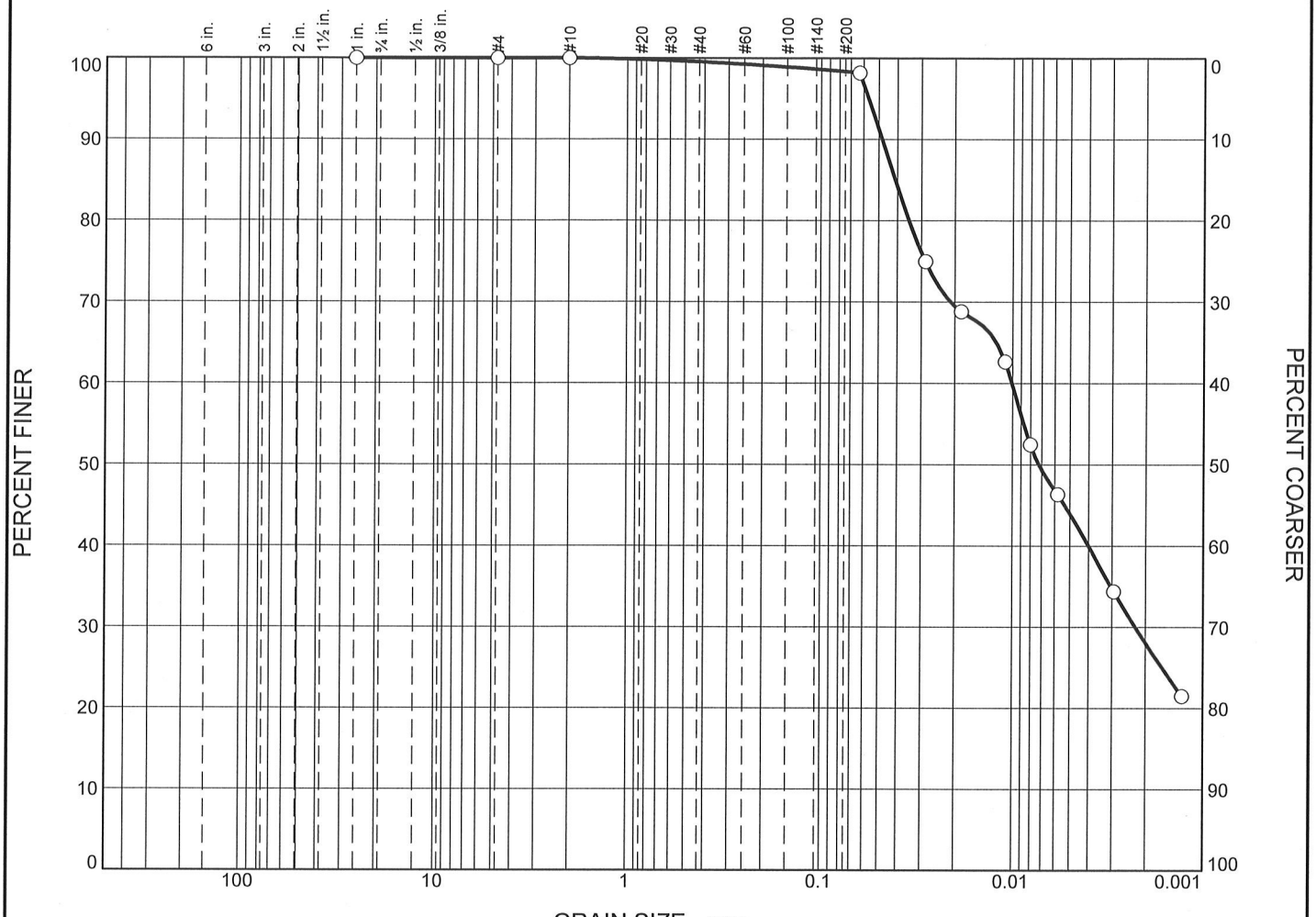
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	2.5	59.8	37.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0024	0.0080	0.0139	0.0368	0.0428	0.0497	0.0580

Fineness Modulus
0.03

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	1.8	58.7	39.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0410	0.0101	0.0073	0.0023				

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-08 **Sample Number:** 20150069

Remarks:

RF

Aqua Survey, Inc.

Flemington, NJ

Figure S-08

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-08
Sample Number: 20150069
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
67.50	11.50	1	0.00	0.00	100.0	0.0
		#4	11.50	11.50	100.0	0.0
		#10	11.50	11.50	100.0	0.0
50.00	0.00	#230	146.85	145.95	98.2	1.8

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 8.53
Dry weight and tare = 8.35
Tare weight = 1.33
Hygroscopic moisture = 2.5%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.6	42.0	36.6	0.0132	42.5	9.3	0.0285	75.0	25.0
5.00	22.6	39.0	33.6	0.0132	39.5	9.8	0.0185	68.8	31.2
15.00	22.6	36.0	30.6	0.0132	36.5	10.3	0.0110	62.7	37.3
30.00	22.7	31.0	25.6	0.0132	31.5	11.1	0.0080	52.5	47.5
60.00	22.8	28.0	22.6	0.0132	28.5	11.6	0.0058	46.4	53.6
250.00	23.4	22.0	16.8	0.0131	22.5	12.6	0.0029	34.4	65.6
1440.00	22.3	16.0	10.5	0.0133	16.5	13.6	0.0013	21.5	78.5

Fractional Components

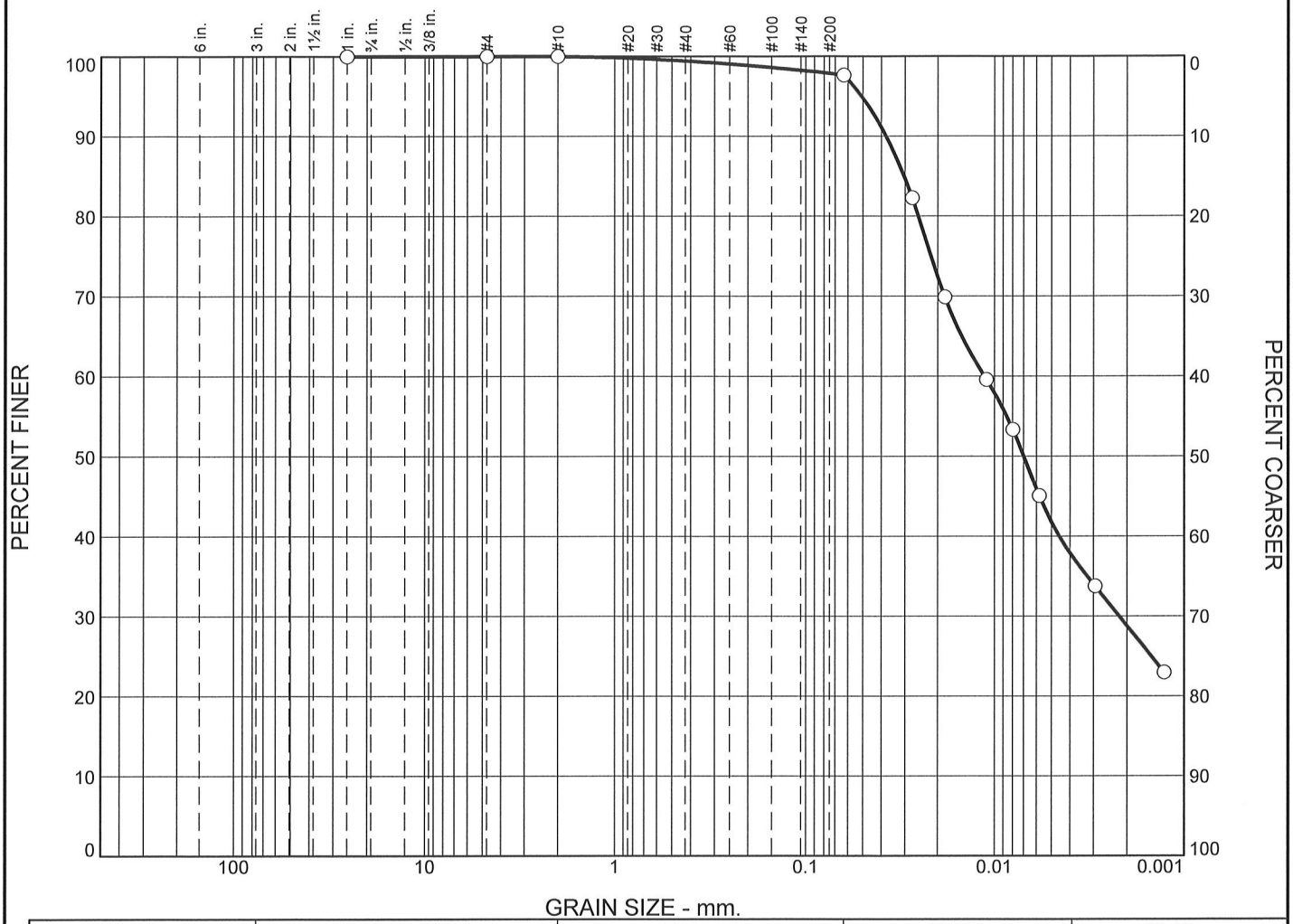
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	1.8	58.7	39.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0023	0.0073	0.0101	0.0347	0.0410	0.0480	0.0563

Fineness Modulus
0.02

RF

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	2.3	60.1	37.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0303	0.0113	0.0070	0.0022				

Material Description	USCS	AASHTO
○ Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite C-1 **Sample Number:** 20150100

Remarks:

RF

Aqua Survey, Inc.

Flemington, NJ

Figure Comp C-1

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite C-1
Sample Number: 20150100
Material Description: Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
64.20	11.95	1	0.00	0.00	100.0	0.0
		#4	11.95	11.95	100.0	0.0
		#10	11.95	11.95	100.0	0.0
50.00	0.00	#230	166.11	164.94	97.7	2.3

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 8.46
Dry weight and tare = 8.23
Tare weight = 1.35
Hygroscopic moisture = 3.4%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	23.5	45.0	39.8	0.0131	45.5	8.8	0.0275	82.3	17.7
5.00	23.5	39.0	33.8	0.0131	39.5	9.8	0.0183	69.9	30.1
15.00	23.5	34.0	28.8	0.0131	34.5	10.6	0.0110	59.6	40.4
30.00	23.5	31.0	25.8	0.0131	31.5	11.1	0.0080	53.4	46.6
60.00	23.5	27.0	21.8	0.0131	27.5	11.8	0.0058	45.1	54.9
250.00	23.6	21.5	16.3	0.0131	22.0	12.7	0.0029	33.8	66.2
1440.00	22.8	16.5	11.1	0.0132	17.0	13.5	0.0013	23.0	77.0

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	2.3	60.1	37.6

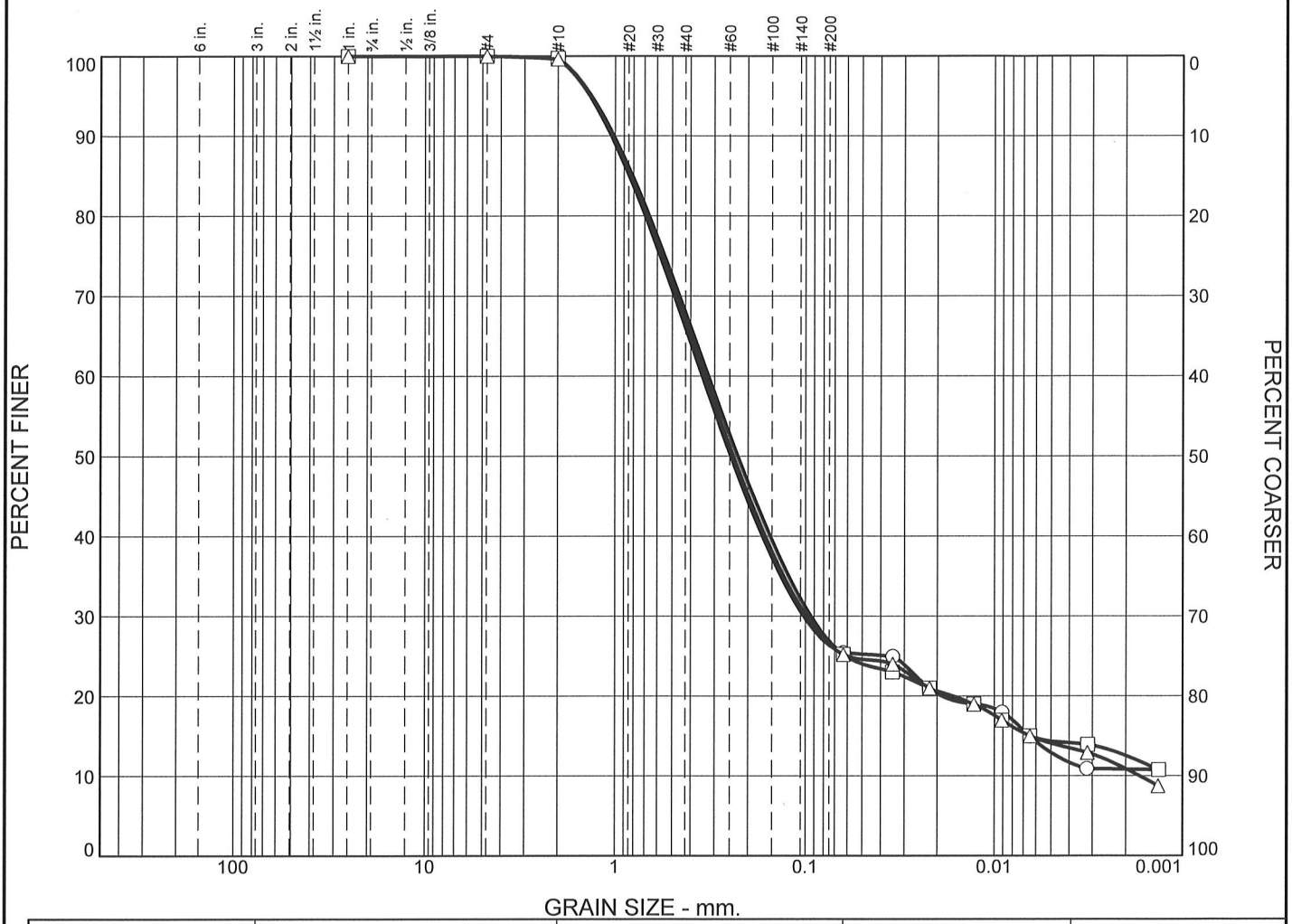
D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0022	0.0070	0.0113	0.0255	0.0303	0.0377	0.0508

Fineness Modulus
0.03

RF

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.2	74.4	13.8	11.6
□	0.0	0.3	74.5	11.1	14.1
△	0.0	0.4	74.4	11.7	13.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8423	0.3471	0.2458	0.1020	0.0065			
□			0.8095	0.3225	0.2260	0.0936	0.0064			
△			0.8338	0.3382	0.2384	0.0989	0.0064	0.0017	17.11	200.25

Material Description	USCS	AASHTO
○ Discrete Composite Sediment □ Discrete Composite Sediment △ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite C-2/S-27 **Sample Number:** 20150070

□ **Source of Sample:** Composite C-2/S-27 **Sample Number:** 20150070 Dup

△ **Source of Sample:** Composite C-2/S-27 **Sample Number:** 20150070 Trp

Remarks:

RF

Aqua Survey, Inc.

Flemington, NJ

Figure Comp C-2

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite C-2/S-27
Sample Number: 20150070
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
69.58	11.52	1	0.00	0.00	100.0	0.0
		#4	11.52	11.52	100.0	0.0
		#10	11.66	11.52	99.8	0.2
50.00	0.00	#230	213.95	176.70	25.4	74.6

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.8
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 14.80
Dry weight and tare = 14.71
Tare weight = 1.34
Hygroscopic moisture = 0.7%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -5
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.1	17.0	12.4	0.0133	17.5	13.4	0.0345	25.0	75.0
5.00	22.1	15.0	10.4	0.0133	15.5	13.8	0.0221	21.0	79.0
15.00	22.2	14.0	9.5	0.0133	14.5	13.9	0.0128	19.0	81.0
30.00	22.2	13.5	9.0	0.0133	14.0	14.0	0.0091	18.0	82.0
60.00	22.2	12.0	7.5	0.0133	12.5	14.2	0.0065	15.0	85.0
250.00	22.1	10.0	5.4	0.0133	10.5	14.6	0.0032	10.9	89.1
1440.00	21.8	10.0	5.4	0.0133	10.5	14.6	0.0013	10.8	89.2

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.2	74.4	13.8	11.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0065	0.0190	0.1020	0.2458	0.3471	0.6939	0.8423	1.0454	1.3568

Fineness Modulus
1.39

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Aqua Survey, Inc.

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite C-2/S-27
Sample Number: 20150070 Dup
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
71.00	11.39	1	0.00	0.00	100.0	0.0
		#4	11.39	11.39	100.0	0.0
		#10	11.55	11.39	99.7	0.3
50.00	0.00	#230	214.28	176.93	25.2	74.8

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.7
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 14.80
Dry weight and tare = 14.71
Tare weight = 1.34
Hygroscopic moisture = 0.7%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -5
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.2	16.0	11.5	0.0133	16.5	13.6	0.0346	23.0	77.0
5.00	22.2	15.0	10.5	0.0133	15.5	13.8	0.0220	21.0	79.0
15.00	22.2	14.0	9.5	0.0133	14.5	13.9	0.0128	19.0	81.0
30.00	22.2	13.0	8.5	0.0133	13.5	14.1	0.0091	17.0	83.0
60.00	22.3	12.0	7.5	0.0133	12.5	14.2	0.0065	15.0	85.0
250.00	22.1	11.5	6.9	0.0133	12.0	14.3	0.0032	13.9	86.1
1440.00	21.8	10.0	5.4	0.0133	10.5	14.6	0.0013	10.8	89.2

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.3	74.5	11.1	14.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0064	0.0166	0.0936	0.2260	0.3225	0.6616	0.8095	1.0140	1.3316

Fineness Modulus
1.32

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite C-2/S-27
Sample Number: 20150070 Trp
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
75.96	11.72	1	0.00	0.00	100.0	0.0
		#4	11.72	11.72	100.0	0.0
		#10	11.95	11.72	99.6	0.4
50.00	0.00	#230	215.30	177.95	25.2	74.8

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.6
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 14.80
Dry weight and tare = 14.71
Tare weight = 1.34
Hygroscopic moisture = 0.7%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -5
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.2	16.5	12.0	0.0133	17.0	13.5	0.0345	24.0	76.0
5.00	22.2	15.0	10.5	0.0133	15.5	13.8	0.0220	21.0	79.0
15.00	22.2	14.0	9.5	0.0133	14.5	13.9	0.0128	19.0	81.0
30.00	22.2	13.0	8.5	0.0133	13.5	14.1	0.0091	17.0	83.0
60.00	22.3	12.0	7.5	0.0133	12.5	14.2	0.0065	15.0	85.0
250.00	22.1	11.0	6.4	0.0133	11.5	14.4	0.0032	12.9	87.1
1440.00	21.8	9.0	4.4	0.0133	9.5	14.7	0.0014	8.7	91.3

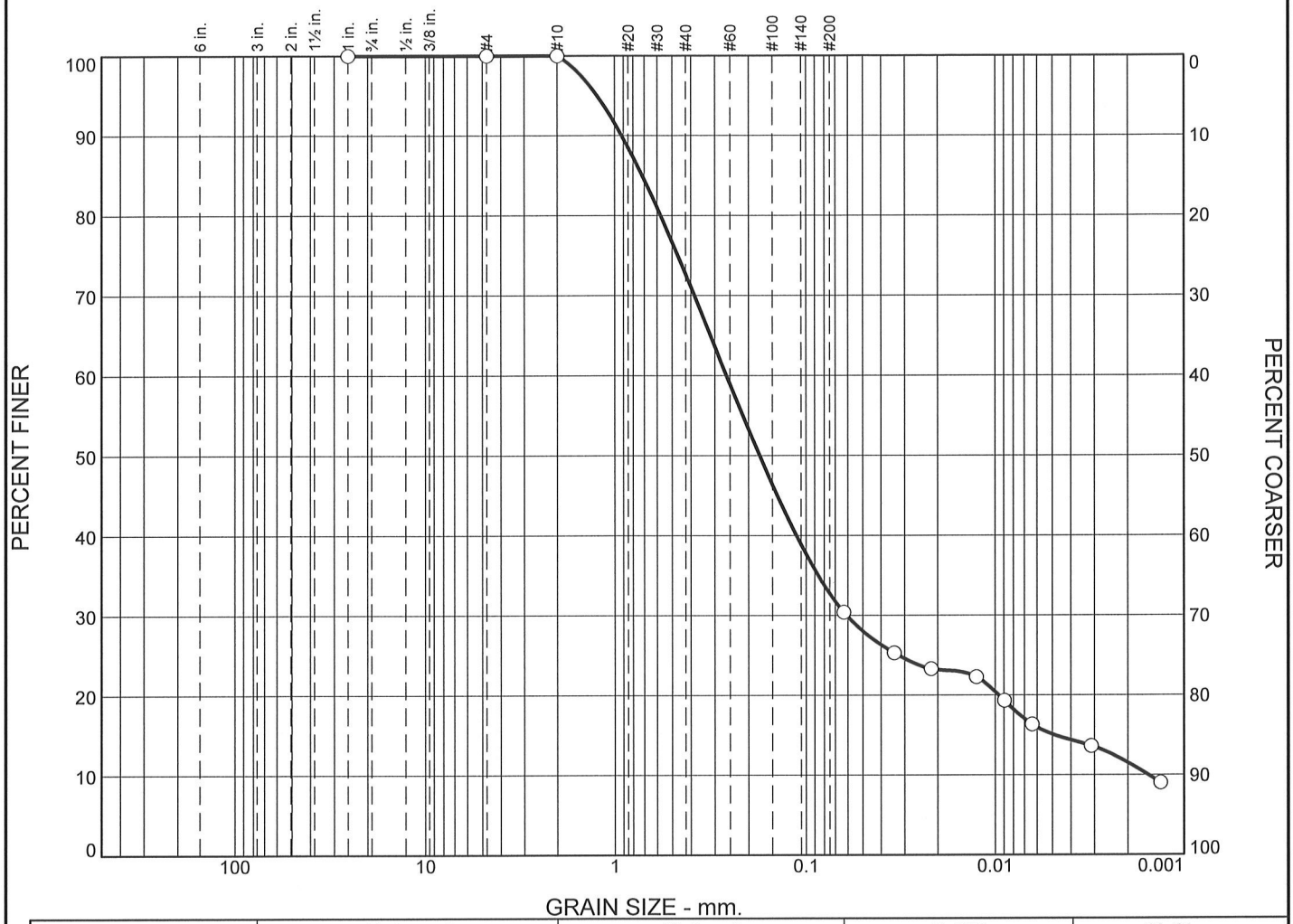
Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.4	74.4	11.7	13.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0017	0.0064	0.0174	0.0989	0.2384	0.3382	0.6843	0.8338	1.0396	1.3577

Fineness Modulus	C_u	C_c
1.37	200.25	17.11

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	69.6	16.1	14.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7169	0.2602	0.1748	0.0608	0.0049	0.0016	9.15	167.54

Material Description	USCS	AASHTO
○ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite D/S-09 **Sample Number:** 20150071

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp D

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite D/S-09
Sample Number: 20150071
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
67.47	11.70	1	0.00	0.00	100.0	0.0
		#4	11.70	11.70	100.0	0.0
		#10	11.70	11.70	100.0	0.0
50.00	0.00	#230	213.88	179.09	30.4	69.6

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 16.14
Dry weight and tare = 16.02
Tare weight = 1.33
Hygroscopic moisture = 0.8%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.6	18.0	12.6	0.0132	18.5	13.3	0.0340	25.3	74.7
5.00	22.6	17.0	11.6	0.0132	17.5	13.4	0.0217	23.3	76.7
15.00	22.6	16.5	11.1	0.0132	17.0	13.5	0.0125	22.3	77.7
30.00	22.7	15.0	9.6	0.0132	15.5	13.8	0.0089	19.3	80.7
60.00	22.8	13.5	8.1	0.0132	14.0	14.0	0.0064	16.3	83.7
250.00	23.4	12.0	6.8	0.0131	12.5	14.2	0.0031	13.7	86.3
1440.00	22.3	10.0	4.5	0.0133	10.5	14.6	0.0013	9.0	91.0

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	69.6	16.1	14.3

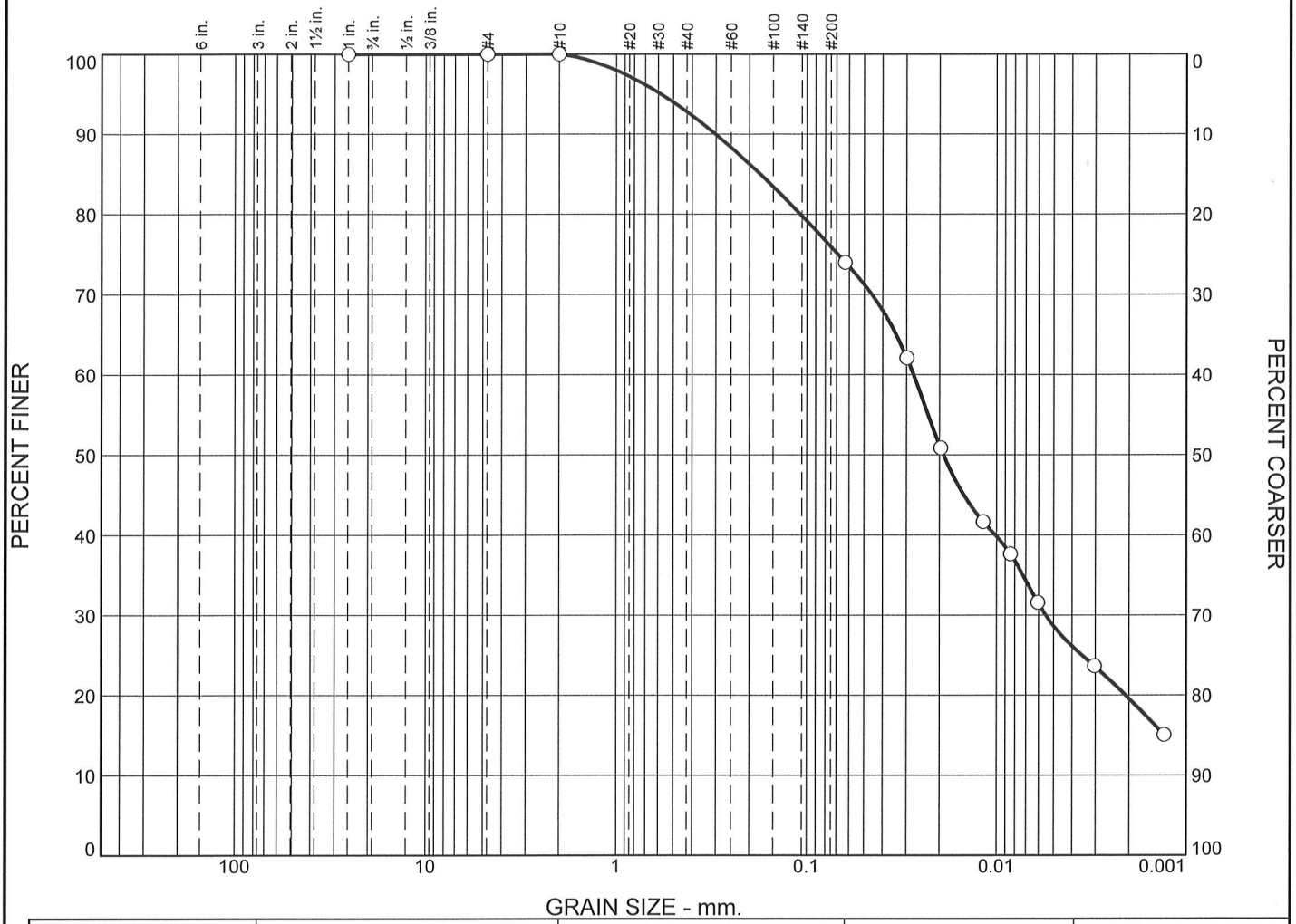
D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0016	0.0049	0.0096	0.0608	0.1748	0.2602	0.5747	0.7169	0.9170	1.2341

Fineness Modulus	C_u	C_c
1.15	167.54	9.15

RF

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	26.0	48.1	25.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1756	0.0275	0.0191	0.0055				

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-10 **Sample Number:** 20150072

Remarks:

RF

Aqua Survey, Inc.

Flemington, NJ

Figure S-10

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-10
Sample Number: 20150072
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
68.15	11.47	1	0.00	0.00	100.0	0.0
		#4	11.47	11.47	100.0	0.0
		#10	11.47	11.47	100.0	0.0
50.00	0.00	#230	191.22	178.22	74.0	26.0

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 12.12
Dry weight and tare = 11.92
Tare weight = 1.34
Hygroscopic moisture = 1.9%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.3	37.0	30.5	0.0133	37.5	10.1	0.0299	62.1	37.9
5.00	22.2	31.5	25.0	0.0133	32.0	11.0	0.0197	50.9	49.1
15.00	22.2	27.0	20.5	0.0133	27.5	11.8	0.0118	41.7	58.3
30.00	22.3	25.0	18.5	0.0133	25.5	12.1	0.0084	37.7	62.3
60.00	22.4	22.0	15.5	0.0132	22.5	12.6	0.0061	31.6	68.4
250.00	22.8	18.0	11.6	0.0132	18.5	13.3	0.0030	23.7	76.3
1440.00	22.0	14.0	7.4	0.0133	14.5	13.9	0.0013	15.1	84.9

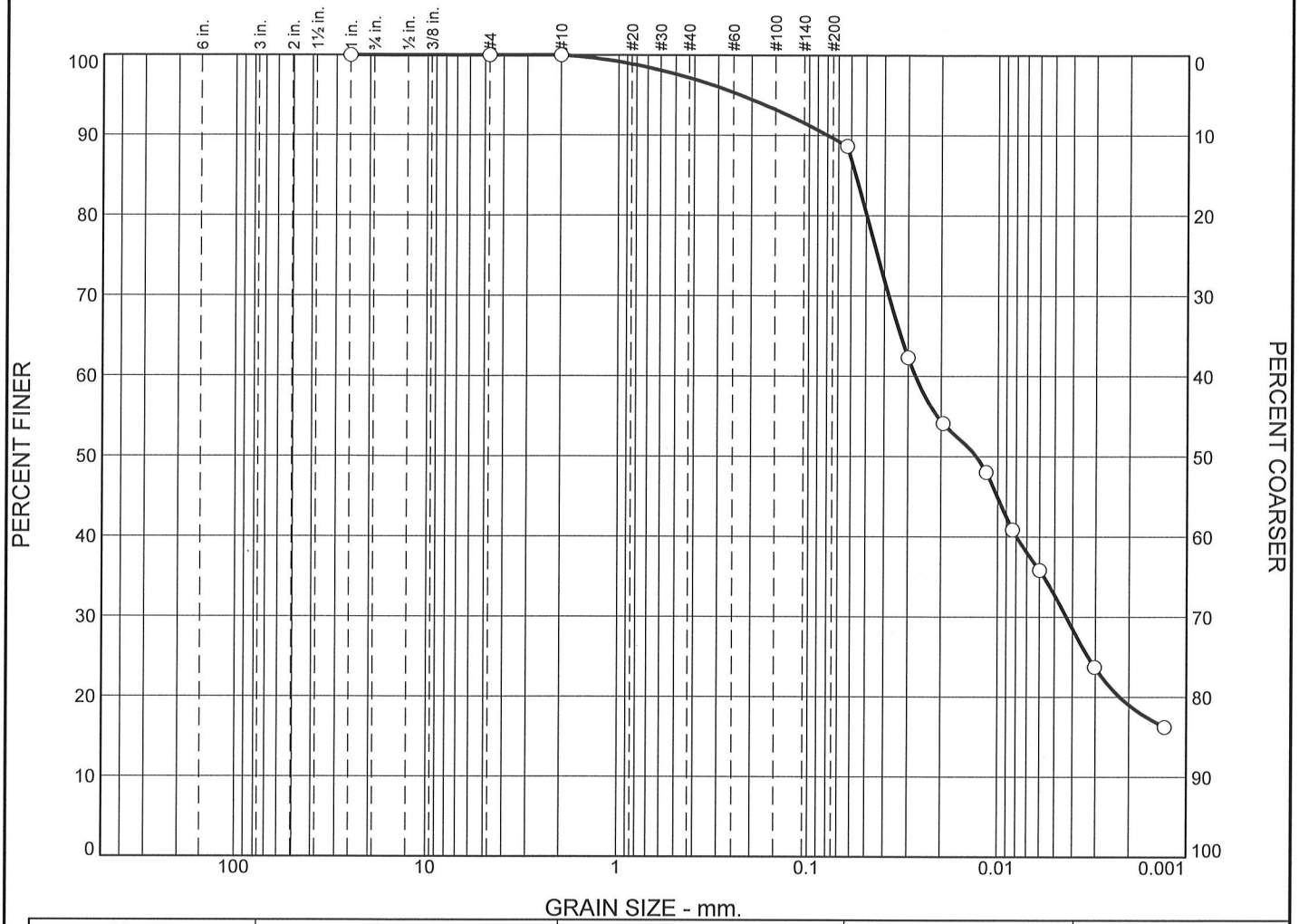
Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	26.0	48.1	25.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0021	0.0055	0.0191	0.0275	0.1082	0.1756	0.3016	0.5833

Fineness Modulus
0.33

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	11.3	60.6	28.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0567	0.0273	0.0130	0.0043				

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-10a **Sample Number:** 20150073

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure S-10a

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-10a
Sample Number: 20150073
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
68.78	11.44	1	0.00	0.00	100.0	0.0
		#4	11.44	11.44	100.0	0.0
		#10	11.44	11.44	100.0	0.0
50.00	0.00	#230	169.95	164.28	88.7	11.3

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 10.77
Dry weight and tare = 10.56
Tare weight = 1.37
Hygroscopic moisture = 2.3%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.2	37.0	30.5	0.0133	37.5	10.1	0.0299	62.3	37.7
5.00	22.2	33.0	26.5	0.0133	33.5	10.8	0.0195	54.1	45.9
15.00	22.3	30.0	23.5	0.0133	30.5	11.3	0.0115	48.1	51.9
30.00	22.3	26.5	20.0	0.0133	27.0	11.9	0.0083	40.9	59.1
60.00	22.4	24.0	17.5	0.0132	24.5	12.3	0.0060	35.8	64.2
250.00	22.8	18.0	11.6	0.0132	18.5	13.3	0.0030	23.8	76.2
1440.00	22.1	14.5	7.9	0.0133	15.0	13.8	0.0013	16.2	83.8

Fractional Components

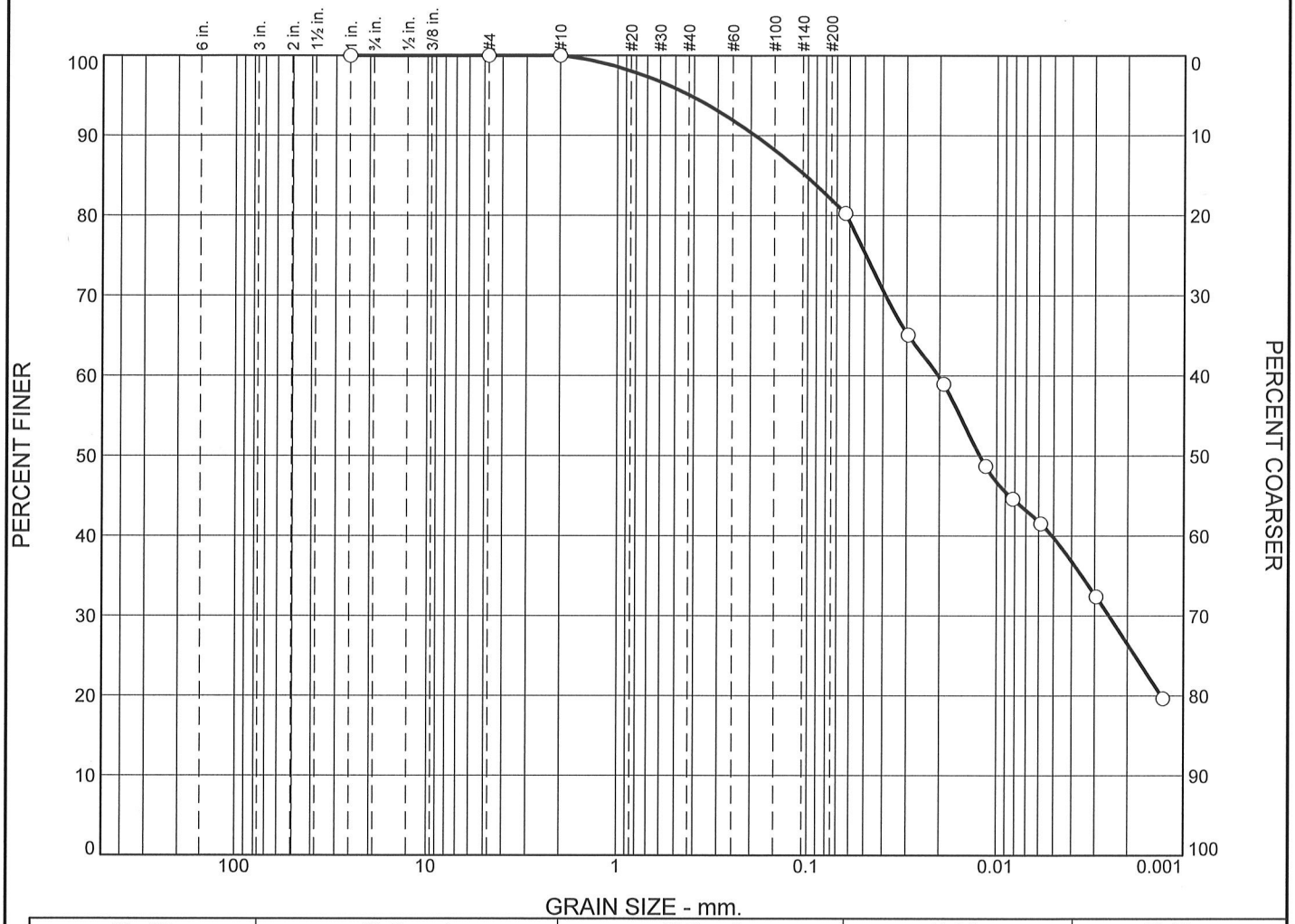
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	11.3	60.6	28.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0022	0.0043	0.0130	0.0273	0.0495	0.0567	0.0796	0.2282

Fineness Modulus
0.13

RF

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	19.8	43.7	36.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1033	0.0204	0.0123	0.0025				

Material Description	USCS	AASHTO
○ Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite D-1 **Sample Number:** 20150101

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp D-1

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite D-1
Sample Number: 20150101
Material Description: Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
69.93	11.25	1	0.00	0.00	100.0	0.0
		#4	11.25	11.25	100.0	0.0
		#10	11.25	11.25	100.0	0.0
50.00	0.00	#230	170.42	160.54	80.2	19.8

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 10.42
Dry weight and tare = 10.22
Tare weight = 1.34
Hygroscopic moisture = 2.3%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	23.5	37.0	31.8	0.0131	37.5	10.1	0.0294	65.1	34.9
5.00	23.5	34.0	28.8	0.0131	34.5	10.6	0.0191	58.9	41.1
15.00	23.5	29.0	23.8	0.0131	29.5	11.5	0.0114	48.7	51.3
30.00	23.5	27.0	21.8	0.0131	27.5	11.8	0.0082	44.6	55.4
60.00	23.5	25.5	20.3	0.0131	26.0	12.0	0.0059	41.5	58.5
250.00	23.6	21.0	15.8	0.0131	21.5	12.8	0.0030	32.4	67.6
1440.00	22.8	15.0	9.6	0.0132	15.5	13.8	0.0013	19.7	80.3

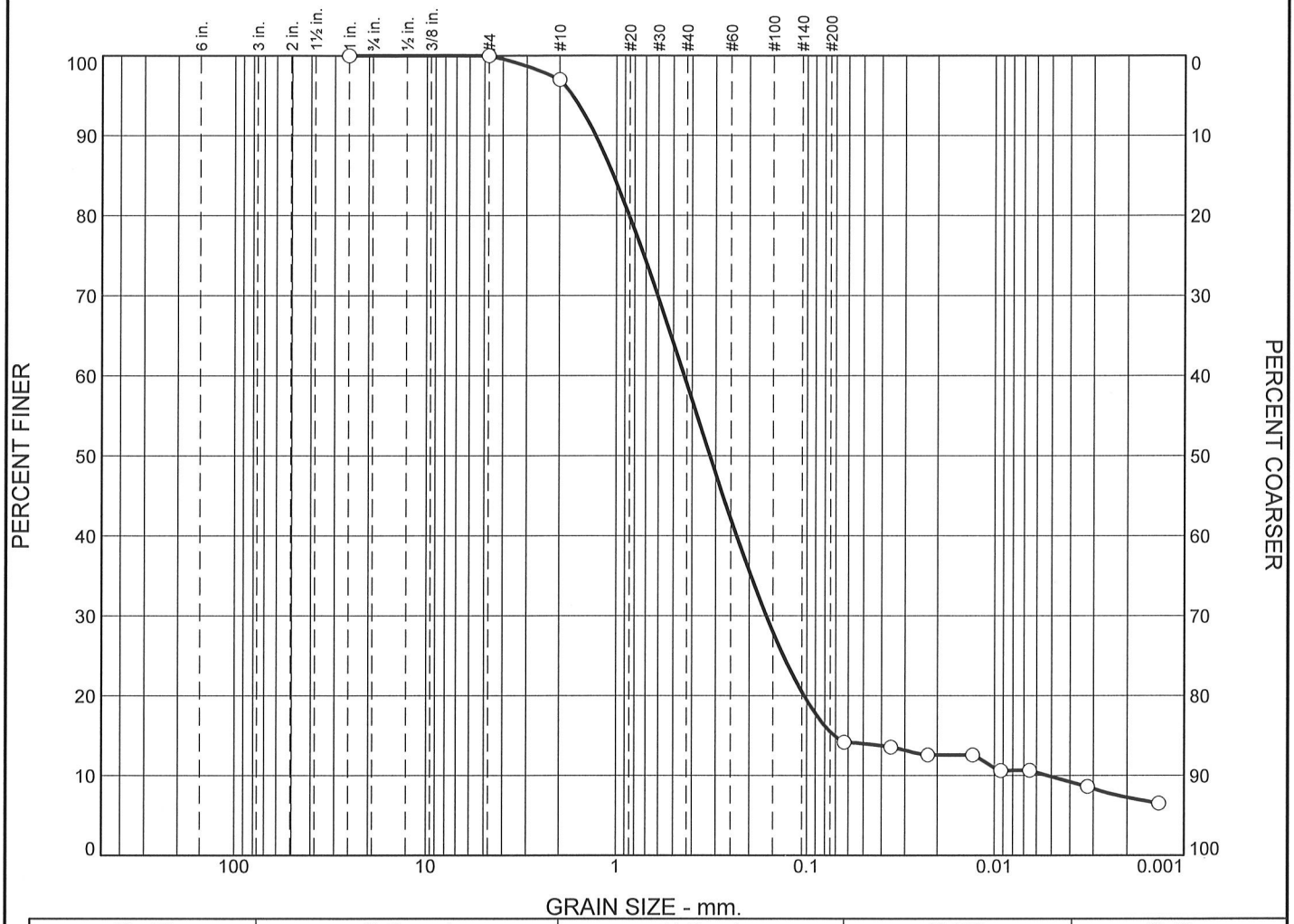
Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	19.8	43.7	36.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0013	0.0025	0.0123	0.0204	0.0622	0.1033	0.1904	0.4204

Fineness Modulus
0.23

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	3.0	82.8	5.0	9.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.0366	0.4399	0.3216	0.1626	0.0709	0.0052	11.50	84.15

Material Description	USCS	AASHTO
○ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite D-2/S-11 **Sample Number:** 20150074

Remarks:

RF

Aqua Survey, Inc.

Flemington, NJ

Figure Comp D-2

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite D-2/S-11
Sample Number: 20150074
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
77.24	11.39	1	0.00	0.00	100.0	0.0
		#4	11.39	11.39	100.0	0.0
		#10	13.36	11.39	97.0	3.0
50.00	0.00	#230	214.62	171.93	14.2	85.8

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 97.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 19.04
Dry weight and tare = 18.97
Tare weight = 1.33
Hygroscopic moisture = 0.4%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -5
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.2	11.5	7.0	0.0133	12.0	14.3	0.0355	13.6	86.4
5.00	22.2	11.0	6.5	0.0133	11.5	14.4	0.0225	12.6	87.4
15.00	22.2	11.0	6.5	0.0133	11.5	14.4	0.0130	12.6	87.4
30.00	22.2	10.0	5.5	0.0133	10.5	14.6	0.0093	10.6	89.4
60.00	22.3	10.0	5.5	0.0133	10.5	14.6	0.0065	10.7	89.3
250.00	22.1	9.0	4.4	0.0133	9.5	14.7	0.0032	8.6	91.4
1440.00	21.8	8.0	3.4	0.0133	8.5	14.9	0.0014	6.5	93.5

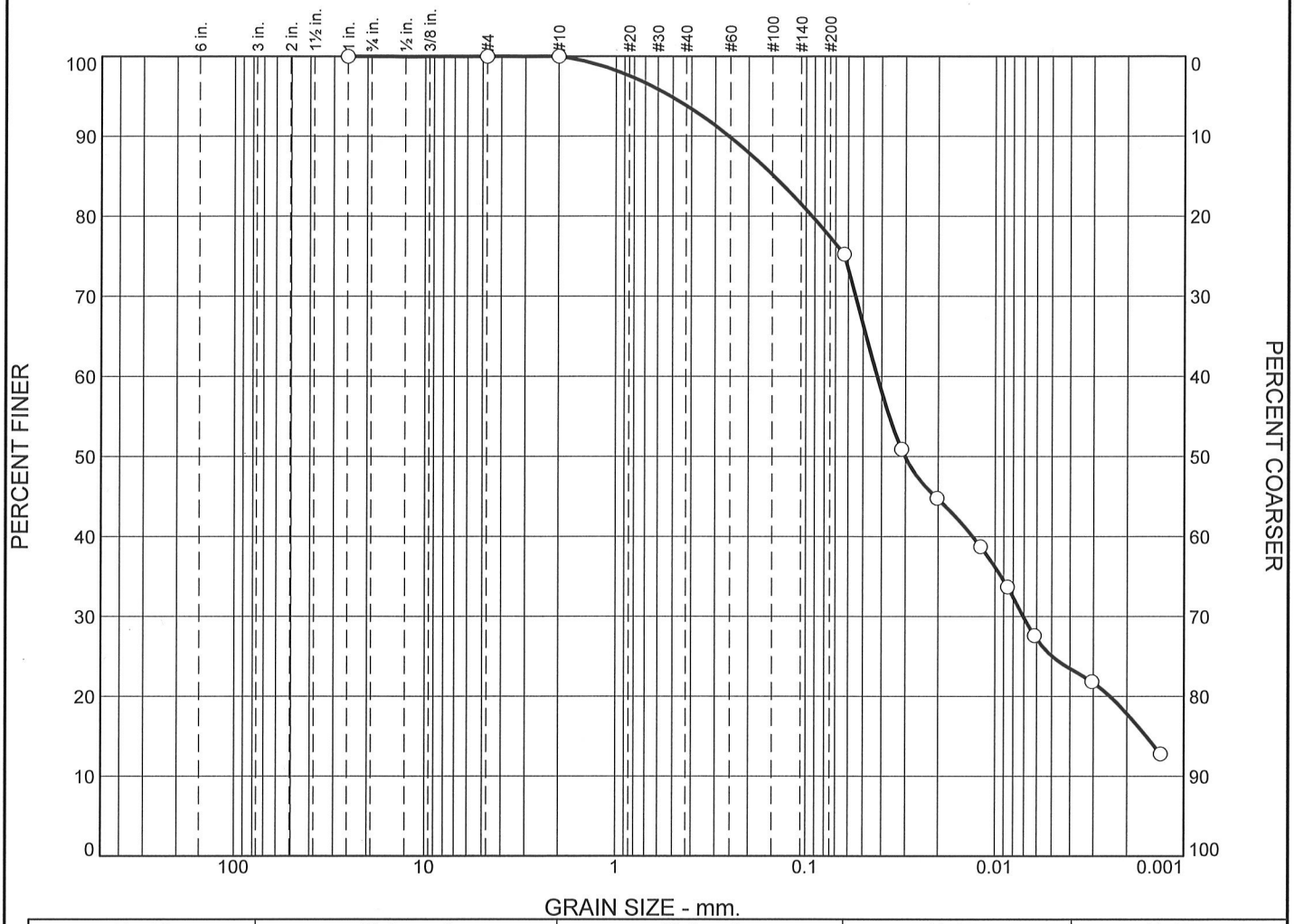
Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	3.0	82.8	5.0	9.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0052	0.0709	0.1032	0.1626	0.3216	0.4399	0.8545	1.0366	1.2924	1.7107

Fineness Modulus	C_u	C_c
1.69	84.15	11.50

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	24.8	51.9	23.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1474	0.0422	0.0301	0.0071	0.0016			

Material Description	USCS	AASHTO
○ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite E/S-12 **Sample Number:** 20150075

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp E

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite E/S-12
Sample Number: 20150075
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
67.25	11.41	1	0.00	0.00	100.0	0.0
		#4	11.41	11.41	100.0	0.0
		#10	11.41	11.41	100.0	0.0
50.00	0.00	#230	188.76	176.38	75.2	24.8

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 13.21
Dry weight and tare = 12.98
Tare weight = 1.30
Hygroscopic moisture = 1.9%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.3	30.5	25.0	0.0133	31.0	11.2	0.0314	50.9	49.1
5.00	22.3	27.5	22.0	0.0133	28.0	11.7	0.0203	44.8	55.2
15.00	22.4	24.5	19.0	0.0132	25.0	12.2	0.0119	38.7	61.3
30.00	22.5	22.0	16.5	0.0132	22.5	12.6	0.0086	33.7	66.3
60.00	22.6	19.0	13.6	0.0132	19.5	13.1	0.0062	27.6	72.4
250.00	23.2	16.0	10.7	0.0131	16.5	13.6	0.0031	21.8	78.2
1440.00	21.5	12.0	6.3	0.0134	12.5	14.2	0.0013	12.8	87.2

Fractional Components

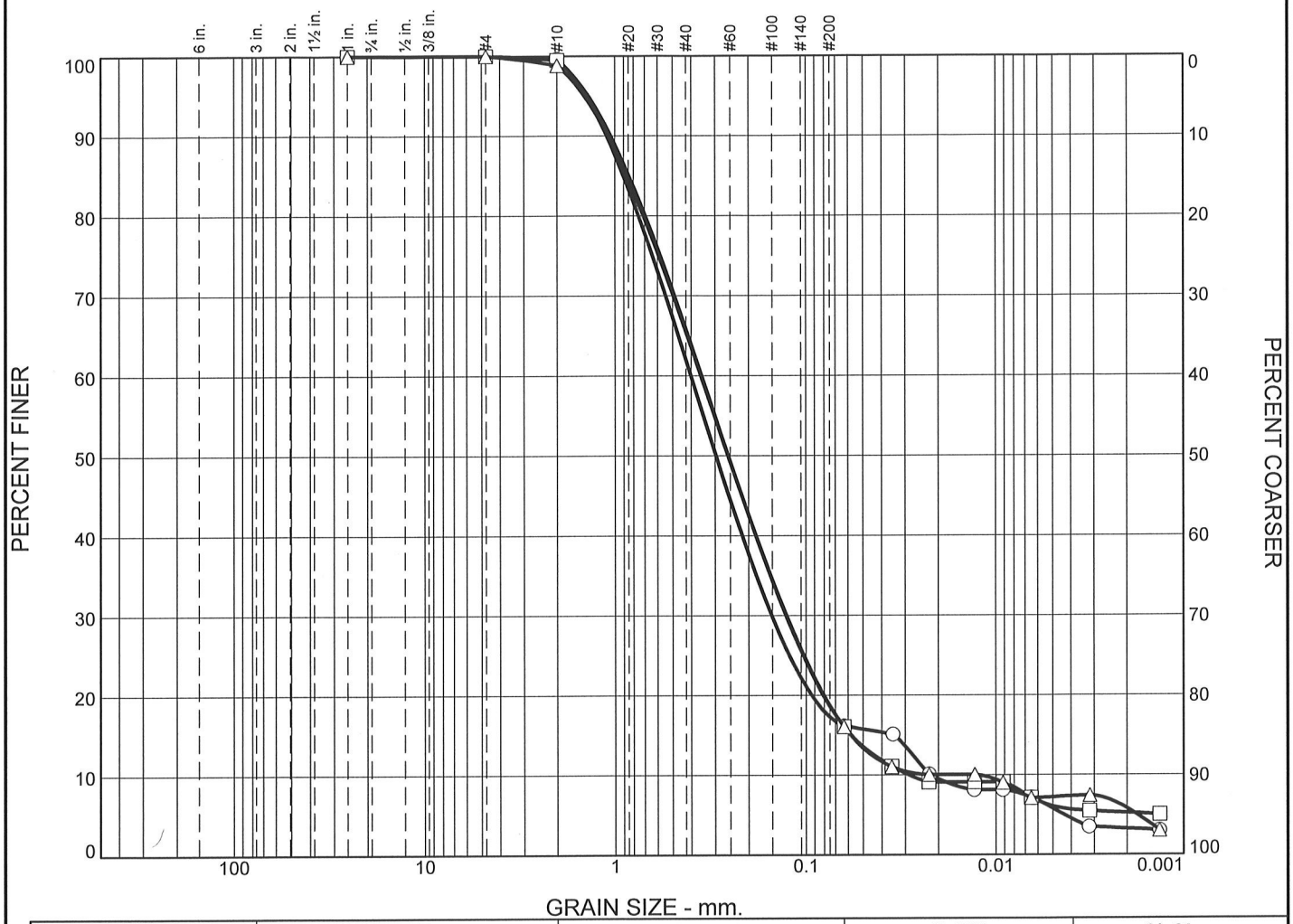
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	24.8	51.9	23.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0016	0.0025	0.0071	0.0301	0.0422	0.0929	0.1474	0.2543	0.5144

Fineness Modulus
0.29

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.3	83.5	11.8	4.4
□	0.0	0.5	83.4	10.5	5.6
△	0.0	1.2	82.7	8.8	7.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.9019	0.4009	0.2962	0.1511	0.0343	0.0219	2.60	18.31
□			0.8439	0.3523	0.2553	0.1271	0.0578	0.0286	1.60	12.30
△			0.8689	0.3553	0.2560	0.1263	0.0581	0.0124	3.61	28.55

Material Description	USCS	AASHTO
○ Discrete Composite Sediment		
□ Discrete Composite Sediment		
△ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite E-1/S-13 **Sample Number:** 20150076

□ **Source of Sample:** Composite E-1/S-13 **Sample Number:** 20150076 dup

△ **Source of Sample:** Composite E-1/S-13 **Sample Number:** 20150076 trip

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp E-1

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite E-1/S-13
Sample Number: 20150076
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
80.64	11.42	1	0.00	0.00	100.0	0.0
		#4	11.42	11.42	100.0	0.0
		#10	11.66	11.42	99.7	0.3
50.00	0.00	#230	218.24	176.35	16.2	83.8

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.7
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 19.36
Dry weight and tare = 19.29
Tare weight = 1.32
Hygroscopic moisture = 0.4%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.6	14.0	7.6	0.0132	14.5	13.9	0.0349	15.1	84.9
5.00	22.6	11.5	5.1	0.0132	12.0	14.3	0.0224	10.1	89.9
15.00	22.6	10.5	4.1	0.0132	11.0	14.5	0.0130	8.1	91.9
30.00	22.6	10.5	4.1	0.0132	11.0	14.5	0.0092	8.1	91.9
60.00	22.7	10.0	3.6	0.0132	10.5	14.6	0.0065	7.2	92.8
250.00	23.3	8.0	1.7	0.0131	8.5	14.9	0.0032	3.5	96.5
1440.00	22.5	8.0	1.5	0.0132	8.5	14.9	0.0013	3.1	96.9

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.3	83.5	11.8	4.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0219	0.0343	0.0932	0.1511	0.2962	0.4009	0.7535	0.9019	1.1031	1.4082

Fineness Modulus	C_u	C_c
1.55	18.31	2.60

RF

Aqua Survey, Inc.

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite E-1/S-13
Sample Number: 20150076 dup
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
68.40	11.50	1	0.00	0.00	100.0	0.0
		#4	11.50	11.50	100.0	0.0
		#10	11.79	11.50	99.5	0.5
50.00	0.00	#230	185.03	143.10	16.1	83.9

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.5
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 19.36
Dry weight and tare = 19.29
Tare weight = 1.32
Hygroscopic moisture = 0.4%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.6	12.0	5.6	0.0132	12.5	14.2	0.0353	11.1	88.9
5.00	22.6	11.0	4.6	0.0132	11.5	14.4	0.0224	9.1	90.9
15.00	22.6	11.0	4.6	0.0132	11.5	14.4	0.0130	9.1	90.9
30.00	22.6	11.0	4.6	0.0132	11.5	14.4	0.0092	9.1	90.9
60.00	22.7	10.0	3.6	0.0132	10.5	14.6	0.0065	7.2	92.8
250.00	23.3	9.0	2.7	0.0131	9.5	14.7	0.0032	5.5	94.5
1440.00	22.5	9.0	2.5	0.0132	9.5	14.7	0.0013	5.1	94.9

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.5	83.4	10.5	5.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0286	0.0578	0.0809	0.1271	0.2553	0.3523	0.6945	0.8439	1.0508	1.3734

Fineness Modulus	C_u	C_c
1.43	12.30	1.60

RF

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite E-1/S-13
Sample Number: 20150076 trip
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
71.78	11.29	1	0.00	0.00	100.0	0.0
		#4	11.29	11.29	100.0	0.0
		#10	11.99	11.29	98.8	1.2
50.00	0.00	#230	218.91	177.03	16.1	83.9

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 98.8
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 19.36
Dry weight and tare = 19.29
Tare weight = 1.32
Hygroscopic moisture = 0.4%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.6	12.0	5.6	0.0132	12.5	14.2	0.0353	11.0	89.0
5.00	22.6	11.5	5.1	0.0132	12.0	14.3	0.0224	10.0	90.0
15.00	22.6	11.5	5.1	0.0132	12.0	14.3	0.0129	10.0	90.0
30.00	22.6	11.0	4.6	0.0132	11.5	14.4	0.0092	9.0	91.0
60.00	22.7	10.0	3.6	0.0132	10.5	14.6	0.0065	7.1	92.9
250.00	23.3	10.0	3.7	0.0131	10.5	14.6	0.0032	7.4	92.6
1440.00	22.5	8.0	1.5	0.0132	8.5	14.9	0.0013	3.0	97.0

Fractional Components

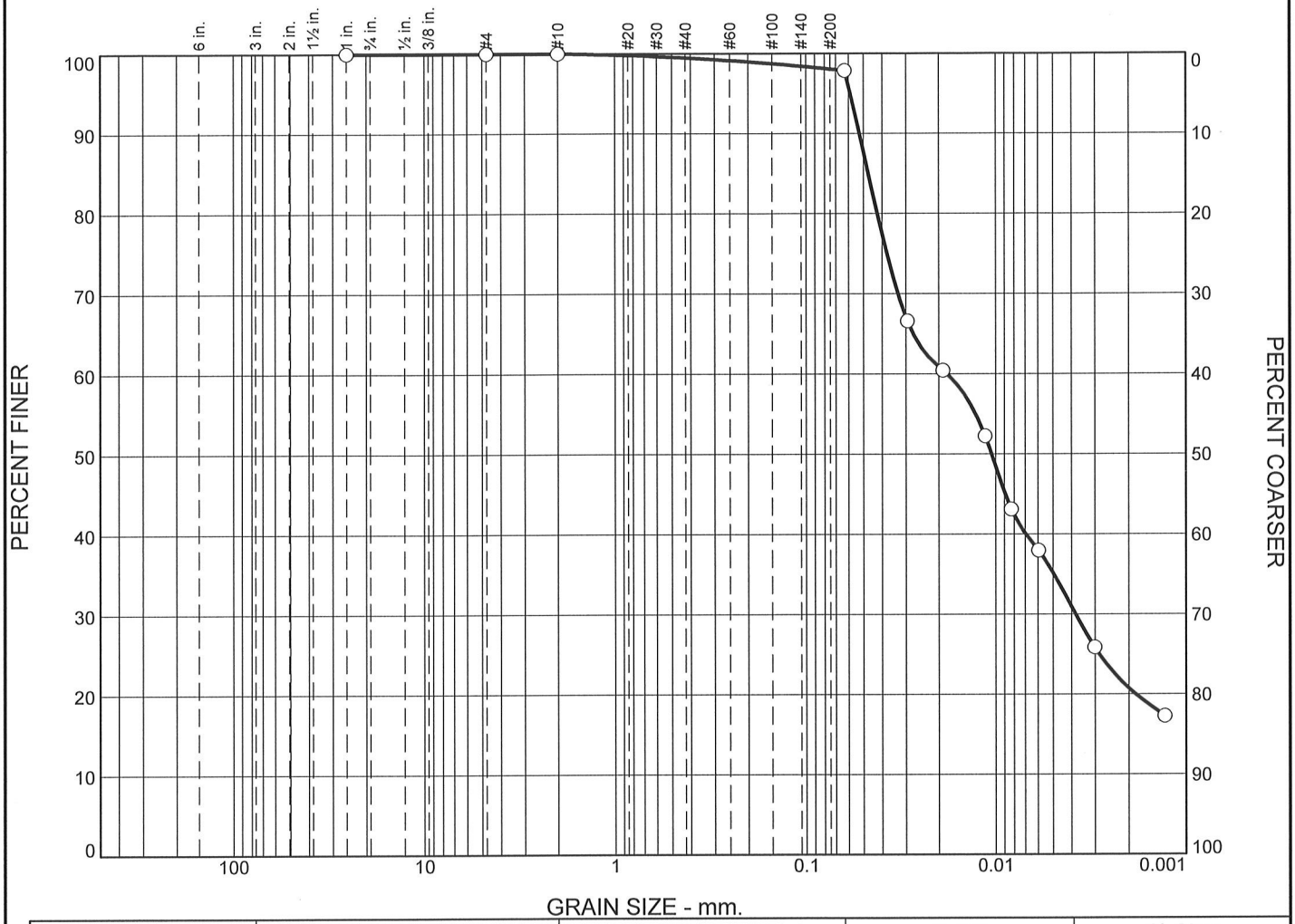
Cobbles	Gravel	Sand	Silt	Clay
0.0	1.2	82.7	8.8	7.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0124	0.0581	0.0803	0.1263	0.2560	0.3553	0.7112	0.8689	1.0897	1.4414

Fineness Modulus	C_u	C_c
1.45	28.55	3.61

RF

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	2.1	67.4	30.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0472	0.0182	0.0105	0.0038				

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-14 **Sample Number:** 20150077

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure S-14

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-14
Sample Number: 20150077
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
68.83	11.38	1	0.00	0.00	100.0	0.0
		#4	11.38	11.38	100.0	0.0
		#10	11.38	11.38	100.0	0.0
50.00	0.00	#230	179.60	178.53	97.9	2.1

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 10.13
Dry weight and tare = 9.90
Tare weight = 1.34
Hygroscopic moisture = 2.6%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.2	39.0	32.5	0.0133	39.5	9.8	0.0294	66.6	33.4
5.00	22.2	36.0	29.5	0.0133	36.5	10.3	0.0191	60.5	39.5
15.00	22.2	32.0	25.5	0.0133	32.5	11.0	0.0114	52.2	47.8
30.00	22.4	27.5	21.0	0.0132	28.0	11.7	0.0083	43.1	56.9
60.00	22.4	25.0	18.5	0.0132	25.5	12.1	0.0060	38.0	62.0
250.00	22.8	19.0	12.6	0.0132	19.5	13.1	0.0030	25.9	74.1
1440.00	22.1	15.0	8.4	0.0133	15.5	13.8	0.0013	17.3	82.7

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	2.1	67.4	30.5

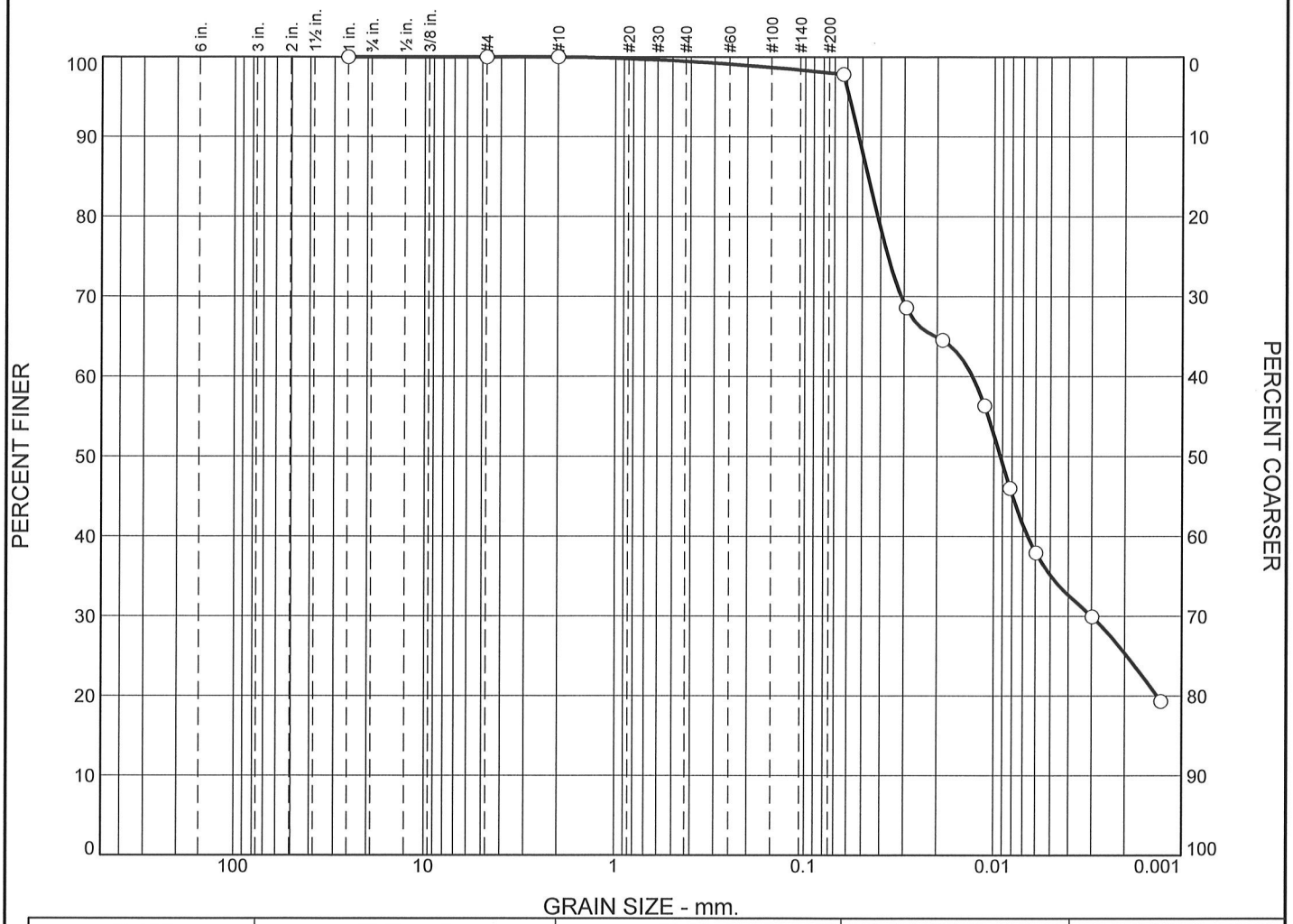
D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0018	0.0038	0.0105	0.0182	0.0423	0.0472	0.0526	0.0588

Fineness Modulus
0.02

RF

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	2.2	65.4	32.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0466	0.0130	0.0092	0.0030				

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-15 **Sample Number:** 20150078

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure S-15

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-15
Sample Number: 20150078
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
67.37	11.45	1	0.00	0.00	100.0	0.0
		#4	11.45	11.45	100.0	0.0
		#10	11.45	11.45	100.0	0.0
50.00	0.00	#230	173.69	172.60	97.8	2.2

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 9.24
Dry weight and tare = 9.04
Tare weight = 1.32
Hygroscopic moisture = 2.5%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.2	40.0	33.5	0.0133	40.5	9.7	0.0292	68.6	31.4
5.00	22.3	38.0	31.5	0.0133	38.5	10.0	0.0187	64.5	35.5
15.00	22.3	34.0	27.5	0.0133	34.5	10.6	0.0112	56.3	43.7
30.00	22.2	29.0	22.5	0.0133	29.5	11.5	0.0082	46.0	54.0
60.00	22.4	25.0	18.5	0.0132	25.5	12.1	0.0060	37.9	62.1
250.00	22.8	21.0	14.6	0.0132	21.5	12.8	0.0030	30.0	70.0
1440.00	22.1	16.0	9.4	0.0133	16.5	13.6	0.0013	19.3	80.7

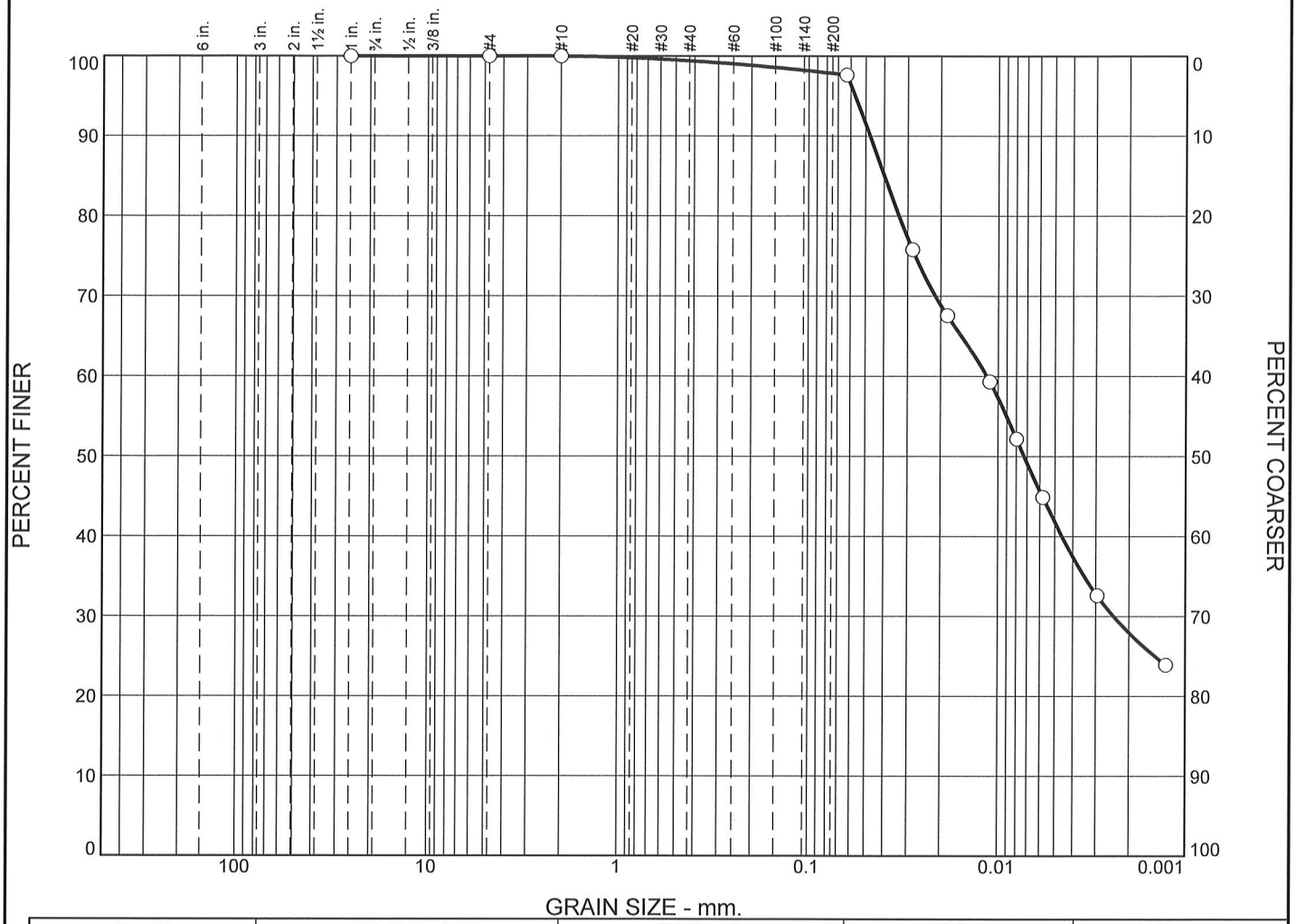
Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	2.2	65.4	32.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0014	0.0030	0.0092	0.0130	0.0414	0.0466	0.0522	0.0587

Fineness Modulus
0.03

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	2.4	60.5	37.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0397	0.0114	0.0073	0.0024				

Material Description	USCS	AASHTO
○ Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite F **Sample Number:** 20150103

Remarks:

RF

Aqua Survey, Inc.

Flemington, NJ

Figure Comp F

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite F
Sample Number: 20150103
Material Description: Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
67.73	11.39	1	0.00	0.00	100.0	0.0
		#4	11.39	11.39	100.0	0.0
		#10	11.39	11.39	100.0	0.0
50.00	0.00	#230	165.06	163.88	97.6	2.4

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 8.48
Dry weight and tare = 8.27
Tare weight = 1.33
Hygroscopic moisture = 3.0%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	23.5	42.0	36.8	0.0131	42.5	9.3	0.0282	75.8	24.2
5.00	23.5	38.0	32.8	0.0131	38.5	10.0	0.0185	67.6	32.4
15.00	23.5	34.0	28.8	0.0131	34.5	10.6	0.0110	59.3	40.7
30.00	23.6	30.5	25.3	0.0131	31.0	11.2	0.0080	52.2	47.8
60.00	23.5	27.0	21.8	0.0131	27.5	11.8	0.0058	44.9	55.1
250.00	23.6	21.0	15.8	0.0131	21.5	12.8	0.0030	32.6	67.4
1440.00	22.8	17.0	11.6	0.0132	17.5	13.4	0.0013	23.9	76.1

Fractional Components

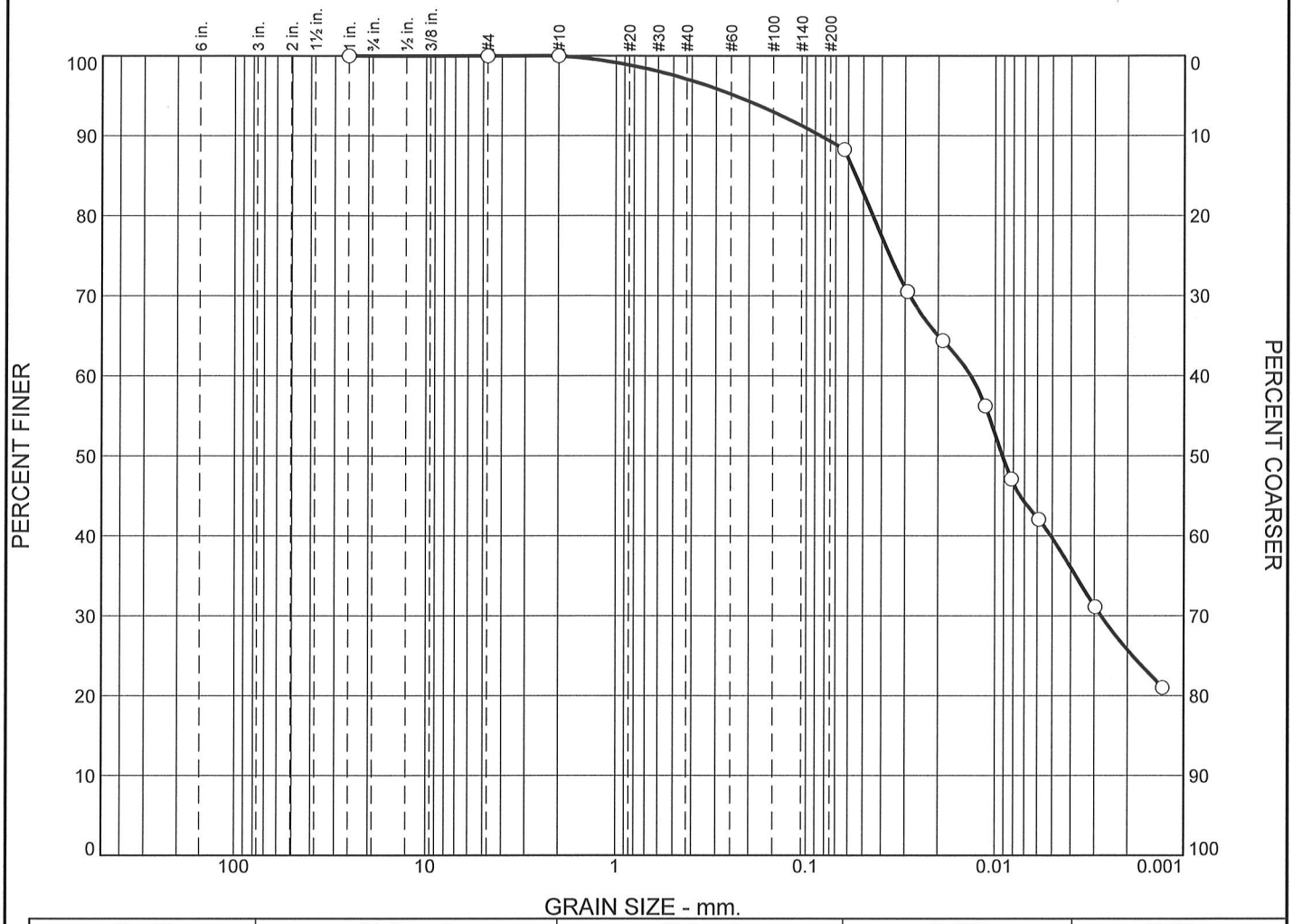
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	2.4	60.5	37.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0024	0.0073	0.0114	0.0333	0.0397	0.0473	0.0567

Fineness Modulus
0.03

RF

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	11.7	52.7	35.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0546	0.0134	0.0091	0.0028				

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-17 **Sample Number:** 20150079

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure S-17

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-17
Sample Number: 20150079
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
68.99	11.38	1	0.00	0.00	100.0	0.0
		#4	11.38	11.38	100.0	0.0
		#10	11.38	11.38	100.0	0.0
50.00	0.00	#230	170.08	164.21	88.3	11.7

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 9.86
Dry weight and tare = 9.67
Tare weight = 1.34
Hygroscopic moisture = 2.2%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.3	40.0	34.5	0.0133	40.5	9.7	0.0291	70.5	29.5
5.00	22.3	37.0	31.5	0.0133	37.5	10.1	0.0189	64.4	35.6
15.00	22.4	33.0	27.5	0.0132	33.5	10.8	0.0112	56.2	43.8
30.00	22.5	28.5	23.0	0.0132	29.0	11.5	0.0082	47.1	52.9
60.00	22.7	26.0	20.6	0.0132	26.5	11.9	0.0059	42.1	57.9
250.00	23.2	20.5	15.2	0.0131	21.0	12.9	0.0030	31.1	68.9
1440.00	21.5	16.0	10.3	0.0134	16.5	13.6	0.0013	21.0	79.0

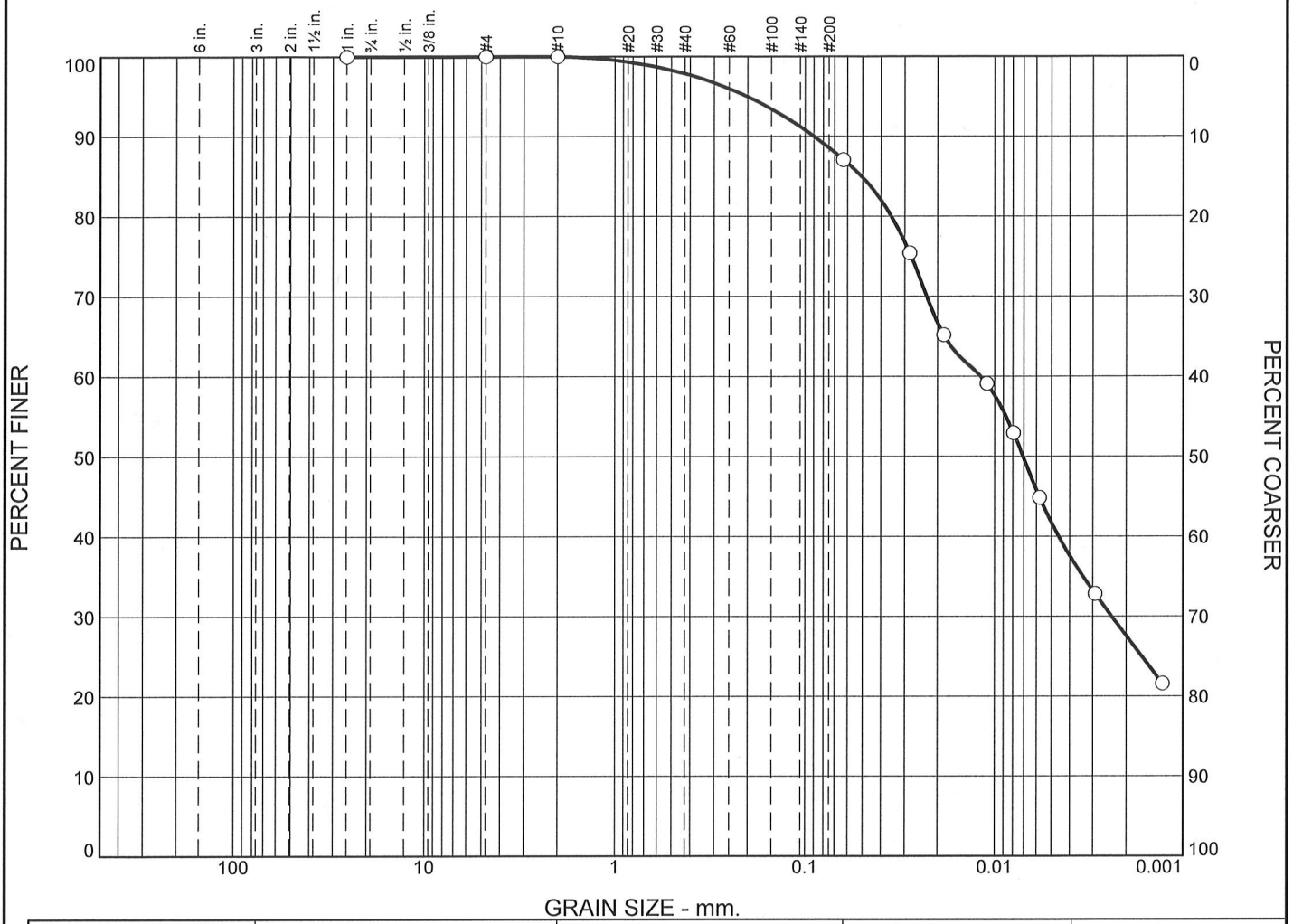
Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	11.7	52.7	35.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0028	0.0091	0.0134	0.0445	0.0546	0.0847	0.2383

Fineness Modulus
0.14

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	12.9	49.9	37.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0508	0.0119	0.0071	0.0024				

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-17a **Sample Number:** 20150080

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure S-17a

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-17a
Sample Number: 20150080
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
69.22	11.72	1	0.00	0.00	100.0	0.0
		#4	11.72	11.72	100.0	0.0
		#10	11.72	11.72	100.0	0.0
50.00	0.00	#230	177.99	171.53	87.1	12.9

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 11.01
Dry weight and tare = 10.78
Tare weight = 1.31
Hygroscopic moisture = 2.4%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	23.6	42.0	36.8	0.0131	42.5	9.3	0.0282	75.4	24.6
5.00	23.6	37.0	31.8	0.0131	37.5	10.1	0.0186	65.2	34.8
15.00	23.7	34.0	28.9	0.0130	34.5	10.6	0.0110	59.1	40.9
30.00	23.7	31.0	25.9	0.0130	31.5	11.1	0.0079	52.9	47.1
60.00	23.9	27.0	21.9	0.0130	27.5	11.8	0.0058	44.9	55.1
250.00	24.3	21.0	16.0	0.0130	21.5	12.8	0.0029	32.8	67.2
1440.00	22.6	16.0	10.6	0.0132	16.5	13.6	0.0013	21.6	78.4

Fractional Components

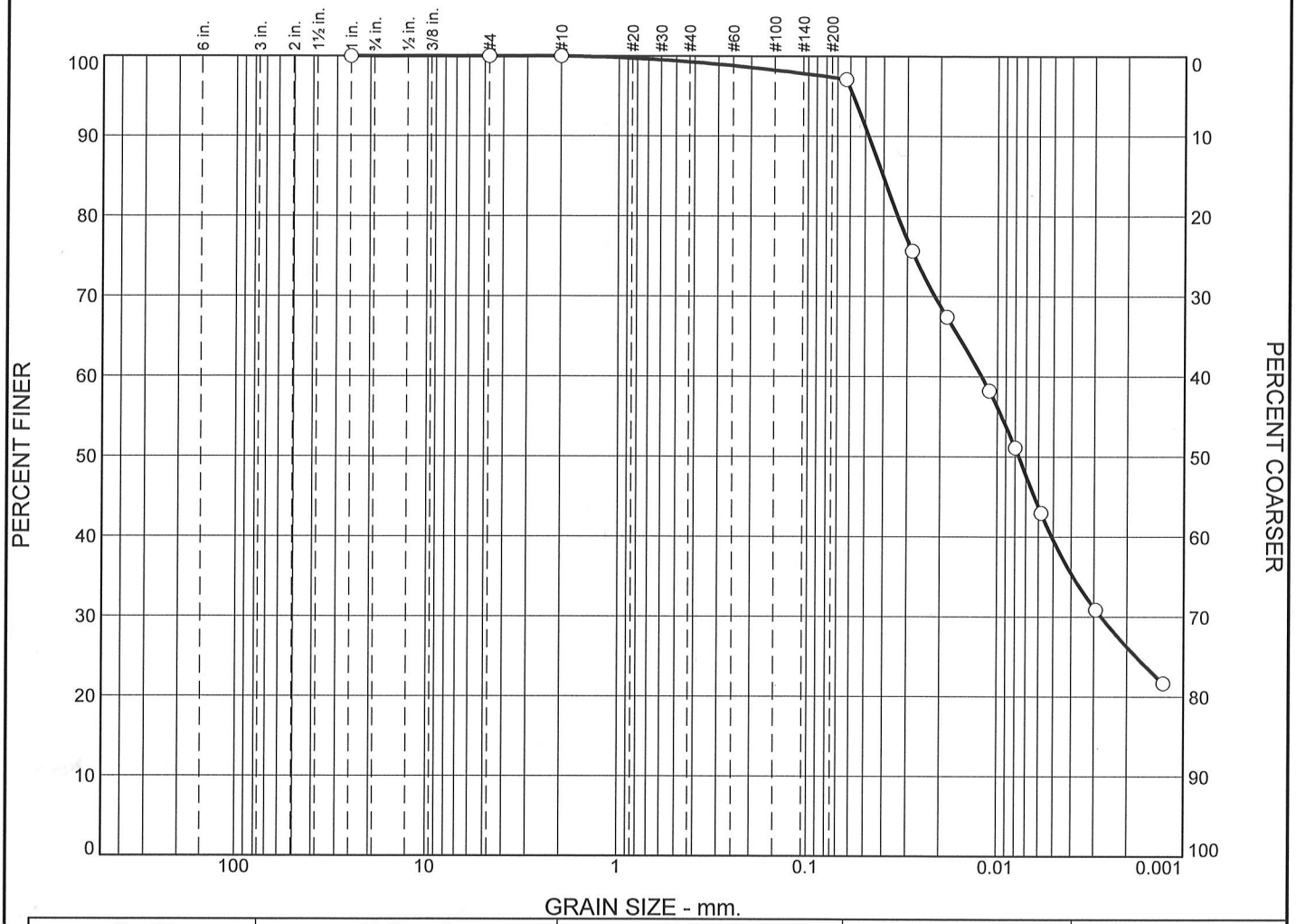
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	12.9	49.9	37.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0024	0.0071	0.0119	0.0352	0.0508	0.0898	0.2023

Fineness Modulus
0.12

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	2.9	62.1	35.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0402	0.0121	0.0076	0.0028				

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-18 **Sample Number:** 20150081

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure S-18

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-18
Sample Number: 20150081
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
66.87	11.48	1	0.00	0.00	100.0	0.0
		#4	11.48	11.48	100.0	0.0
		#10	11.48	11.48	100.0	0.0
50.00	0.00	#230	173.27	171.82	97.1	2.9

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 8.54
Dry weight and tare = 8.35
Tare weight = 1.34
Hygroscopic moisture = 2.7%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	23.6	42.0	36.8	0.0131	42.5	9.3	0.0282	75.6	24.4
5.00	23.6	38.0	32.8	0.0131	38.5	10.0	0.0185	67.4	32.6
15.00	23.7	33.5	28.4	0.0130	34.0	10.7	0.0110	58.2	41.8
30.00	23.8	30.0	24.9	0.0130	30.5	11.3	0.0080	51.1	48.9
60.00	23.9	26.0	20.9	0.0130	26.5	11.9	0.0058	43.0	57.0
250.00	24.3	20.0	15.0	0.0130	20.5	12.9	0.0029	30.9	69.1
1440.00	22.6	16.0	10.6	0.0132	16.5	13.6	0.0013	21.7	78.3

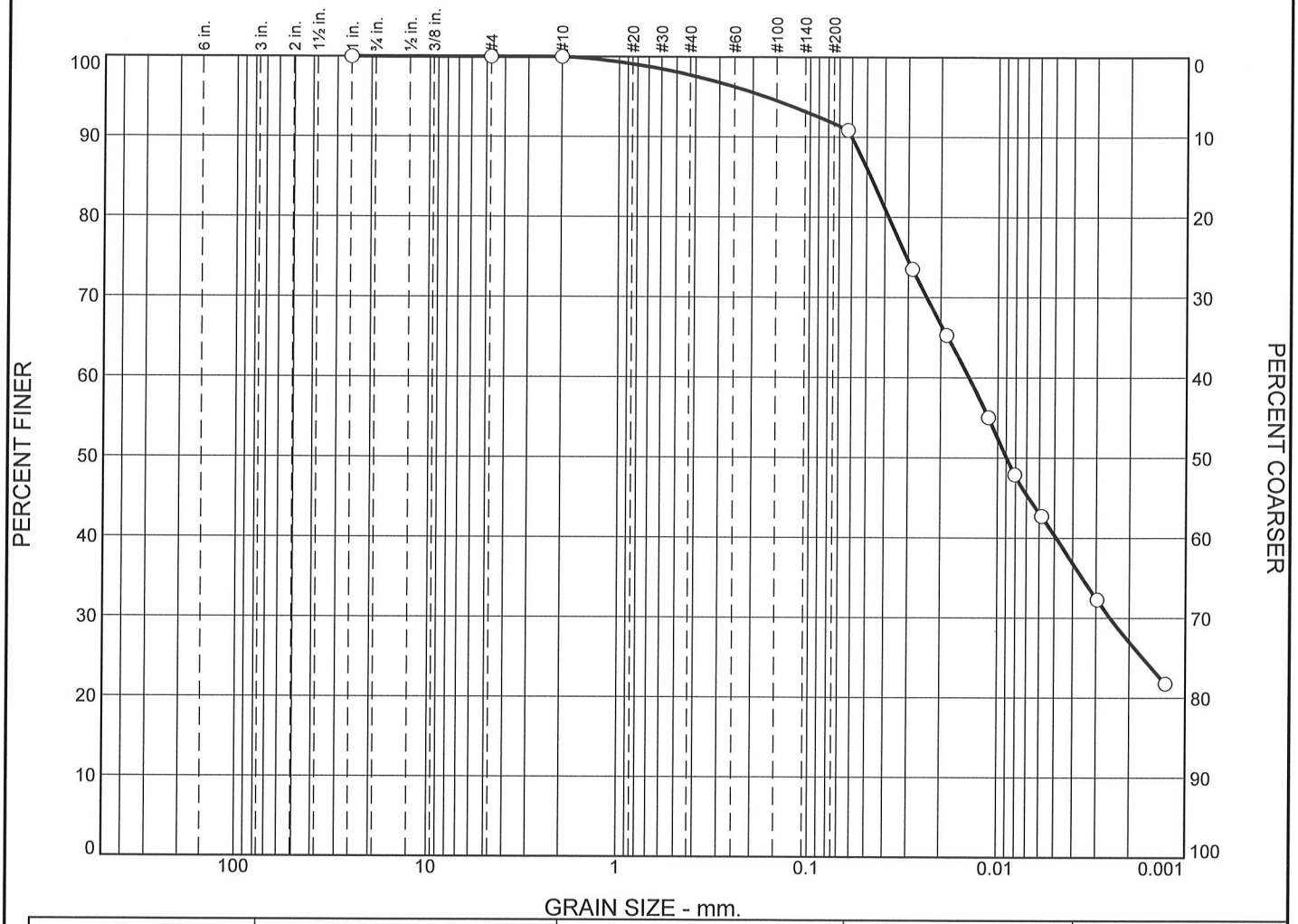
Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	2.9	62.1	35.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0028	0.0076	0.0121	0.0336	0.0402	0.0480	0.0578

Fineness Modulus
0.03

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	9.1	54.4	36.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0475	0.0141	0.0090	0.0025				

Material Description	USCS	AASHTO
○ Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite G **Sample Number:** 20150104

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp G

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite G
Sample Number: 20150104
Material Description: Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
69.57	11.41	1	0.00	0.00	100.0	0.0
		#4	11.41	11.41	100.0	0.0
		#10	11.41	11.41	100.0	0.0
50.00	0.00	#230	138.15	133.59	90.9	9.1

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 9.19
Dry weight and tare = 8.98
Tare weight = 1.35
Hygroscopic moisture = 2.7%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	23.5	41.0	35.8	0.0131	41.5	9.5	0.0285	73.5	26.5
5.00	23.5	37.0	31.8	0.0131	37.5	10.1	0.0186	65.3	34.7
15.00	23.5	32.0	26.8	0.0131	32.5	11.0	0.0112	55.0	45.0
30.00	23.6	28.5	23.3	0.0131	29.0	11.5	0.0081	47.9	52.1
60.00	23.5	26.0	20.8	0.0131	26.5	11.9	0.0058	42.7	57.3
250.00	23.2	21.0	15.7	0.0131	21.5	12.8	0.0030	32.3	67.7
1440.00	22.8	16.0	10.6	0.0132	16.5	13.6	0.0013	21.8	78.2

Fractional Components

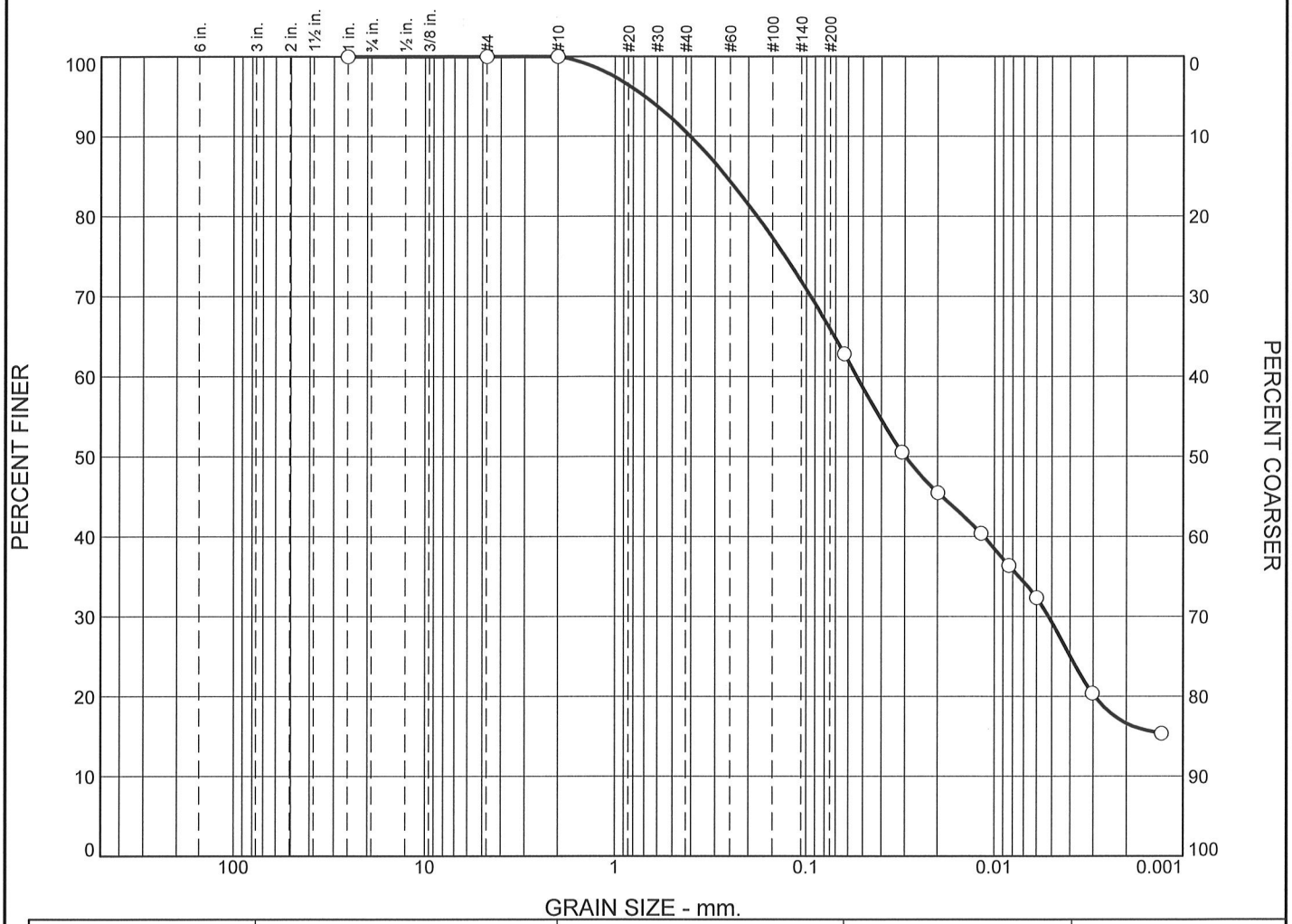
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	9.1	54.4	36.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0025	0.0090	0.0141	0.0382	0.0475	0.0602	0.1704

Fineness Modulus
0.11

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	37.2	38.2	24.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2619	0.0540	0.0298	0.0052				

Material Description	USCS	AASHTO
○ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite I/S-19 **Sample Number:** 20150085

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp I

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite I/S-19
Sample Number: 20150085
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
68.13	11.42	1	0.00	0.00	100.0	0.0
		#4	11.42	11.42	100.0	0.0
		#10	11.42	11.42	100.0	0.0
50.00	0.00	#230	164.73	146.15	62.8	37.2

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 14.19
Dry weight and tare = 13.98
Tare weight = 1.35
Hygroscopic moisture = 1.7%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	23.7	30.0	24.9	0.0130	30.5	11.3	0.0310	50.6	49.4
5.00	23.7	27.5	22.4	0.0130	28.0	11.7	0.0200	45.5	54.5
15.00	23.7	25.0	19.9	0.0130	25.5	12.1	0.0117	40.4	59.6
30.00	23.8	23.0	17.9	0.0130	23.5	12.4	0.0084	36.4	63.6
60.00	23.9	21.0	15.9	0.0130	21.5	12.8	0.0060	32.4	67.6
250.00	24.3	15.0	10.0	0.0130	15.5	13.8	0.0030	20.4	79.6
1440.00	22.6	13.0	7.6	0.0132	13.5	14.1	0.0013	15.4	84.6

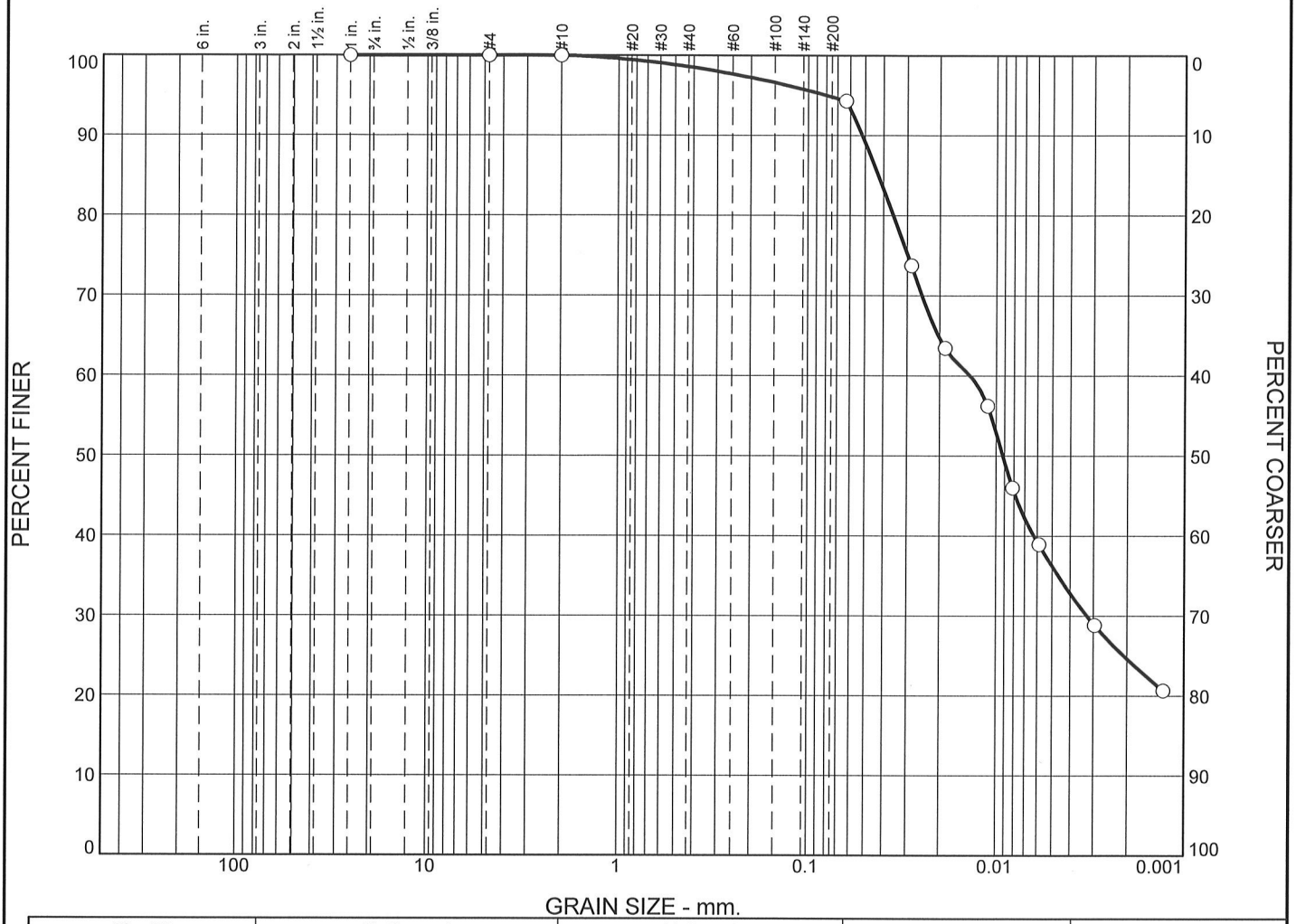
Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	37.2	38.2	24.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0029	0.0052	0.0298	0.0540	0.1803	0.2619	0.4036	0.6976

Fineness Modulus
0.44

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	5.7	61.8	32.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0425	0.0138	0.0092	0.0032				

Material Description	USCS	AASHTO
○ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite I-1/S-20 **Sample Number:** 20150086

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp I-1

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite I-1/S-20
Sample Number: 20150086
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
72.39	11.29	1	0.00	0.00	100.0	0.0
		#4	11.29	11.29	100.0	0.0
		#10	11.29	11.29	100.0	0.0
50.00	0.00	#230	173.67	170.83	94.3	5.7

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 9.07
Dry weight and tare = 8.86
Tare weight = 1.35
Hygroscopic moisture = 2.8%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	23.7	41.0	35.9	0.0130	41.5	9.5	0.0284	73.7	26.3
5.00	23.7	36.0	30.9	0.0130	36.5	10.3	0.0187	63.4	36.6
15.00	23.7	32.5	27.4	0.0130	33.0	10.9	0.0111	56.2	43.8
30.00	23.8	27.5	22.4	0.0130	28.0	11.7	0.0081	46.0	54.0
60.00	24.0	24.0	19.0	0.0130	24.5	12.3	0.0059	39.0	61.0
250.00	24.3	19.0	14.0	0.0130	19.5	13.1	0.0030	28.9	71.1
1440.00	22.6	15.5	10.1	0.0132	16.0	13.7	0.0013	20.7	79.3

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	5.7	61.8	32.5

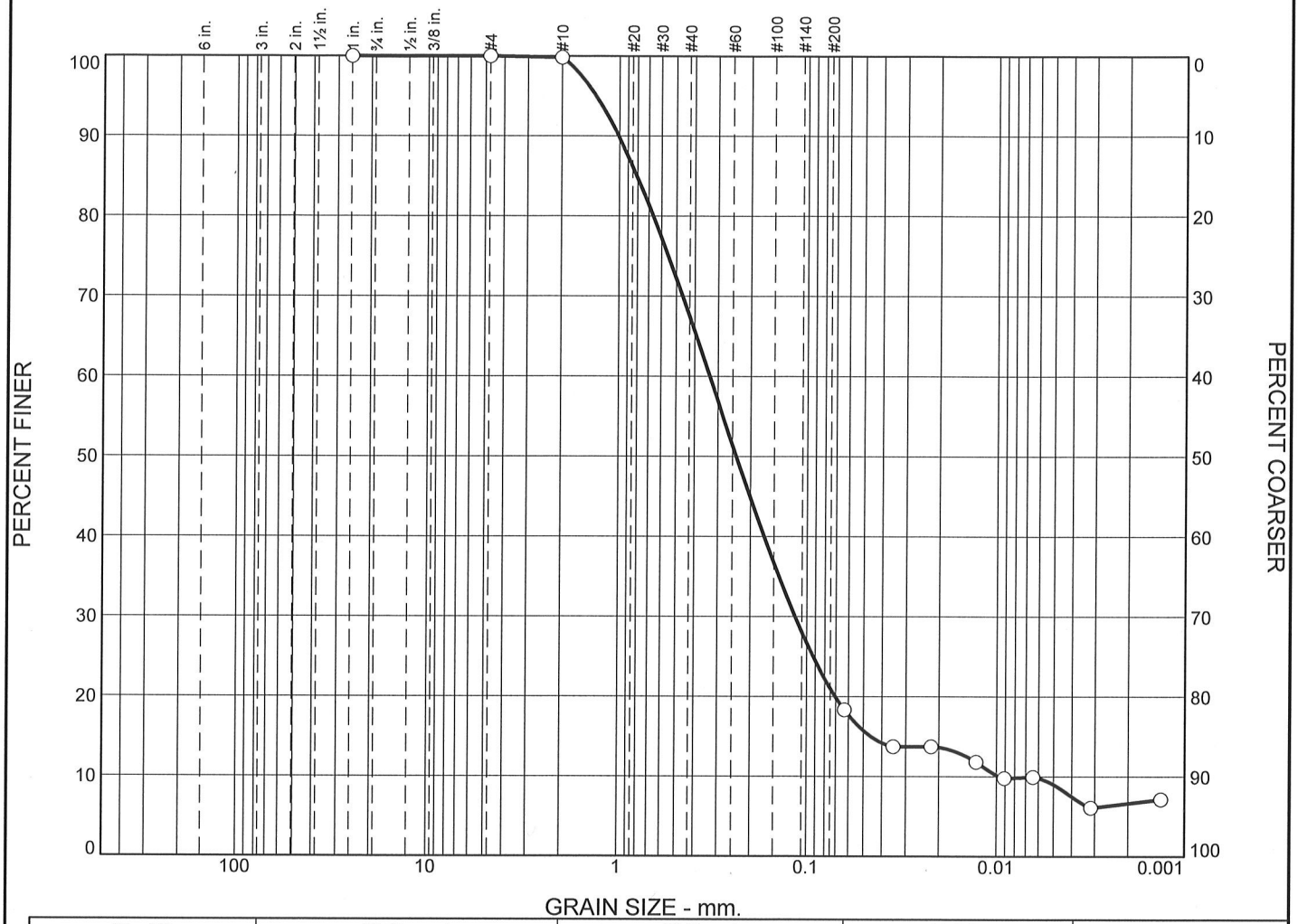
D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0032	0.0092	0.0138	0.0354	0.0425	0.0519	0.0799

Fineness Modulus
0.07

RA

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.2	81.5	11.0	7.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8087	0.3317	0.2383	0.1153	0.0457	0.0096	4.17	34.48

Material Description	USCS	AASHTO
○ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite I-2/S-21 **Sample Number:** 20150087

Remarks:

○ material retained on #10 sieve: shell

Aqua Survey, Inc.

Flemington, NJ

Figure Comp I-2

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite I-2/S-21
Sample Number: 20150087
Material Description: Discrete Composite Sediment
Testing Remarks: material retained on #10 sieve: shell
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
75.27	11.50	1	0.00	0.00	100.0	0.0
		#4	11.50	11.50	100.0	0.0
		#10	11.62	11.50	99.8	0.2
50.00	0.00	#230	212.80	171.99	18.3	81.7

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.8
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 21.84
Dry weight and tare = 21.74
Tare weight = 1.31
Hygroscopic moisture = 0.5%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	23.7	12.0	6.9	0.0130	12.5	14.2	0.0348	13.8	86.2
5.00	23.7	12.0	6.9	0.0130	12.5	14.2	0.0220	13.8	86.2
15.00	23.8	11.0	5.9	0.0130	11.5	14.4	0.0128	11.8	88.2
30.00	23.8	10.0	4.9	0.0130	10.5	14.6	0.0091	9.8	90.2
60.00	24.0	10.0	5.0	0.0130	10.5	14.6	0.0064	9.9	90.1
250.00	24.3	8.0	3.0	0.0130	8.5	14.9	0.0032	6.1	93.9
1440.00	22.6	9.0	3.6	0.0132	9.5	14.7	0.0013	7.1	92.9

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.2	81.5	11.0	7.3

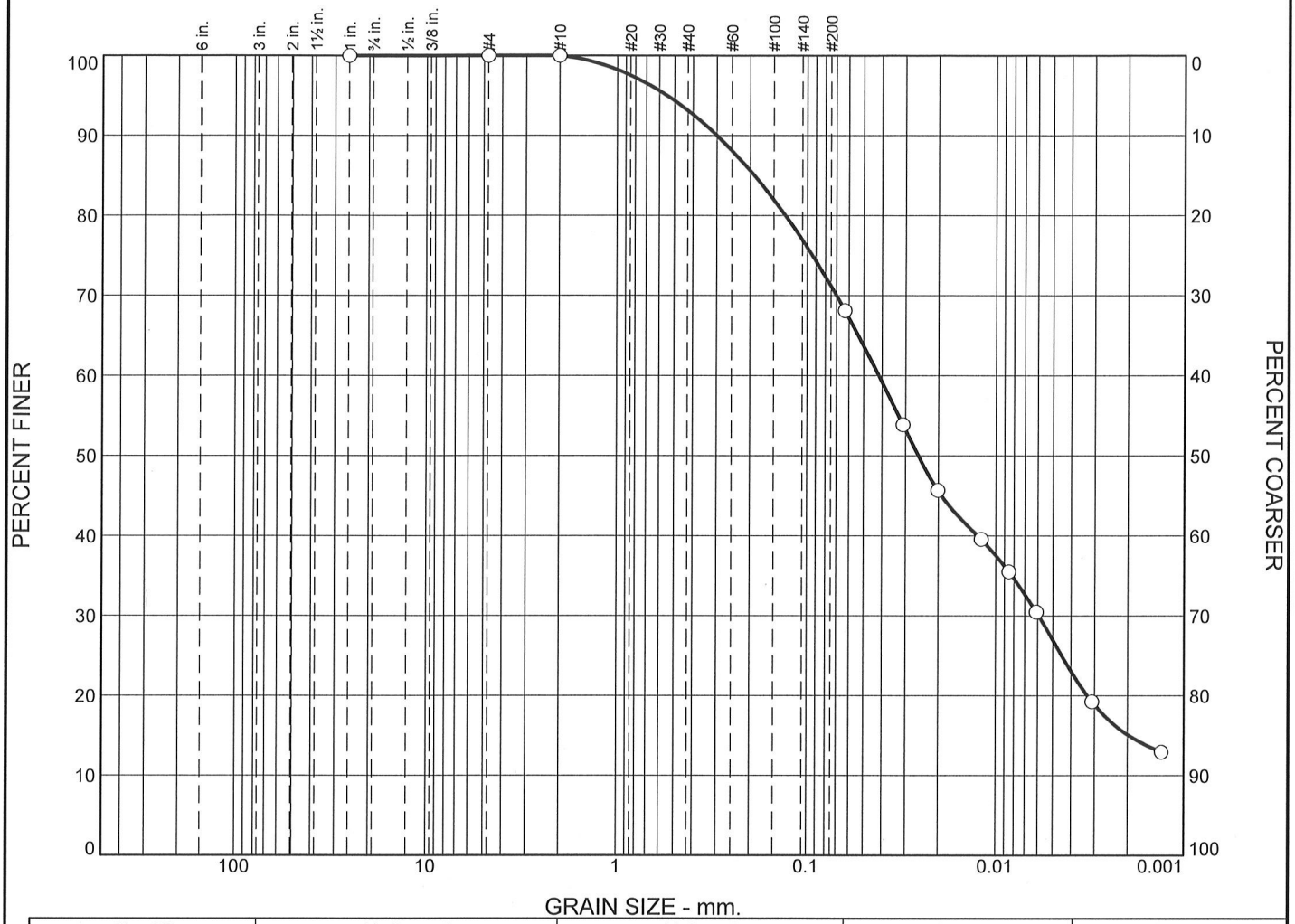
D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0096	0.0457	0.0704	0.1153	0.2383	0.3317	0.6633	0.8087	1.0100	1.3229

Fineness Modulus	C_u	C_c
1.36	34.48	4.17

RF

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	31.9	45.4	22.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1903	0.0415	0.0256	0.0059	0.0020			

Material Description	USCS	AASHTO
○ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite J/S-22 **Sample Number:** 20150088

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp J

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite J/S-22
Sample Number: 20150088
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
73.03	11.41	1	0.00	0.00	100.0	0.0
		#4	11.41	11.41	100.0	0.0
		#10	11.41	11.41	100.0	0.0
50.00	0.00	#230	181.94	166.00	68.1	31.9

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 11.83
Dry weight and tare = 11.62
Tare weight = 1.34
Hygroscopic moisture = 2.1%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.0	33.0	26.4	0.0133	33.5	10.8	0.0309	53.9	46.1
5.00	21.9	29.0	22.4	0.0133	29.5	11.5	0.0202	45.7	54.3
15.00	21.9	26.0	19.4	0.0133	26.5	11.9	0.0119	39.6	60.4
30.00	22.0	24.0	17.4	0.0133	24.5	12.3	0.0085	35.5	64.5
60.00	22.1	21.5	14.9	0.0133	22.0	12.7	0.0061	30.5	69.5
250.00	22.1	16.0	9.4	0.0133	16.5	13.6	0.0031	19.3	80.7
1440.00	21.7	13.0	6.3	0.0134	13.5	14.1	0.0013	12.9	87.1

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	31.9	45.4	22.7

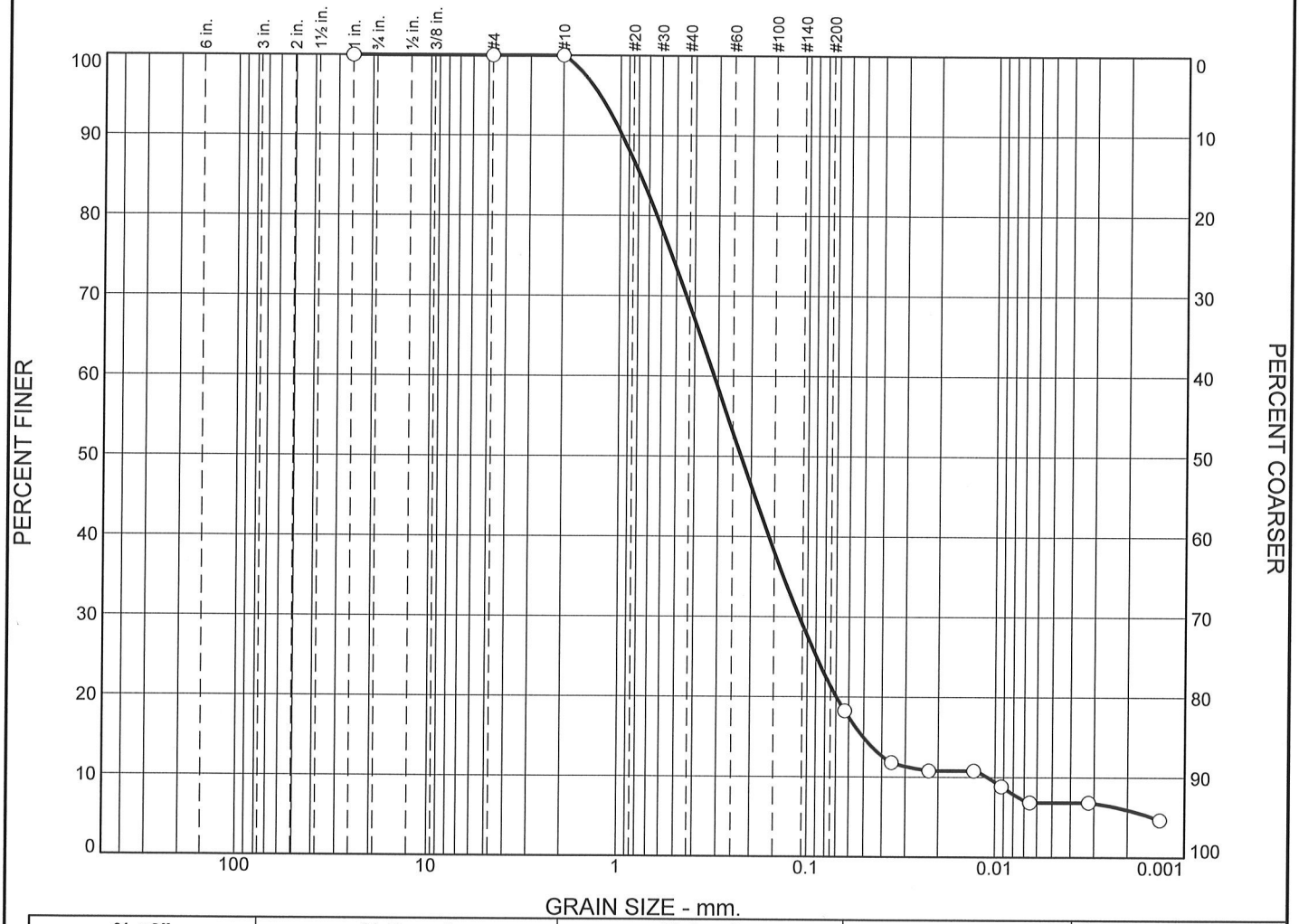
D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0020	0.0033	0.0059	0.0256	0.0415	0.1304	0.1903	0.3001	0.5486

Fineness Modulus
0.34

RF

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	81.7	11.4	6.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7790	0.3155	0.2261	0.1102	0.0503	0.0109	3.52	28.84

Material Description	USCS	AASHTO
○ Discrete Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite J-1/S-23 **Sample Number:** 20150089

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp J-1

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite J-1/S-23
Sample Number: 20150089
Material Description: Discrete Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
73.76	11.71	1	0.00	0.00	100.0	0.0
		#4	11.71	11.71	100.0	0.0
		#10	11.71	11.71	100.0	0.0
50.00	0.00	#230	206.76	165.89	18.3	81.7

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 20.08
Dry weight and tare = 19.98
Tare weight = 1.34
Hygroscopic moisture = 0.5%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	21.9	12.5	5.9	0.0133	13.0	14.2	0.0355	11.8	88.2
5.00	21.9	12.0	5.4	0.0133	12.5	14.2	0.0225	10.8	89.2
15.00	21.9	12.0	5.4	0.0133	12.5	14.2	0.0130	10.8	89.2
30.00	22.0	11.0	4.4	0.0133	11.5	14.4	0.0092	8.9	91.1
60.00	22.0	10.0	3.4	0.0133	10.5	14.6	0.0066	6.9	93.1
250.00	22.0	10.0	3.4	0.0133	10.5	14.6	0.0032	6.9	93.1
1440.00	21.7	9.0	2.3	0.0134	9.5	14.7	0.0014	4.7	95.3

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	81.7	11.4	6.9

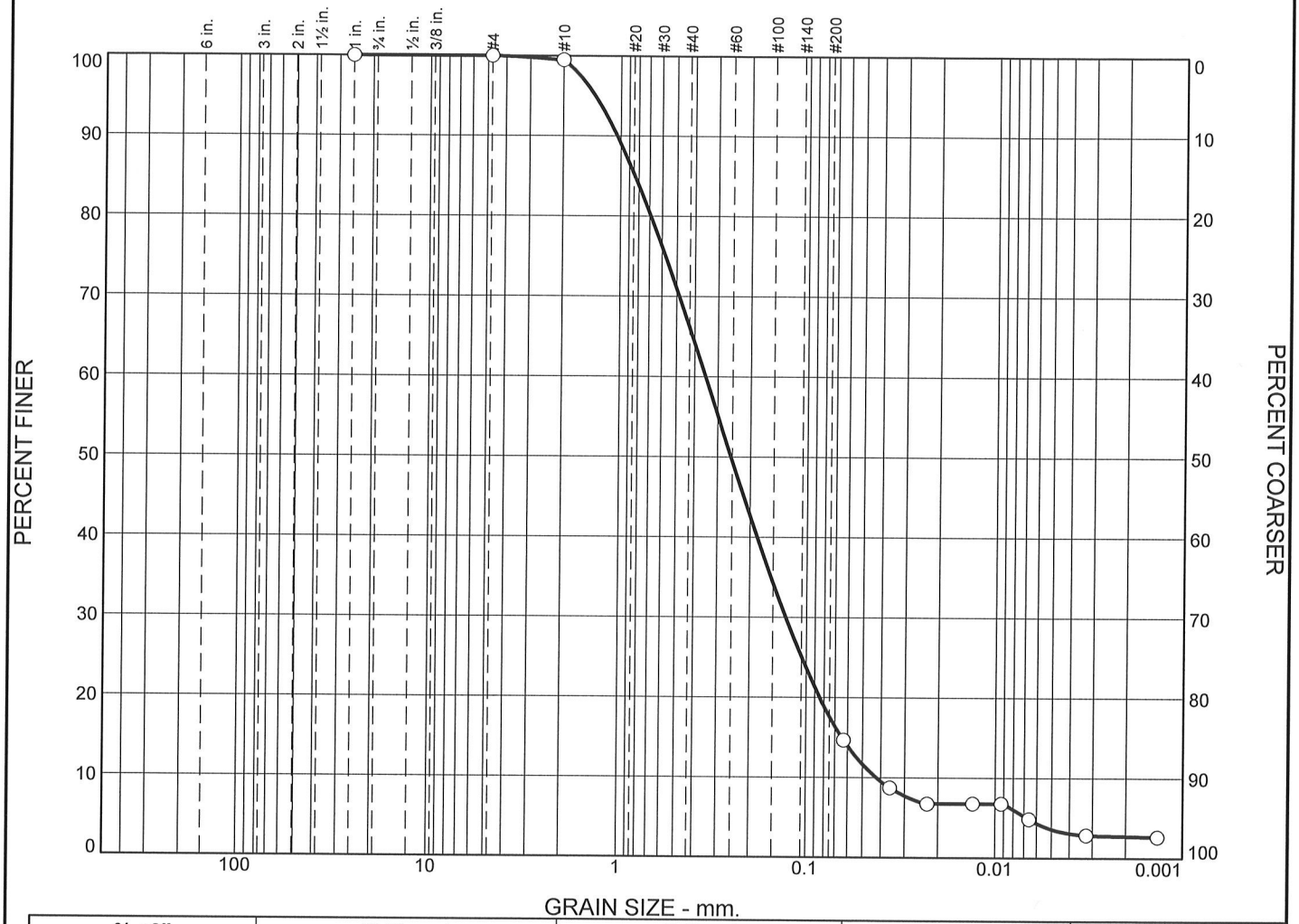
D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0109	0.0503	0.0696	0.1102	0.2261	0.3155	0.6369	0.7790	0.9766	1.2846

Fineness Modulus	C_u	C_c
1.31	28.84	3.52

RF

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.5	84.8	11.6	3.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8383	0.3493	0.2537	0.1284	0.0643	0.0422	1.12	8.28

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-28 (0-2.9') **Sample Number:** 20150093a

Remarks:

○ material retained on #10 sieve: mix shell & wood

Aqua Survey, Inc.

Flemington, NJ

Figure S-28 (0-2.9')

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-28 (0-2.9')
Sample Number: 20150093a
Material Description: Sediment
Testing Remarks: material retained on #10 sieve: mix shell & wood
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
68.71	11.65	1	0.00	0.00	100.0	0.0
		#4	11.65	11.65	100.0	0.0
		#10	11.95	11.65	99.5	0.5
50.00	0.00	#230	213.58	170.96	14.7	85.3

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.5
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 24.15
Dry weight and tare = 24.07
Tare weight = 1.35
Hygroscopic moisture = 0.4%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	21.9	11.0	4.4	0.0133	11.5	14.4	0.0358	8.8	91.2
5.00	21.9	10.0	3.4	0.0133	10.5	14.6	0.0228	6.8	93.2
15.00	22.0	10.0	3.4	0.0133	10.5	14.6	0.0131	6.8	93.2
30.00	22.0	10.0	3.4	0.0133	10.5	14.6	0.0093	6.8	93.2
60.00	22.1	9.0	2.4	0.0133	9.5	14.7	0.0066	4.9	95.1
250.00	22.1	8.0	1.4	0.0133	8.5	14.9	0.0032	2.9	97.1
1440.00	21.7	8.0	1.3	0.0134	8.5	14.9	0.0014	2.7	97.3

Fractional Components

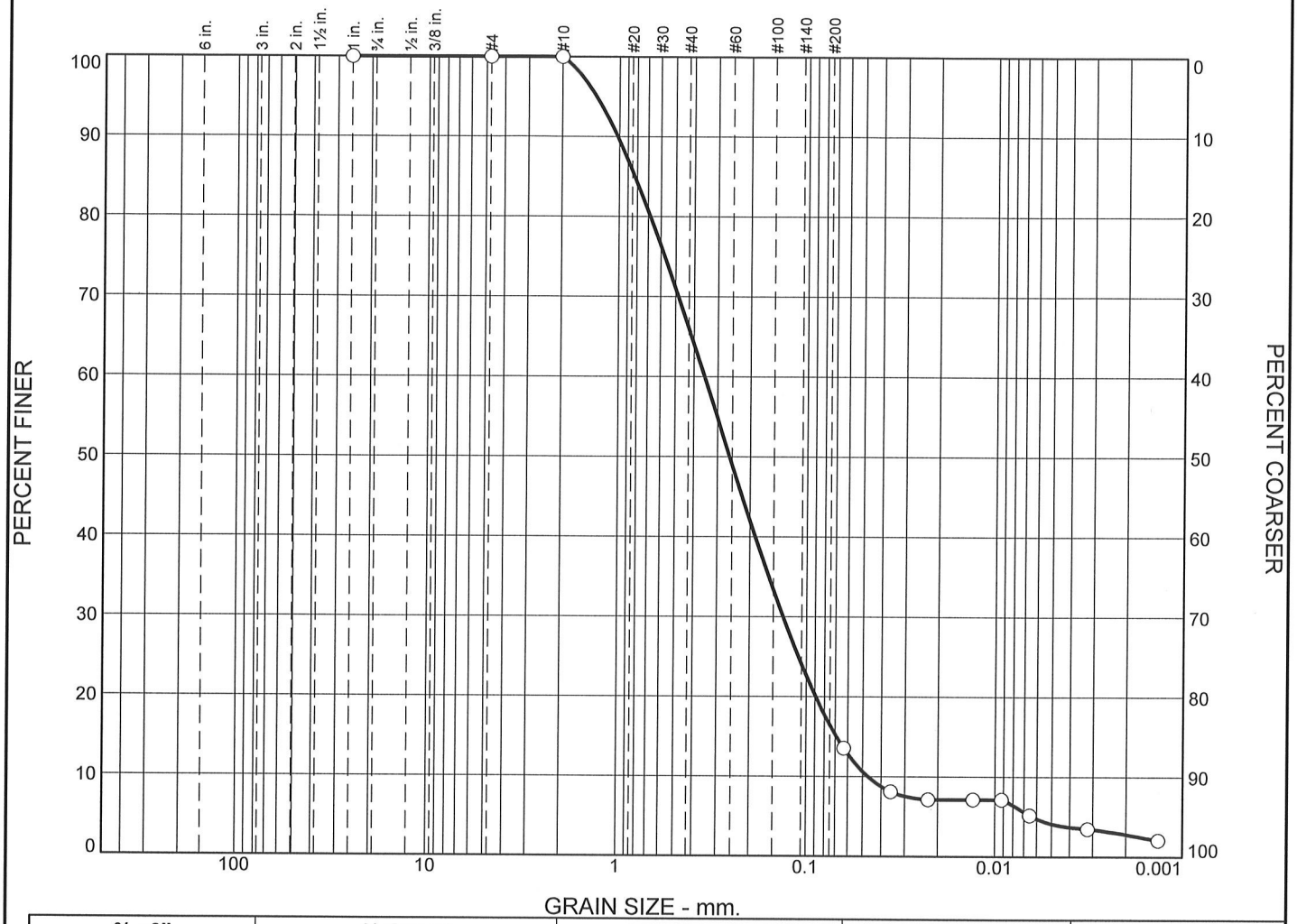
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.5	84.8	11.6	3.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0422	0.0643	0.0845	0.1284	0.2537	0.3493	0.6891	0.8383	1.0454	1.3695

Fineness Modulus	C_u	C_c
1.42	8.28	1.12

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.0	86.4	9.9	3.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8246	0.3518	0.2577	0.1331	0.0688	0.0468	1.08	7.52

Material Description	USCS	AASHTO
○ Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** S-29 **Sample Number:** 20150094

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure S-29

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: S-29
Sample Number: 20150094
Material Description: Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
74.42	11.67	1	0.00	0.00	100.0	0.0
		#4	11.67	11.67	100.0	0.0
		#10	11.67	11.67	100.0	0.0
50.00	0.00	#230	216.31	173.10	13.6	86.4

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer sample =50.0
Hygroscopic moisture correction:
Moist weight and tare = 26.81
Dry weight and tare = 26.72
Tare weight = 1.29
Hygroscopic moisture = 0.4%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -7
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	22.6	10.5	4.1	0.0132	11.0	14.5	0.0356	8.1	91.9
5.00	22.6	10.0	3.6	0.0132	10.5	14.6	0.0226	7.1	92.9
15.00	22.6	10.0	3.6	0.0132	10.5	14.6	0.0130	7.1	92.9
30.00	22.6	10.0	3.6	0.0132	10.5	14.6	0.0092	7.1	92.9
60.00	22.7	9.0	2.6	0.0132	9.5	14.7	0.0065	5.2	94.8
250.00	23.3	8.0	1.7	0.0131	8.5	14.9	0.0032	3.5	96.5
1440.00	22.5	7.5	1.0	0.0132	8.0	15.0	0.0013	2.1	97.9

Fractional Components

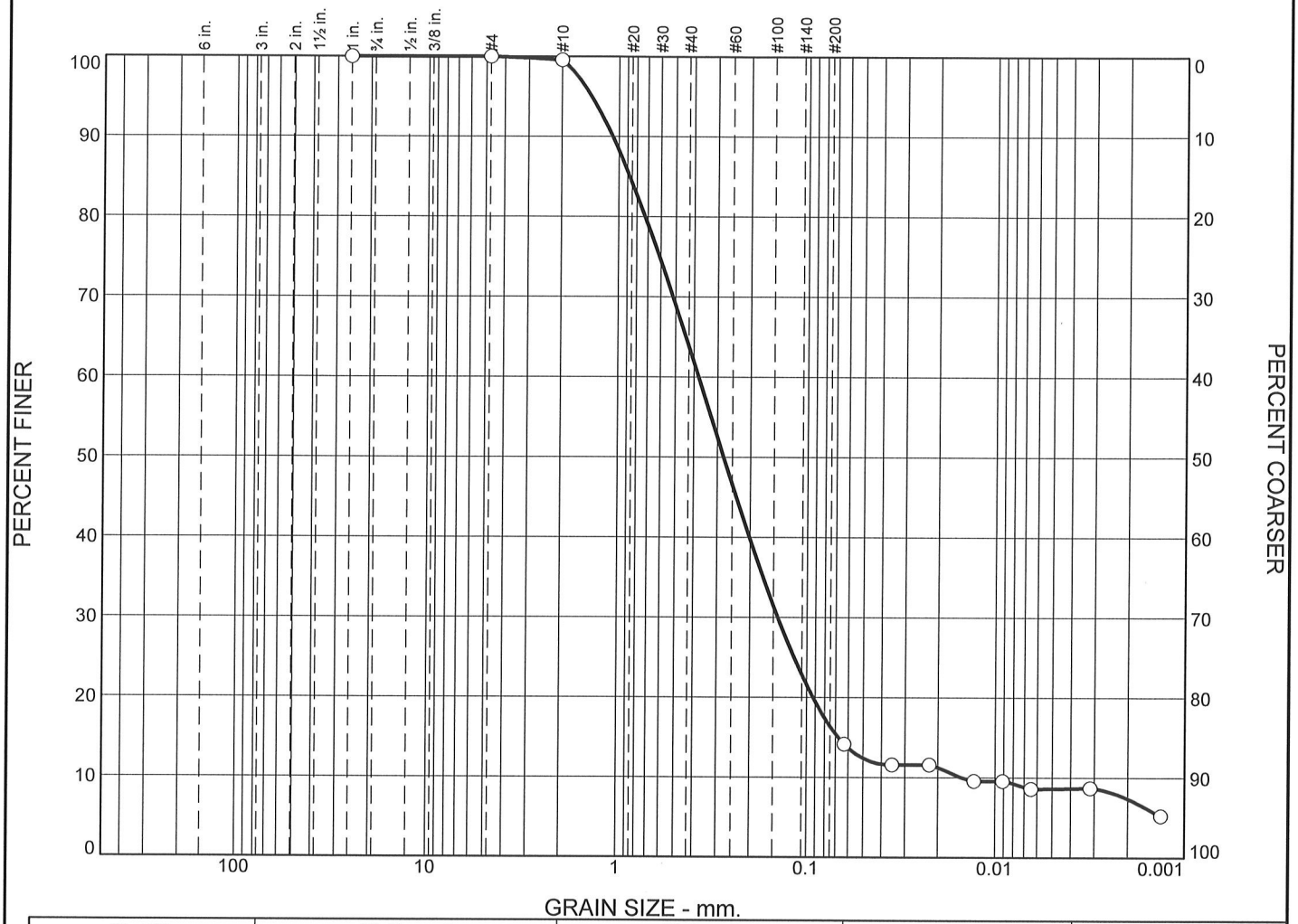
Cobbles	Gravel	Sand	Silt	Clay
0.0	0.0	86.4	9.9	3.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0468	0.0688	0.0890	0.1331	0.2577	0.3518	0.6817	0.8246	1.0209	1.3226

Fineness Modulus	C_u	C_c
1.42	7.52	1.08

Aqua Survey, Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.4	85.4	5.5	8.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8732	0.3776	0.2772	0.1422	0.0676	0.0150	3.58	25.25

Material Description	USCS	AASHTO
○ Composite Sediment		

Project No. 35-005 **Client:** Ocean and Coastal Consultants, Inc.

Project: Stone Harbor

○ **Source of Sample:** Composite L **Sample Number:** 20150109

Remarks:

Aqua Survey, Inc.

Flemington, NJ

Figure Comp L

Tested By: M. Thomas **Checked By:** R. Fristrom

GRAIN SIZE DISTRIBUTION TEST DATA

2/26/2015

Client: Ocean and Coastal Consultants, Inc.
Project: Stone Harbor
Project Number: 35-005
Location: Composite L
Sample Number: 20150109
Material Description: Composite Sediment
Tested by: M. Thomas **Checked by:** R. Fristrom

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
85.65	11.45	1	0.00	0.00	100.0	0.0
		#4	11.45	11.45	100.0	0.0
		#10	11.78	11.45	99.6	0.4
50.00	0.00	#230	214.71	171.84	14.2	85.8

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.6
Weight of hydrometer sample =50
Hygroscopic moisture correction:
Moist weight and tare = 18.31
Dry weight and tare = 18.26
Tare weight = 1.35
Hygroscopic moisture = 0.3%
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.5
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: 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	Percent Retained
2.00	23.5	11.0	5.8	0.0131	11.5	14.4	0.0351	11.6	88.4
5.00	23.5	11.0	5.8	0.0131	11.5	14.4	0.0222	11.6	88.4
15.00	23.5	10.0	4.8	0.0131	10.5	14.6	0.0129	9.6	90.4
30.00	23.5	10.0	4.8	0.0131	10.5	14.6	0.0091	9.6	90.4
60.00	23.5	9.5	4.3	0.0131	10.0	14.7	0.0065	8.6	91.4
250.00	23.7	9.5	4.4	0.0130	10.0	14.7	0.0032	8.7	91.3
1440.00	22.8	8.0	2.6	0.0132	8.5	14.9	0.0013	5.2	94.8

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
0.0	0.4	85.4	5.5	8.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0150	0.0676	0.0925	0.1422	0.2772	0.3776	0.7243	0.8732	1.0774	1.3917

Fineness Modulus	C_u	C_c
1.50	25.25	3.58

AQUA SURVEY, INC

GRAIN SIZE BENCHSHEET
PRE-HYDROMETER SEPARATION SIEVING

Job #: 35-005
Client: OCC-SH
Balance: 9601

Calibration: Yes: ✓ No: ____

Sample ID	Container Mass (g)	Sample Mass and Container (g)	Sample Mass Retained on #4 Sieve (4.75mm) and Container (g)	Sample Mass Retained on #10 Sieve (2.0mm) and Container (g)	Sample Mass to Hydrometer (g)
20150060	11.54	71.32	11.54	11.54	50.0
0061	11.50	73.27	11.50	11.50	50.0
0062	11.40	67.66	11.40	11.40	50.0
0063	11.32	72.48	11.32	11.50	50.0
Dup. 0063	11.41	70.19	11.41	11.66 ①	50.0
Trp. 0063	11.71	77.06	11.71	12.42 ①	50.0
0064	11.52	67.01	11.52	11.52	50.0
0065	11.53	70.56	11.53	11.53	50.0
0075	11.41	67.75	11.41	11.41	50.0
0079	11.38	68.99	11.38	11.38	50.0
0080	11.72	69.22	11.72	11.72	50.0
0081	11.48	66.87	11.48	11.48	50.0
0085	11.42	68.13	11.42	11.42	50.0
0086	11.29	72.39	11.29	11.29	50.0
0087	11.50	75.27	11.50	11.62 ②	50.0
Date/ 7/10 Initials					

① Mix of wood + stone
② shell

HYDROMETRIC READINGS FOR GRAIN SIZE ANALYSIS

Job #: 35-005 Client: OCC-SH

Sample: 0060 Grams Used: 50.0 DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
9:00	0	XXXX	21/2	22.5
9:02	2	38.0		22.5
9:05	5	33.0		22.6
9:15	15	30.5		22.6
9:30	30	28.0		22.6
10:00	60	24.5		22.7
1:10	250	19.0		23.4
9:00	1440	16.5	21/3	21.7

Sample: 0064 Grams Used: 50.0 DC: 7

Clock Time	T	R_h	Initials/Date	T(°C)
9:12	0	XXXX	21/2	22.6
9:14	2	36.0		22.6
9:17	5	33.0		22.6
9:27	15	30.0		22.6
9:42	30	28.0		22.7
10:12	60	24.0		22.8
1:22	250	18.0		23.4
9:12	1440	15.0	21/3	21.7

Sample: 0061 Grams Used: 50.0 DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
9:04	0	XXXX	21/2	22.6
9:06	2	41.0		22.6
9:09	5	36.0		22.6
9:19	15	32.0		22.6
9:34	30	29.0		22.7
10:04	60	26.0		22.7
1:14	250	20.0		23.4
9:04	1440	16.0	21/3	21.7

Sample: 0065 Grams Used: 50.0 DC: 7

Clock Time	T	R_h	Initials/Date	T(°C)
9:16	0	XXXX	21/2	22.6
9:18	2	42.0		22.6
9:21	5	39.0		22.6
9:31	15	34.0		22.6
9:46	30	30.0		22.7
10:16	60	27.5		22.8
1:26	250	21.0		23.4
9:16	1440	16.5	21/3	21.7

Sample: 0062 Grams Used: 50.0 DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
9:08	0	XXXX	21/2	22.6
9:10	2	34.0		22.6
9:13	5	31.0		22.6
9:23	15	29.0		22.6
9:38	30	26.0		22.7
10:08	60	23.0		22.7
1:18	250	17.0		23.4
9:08	1440	15.0	21/3	21.7

DC= Dispersant Constant M= Time in minutes after initial mixing R_h= Hydrometer Reading T=Water Temp (°C)

HYDROMETRIC READINGS FOR GRAIN SIZE ANALYSIS

Job #: 35-005

Client: OCC-SH

Sample: CO63 Grams Used: 50.0 DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
9:36	0	XXXX	SJ 2/12	22.2
9:38	2	18.0		22.2
9:41	5	15.0		22.2
9:51	15	14.0		22.3
10:06	30	14.0		22.4
10:36	60	12.5		22.6
1:46	250	11.0		23.2
9:36	1440	10.5	SJ 2/13	21.6

Sample: CO75 Grams Used: 50.0 DC: 6

Clock Time	T	R_h	Initials/Date	T(°C)
9:48	0	XXXX	SJ 2/12	22.3
9:50	2	30.5		22.3
9:53	5	27.5		22.3
10:03	15	24.5		22.4
10:18	30	22.0		22.5
10:48	60	19.0		22.6
1:58	250	16.0		23.2
9:48	1440	12.0	SJ 2/13	21.5

Sample: CO63 Dup Grams Used: 50.0 DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
9:40	0	XXXX	SJ 2/12	22.2
9:42	2	17.0		22.2
9:45	5	15.0		22.2
9:55	15	14.0		22.3
10:10	30	14.0		22.4
10:40	60	12.0		22.6
1:50	250	11.0		23.2
9:40	1440	10.0	SJ 2/13	21.5

Sample: CO79 Grams Used: 50.0 DC: 6

Clock Time	T	R_h	Initials/Date	T(°C)
9:52	0	XXXX	SJ 2/12	22.3
9:54	2	40.0		22.3
9:57	5	37.0		22.3
10:07	15	33.0		22.4
10:22	30	28.5		22.5
10:52	60	26.0		22.7
2:02	250	20.5		23.2
9:52	1440	16.0	SJ 2/13	21.5

Sample: CO63 Trip Grams Used: 50.0 DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
9:44	0	XXXX	SJ 2/12	22.3
9:46	2	17.0		22.3
9:49	5	15.0		22.3
9:59	15	14.5		22.4
10:14	30	14.0		22.4
10:44	60	12.5		22.6
1:54	250	10.5		23.2
9:44	1440	9.5	SJ 2/13	21.5

DC= Dispersant Constant M= Time in minutes after initial mixing R_h= Hydrometer Reading T=Water Temp (°C)

HYDROMETRIC READINGS FOR GRAIN SIZE ANALYSIS

Job #: 35-005 Client: OCC-SH

Sample: 0080 Grams Used: 50.0 DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
10:12	0	XXXX	2/12	23.6
10:14	2	42.0		23.6
10:17	5	37.0		23.6
10:27	15	34.0		23.7
10:42	30	31.0		23.7
11:12	60	27.0		23.9
2:22	250	21.0		24.3
10:12	1440	16.0	2/13	22.6

Sample: 0086 Grams Used: 50.0 DC: 6

Clock Time	T	R_h	Initials/Date	T(°C)
10:24	0	XXXX	2/12	23.7
10:26	2	41.0		23.7
10:29	5	36.0		23.7
10:39	15	32.5		23.7
10:54	30	27.5		23.8
11:24	60	24.0		24.0
2:34	250	19.0		24.3
10:24	1440	15.5	2/13	22.6

Sample: 0081 Grams Used: 50.0 DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
10:16	0	XXXX	2/12	23.6
10:18	2	42.0		23.6
10:21	5	38.0		23.6
10:31	15	33.5		23.7
10:46	30	30.0		23.8
11:16	60	26.0		23.9
2:26	250	20.0		24.3
10:16	1440	16.0	2/13	22.6

Sample: 0087 Grams Used: 50.0 DC: 6

Clock Time	T	R_h	Initials/Date	T(°C)
10:28	0	XXXX	2/12	23.7
10:30	2	12.0		23.7
10:33	5	12.0		23.7
10:43	15	11.0		23.8
10:58	30	10.0		23.8
11:28	60	10.0		24.0
2:38	250	8.0		24.3
10:28	1440	9.0	2/13	22.6

Sample: 0085 Grams Used: 50.0 DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
10:20	0	XXXX	2/12	23.7
10:22	2	30.0		23.7
10:25	5	27.5		23.7
10:35	15	25.0		23.7
10:50	30	23.0		23.8
11:20	60	21.0		23.9
2:30	250	15.0		24.3
10:20	1440	13.0	2/13	22.6

DC= Dispersant Constant M= Time in minutes after initial mixing R_h= Hydrometer Reading T=Water Temp (°C)

AQUA SURVEY, INC

GRAIN SIZE BENCHSHEET
SANDS RECOVERED FROM HYDROMETER

Job #: 35-005
Client: UCC-Stone Harbor
Balance: AND GF-8K2 **Calibration: Yes:** ✓ **No:** ____

Oven: QL Model 40 GC **Date In:** 2/17/15, 2/18/15 **Oven Temp:** 110°C, 110°C
Date Out: 2/18/15, 2/19/15 **Oven Temp:** 110C, 110°C

Sample ID	Container Mass (g)	Sample Mass and Container (g)	Sample Mass Retained on Sieve (g)
20150060	172.98 2/17/15	180.91 2/18/15	7.93
20150061	168.05	169.01	0.96
20150062	162.29	179.87	17.58
20150063	167.85	205.14	37.29
20150063 dup	176.08	213.53	37.45
20150063 trip	167.90	205.13	37.23
20150064	171.44	181.03	9.59
20150065	170.44 2/18/15	177.54 2/19/15	7.10
20150075	176.38	188.76	12.38
20150079	164.21	170.08	5.87
20150080	171.53	177.99	~~177.99~~ 6.46
20150081	171.82	173.27	~~173.27~~ 1.45
20150085	146.15	164.73	18.58
20150086	170.83	173.67	2.84
20150087	171.99	212.80	40.81
Date/ Initials	2/17/15; 2/18/15	2/18/15; 2/19/15	2/19/15

AQUA SURVEY, INC

GRAIN SIZE BENCHSHEET
PRE-HYDROMETER SEPARATION SIEVING

Job #: 35-005
Client: OCC-SH
Balance: 9601

Calibration: Yes: ✓ No: ____

Sample ID	Container Mass (g)	Sample Mass and Container (g)	Sample Mass Retained on #4 Sieve (4.75mm) and Container (g)	Sample Mass Retained on #10 Sieve (2.0mm) and Container (g)	Sample Mass to Hydrometer (g)
20150067	11.27	65.98	11.27	11.41	50.0
0068	11.68	65.10	11.68	11.68	50.0
0069	11.50	67.50	11.50	11.50	50.0
0071	11.70	67.47	11.70	11.70	50.0
0072	11.47	68.15	11.47	11.47	50.0
0073	11.44	68.78	11.44	11.44	50.0
0076	11.42	80.64	11.42	11.66	50.0
Dup 0076	11.50	68.40	11.50	11.79	50.0
Trp. 0076	11.29	71.78	11.29	11.99	50.0
0077	11.38	68.83	11.38	11.38	50.0
0078	11.45	67.37	11.45	11.45	50.0
0094	11.67	74.42	11.67	11.67	50.0
Date/ 2/6 Initials ST					

HYDROMETRIC READINGS FOR GRAIN SIZE ANALYSIS

Job #: 35-025

Client: OCC-SH

Sample: ~~0076~~ 0067 Grams Used: 50.0 DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
9:00	0	XXXX	7/10	22.6
9:02	2	35.5		22.6
9:05	5	31.0		22.6
9:15	15	27.5		22.6
9:30	30	25.5		22.6
10:00	60	23.0		22.8
1:10	250	18.5		23.3
9:00	1440	14.0	7/11	22.3

Sample: ~~0094~~ 0071 Grams Used: 50.0 DC: 6

Clock Time	T	R_h	Initials/Date	T(°C)
9:12	0	XXXX	7/10	22.6
9:14	2	18.0		22.6
9:17	5	17.0		22.6
9:27	15	16.5		22.6
9:42	30	15.0		22.7
10:12	60	~~9.5~~		22.8
1:22	250	12.0		23.4
9:12	1440	10.0	7/11	22.3

⓪ 13.5

Sample: ~~0076 Dup~~ 0068 Grams Used: 50.0 DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
9:04	0	XXXX	7/10	22.6
9:06	2	41.0		22.6
9:09	5	37.0		22.6
9:19	15	33.0		22.6
9:34	30	30.0		22.6
10:04	60	27.0		22.8
1:14	250	21.5		23.4
9:04	1440	15.5	7/11	22.3

Sample: Grams Used: DC:

Clock Time	T	R_h	Initials/Date	T(°C)
9:16	0	XXXX		
9:18	2			
9:21	5			
9:31	15			
9:46	30			
10:16	60			
1:26	250			
9:16	1440			

Sample: ~~0076 Trip~~ 0069 Grams Used: 50.0 DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
9:08	0	XXXX	7/10	22.6
9:10	2	42.0		22.6
9:13	5	39.0		22.6
9:23	15	36.0		22.6
9:38	30	31.0		22.7
10:08	60	28.0		22.8
1:18	250	22.0		23.4
9:08	1440	16.0	7/11	22.3

DC= Dispersant Constant M= Time in minutes after initial mixing R_h= Hydrometer Reading T=Water Temp (°C)

HYDROMETRIC READINGS FOR GRAIN SIZE ANALYSIS

Job #: 35-005

Client: OCC-SH

Sample: CU72 Grams Used: 50.0 DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
9:36	0	XXXX	2/10	22.3
9:38	2	37.0		22.3
9:41	5	31.5		22.2
9:51	15	27.0		22.2
10:06	30	25.0		22.3
10:36	60	22.0		22.4
1:46	250	18.0		22.8
9:36	1440	14.0	2/11	22.0

Sample: CU78 Grams Used: 50.0 DC: 7

Clock Time	T	R_h	Initials/Date	T(°C)
9:48	0	XXXX	2/10	22.2
9:50	2	40.0		22.2
9:53	5	38.0		22.3
10:03	15	34.0		22.3
10:18	30	24.0		22.2
10:48	60	25.0		22.4
1:58	250	21.0		22.8
9:48	1440	16.0	2/11	22.1

Sample: CU73 Grams Used: 50.0 DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
9:40	0	XXXX	2/10	22.2
9:42	2	37.0		22.2
9:45	5	33.0		22.2
9:55	15	30.0		22.3
10:10	30	26.5		22.3
10:40	60	24.0		22.4
1:50	250	18.0		22.8
9:40	1440	14.5	2/11	22.1

Sample: Grams Used: DC:

Clock Time	T	R_h	Initials/Date	T(°C)
9:52	0	XXXX		
9:54	2			
9:57	5			
10:07	15			
10:22	30			
10:52	60			
2:02	250			
9:52	1440			

Sample: CU77 Grams Used: 50.0 DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
9:44	0	XXXX	2/10	22.2
9:46	2	39.0		22.2
9:49	5	36.0		22.2
9:59	15	32.0		22.2
10:14	30	27.5		22.4
10:44	60	25.0		22.4
1:54	250	19.0		22.8
9:44	1440	15.0	2/11	22.1

DC= Dispersant Constant M= Time in minutes after initial mixing R_h= Hydrometer Reading T=Water Temp (°C)

HYDROMETRIC READINGS FOR GRAIN SIZE ANALYSIS

Job #: 35-005

Client: OCC-SH

Sample: 0076 Grams Used: 50.0 DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
10:12	0	XXXX	JD 2/10	22.6
10:14	2	14.0		22.6
10:17	5	11.5		22.6
10:27	15	10.5		22.6
10:42	30	10.5		22.6
11:12	60	10.0		22.7
2:22	250	8.0		23.3
10:12	1440	8.0	JD 2/11	22.5

Sample: 0094 Grams Used: 50.0 DC: 7

Clock Time	T	R_h	Initials/Date	T(°C)
10:24	0	XXXX	JD 2/10	22.6
10:26	2	10.5		22.6
10:29	5	10.0		22.6
10:39	15	10.0		22.6
10:54	30	10.0		22.6
11:24	60	9.0		22.7
2:34	250	8.0		23.3
10:24	1440	7.5	JD 2/11	22.5

Sample: 0076 Dup Grams Used: 50.0 DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
10:16	0	XXXX	JD 2/10	22.6
10:18	2	12.0		22.6
10:21	5	11.0		22.6
10:31	15	11.0		22.6
10:46	30	11.0		22.6
11:16	60	10.0		22.7
2:26	250	9.0		23.3
10:16	1440	9.0	JD 2/11	22.5

Sample: Grams Used: DC:

Clock Time	T	R_h	Initials/Date	T(°C)
10:28	0	XXXX		
10:30	2			
10:33	5			
10:43	15			
10:58	30			
11:28	60			
2:38	250			
10:28	1440			

Sample: 0076 Trip Grams Used: 50.0 DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
10:20	0	XXXX	JD 2/10	22.6
10:22	2	12.0		22.6
10:25	5	11.5		22.6
10:35	15	11.5		22.6
10:50	30	11.0		22.6
11:20	60	10.0		22.7
2:30	250	10.0		23.3
10:20	1440	8.0	JD 2/11	22.5

DC= Dispersant Constant M= Time in minutes after initial mixing R_h= Hydrometer Reading T=Water Temp (°C)

AQUA SURVEY, INC

GRAIN SIZE BENCHSHEET
SANDS RECOVERED FROM HYDROMETER

Job #: 35.005
Client: OCC Stone Harbor
Sieve Size: 230
Balance: AND GF-8K2 **Calibration: Yes:** ✓ **No:** ____

Oven: QL Model 40 GC **Date In:** 2/14/15 **Oven Temp:** 110°C **Date/Intls:** 2/14/15
Date Out: 2/16/15 **Oven Temp:** 110°C **Date/Intls:** 2/16/15

Sample ID	Container Mass (g)	Sample Mass and Container (g)	Sample Mass retained on Sieve (g)
20150067	168.74	183.63	14.89
20150068	172.53	173.80	1.27
20150069	145.95	146.85	0.90
20150071	179.09	213.88	34.79
20150072	178.22	191.22	13.00
20150073	164.28	169.95	5.67
20150077	178.53	179.60	1.07
20150078	172.60	173.69	1.09
20150076	176.35	218.24	41.89
20150076 dup	143.10	185.03	41.93
20150076 trp	177.03	218.91	41.88
20150094	173.10	216.31	43.21
Date/ Initials	2/14/15	2/16/15, 2/17/15	2/17/15

AQUA SURVEY, INC

GRAIN SIZE BENCHSHEET
PRE-HYDROMETER SEPARATION SIEVING

Job #: 35.005
Client: OCC-SH
Balance: 9601

Calibration: Yes: ✓ No: ____

Sample ID	Container Mass (g)	Sample Mass and Container (g)	Sample Mass Retained on #4 Sieve (4.75mm) and Container (g)	Sample Mass Retained on #10 Sieve (2.0mm) and Container (g)	Sample Mass to Hydrometer (g)
20150066	11.86	80.98	13.92	15.73	50.0
0070	11.52	69.58	11.52	11.66	50.0
Dup. 0070	11.39	71.00	11.39	11.55	50.0
Trip. 0070	11.72	75.96	11.72	11.95	50.0
0074	11.39	77.24	11.39	13.36	50.0
0088	11.41	73.03	11.41	11.41	50.0
0089	11.71	73.76	11.71	11.71	50.0
0093a	11.65	68.71	11.65	11.95 ①	50.0
~~0097~~	~~11.47~~	~~70.25~~			
0099	11.46	69.63	11.46	11.46	50.0
~~0100~~	~~11.27~~	~~69.85~~			
~~0101~~	~~11.41~~				
0103	11.39	67.73	11.39	11.39	50.0
0104	11.41	69.57	11.41	11.41	50.0
0109	11.45	85.65	11.45	11.78	50.0
0097	11.53	65.75	11.53	11.53	50.0
0100	11.95	64.20	11.95	11.95	50.0
0101	11.25	69.93	11.25	11.25	50.0
Date/ 7/13/15 Initials JR					

① Mix shell + wood

HYDROMETRIC READINGS FOR GRAIN SIZE ANALYSIS

Job #: 35-005

Client: OCC SH

Sample: 0066 Grams Used: 50.0g DC: 5

Clock Time	M	R_h	Initials/Date	T(°C)
9:00	0	XXXX	JT 2/17/15	22.1
9:02	2	22.0		22.1
9:05	5	21.0		22.1
9:15	15	19.0		22.2
9:30	30	17.0		22.2
10:00	60	15.0		22.2
1:10	250	12.0		22.1
9:00	1440	10.0	2/18/15	21.8

Sample: 0070T Grams Used: 50.0g DC: 5

Clock Time	T	R_h	Initials/Date	T(°C)
9:12	0	XXXX	JT 2/17/15	22.2
9:14	2	16.5		22.2
9:17	5	15.0		22.2
9:27	15	14.0		22.2
9:42	30	13.0		22.2
10:12	60	12.0		22.3
1:22	250	11.0		22.1
9:12	1440	9.0	2/18/15	21.8

Sample: 0070 Grams Used: 50.0g DC: 5

Clock Time	M	R_h	Initials/Date	T(°C)
9:04	0	XXXX	JT 2/17/15	22.1
9:06	2	17.0		22.1
9:09	5	15.0		22.1
9:19	15	14.0		22.2
9:34	30	13.5		22.2
10:04	60	12.0		22.2
1:14	250	10.0		22.1
9:04	1440	10.0	2/18/15	21.8

Sample: 0074 Grams Used: 50.0g DC: 5

Clock Time	T	R_h	Initials/Date	T(°C)
9:16	0	XXXX	JT 2/17/15	22.2
9:18	2	11.5		22.2
9:21	5	11.0		22.2
9:31	15	11.0		22.2
9:46	30	10.0		22.2
10:16	60	10.0		22.3
1:26	250	9.0		22.1
9:16	1440	8.0	2/18/15	21.8

Sample: 0070D Grams Used: 50.0g DC: 5

Clock Time	M	R_h	Initials/Date	T(°C)
9:08	0	XXXX	JT 2/17/15	22.2
9:10	2	16.0		22.2
9:13	5	15.0		22.2
9:23	15	14.0		22.2
9:38	30	13.0		22.2
10:08	60	12.0		22.3
1:18	250	11.5		22.1
9:08	1440	10.0	2/18/15	21.8

DC= Dispersant Constant M= Time in minutes after initial mixing R_h= Hydrometer Reading T=Water Temp (°C)

HYDROMETRIC READINGS FOR GRAIN SIZE ANALYSIS

Job #: 35-005

Client: OCC. St

Sample: 0098 Grams Used: 50.0g DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
9:36	0	XXXX	JT 2/17/15	22.0
9:38	2	33.0		22.0
9:41	5	29.0		21.9
9:51	15	26.0		21.9
10:06	30	24.0		22.0
10:36	60	21.5		22.1
1:46	250	16.0		22.1
9:36	1440	13.0	2/18/15	21.7

Sample: 0097 Grams Used: 50.0g DC: 7

Clock Time	T	R_h	Initials/Date	T(°C)
9:48	0	XXXX	JT 2/17/15	21.9
9:50	2	39.0		21.9
9:53	5	36.0		22.0
10:03	15	32.0		21.9
10:18	30	28.0		22.0
10:48	60	26.0		22.1
1:58	250	21.0		22.1
9:48	1440	16.0	2/18/15	21.7

Sample: 0089 Grams Used: 50.0g DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
9:40	0	XXXX	JT 2/17/15	21.9
9:42	2	12.5		21.9
9:45	5	12.0		21.9
9:55	15	12.0		21.9
10:10	30	11.0		22.0
10:40	60	10.0		22.0
1:50	250	10.0		22.0
9:40	1440	9.0	2/18/15	21.7

Sample: 0099 Grams Used: 50.0g DC: 7

Clock Time	T	R_h	Initials/Date	T(°C)
9:52	0	XXXX	JT 2/17/15	21.9
9:54	2	40.0		21.9
9:57	5	37.0		22.0
10:07	15	32.5		22.0
10:22	30	29.0		22.0
10:52	60	26.0		22.1
2:02	250	21.0		22.1
9:52	1440	16.0	2/18/15	21.7

Sample: 0093a Grams Used: 50.0g DC: 7

Clock Time	M	R_h	Initials/Date	T(°C)
9:44	0	XXXX	JT 2/17/15	21.9
9:46	2	11.0		21.9
9:49	5	10.0		21.9
9:59	15	10.0		22.0
10:14	30	10.0		22.0
10:44	60	9.0		22.1
1:54	250	8.0		22.1
9:44	1440	8.0	2/18/15	21.7

DC= Dispersant Constant M= Time in minutes after initial mixing R_h= Hydrometer Reading T=Water Temp (°C)

HYDROMETRIC READINGS FOR GRAIN SIZE ANALYSIS

Job #: 35-005 Client: OCC-SH

Sample: 0100 Grams Used: 50.0g DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
10:12	0	XXXX	JT 2/17/15	23.5
10:14	2	45.0		23.5
10:17	5	39.5		23.5
10:27	15	34.0		23.5
10:42	30	31.0		23.5
11:12	60	27.0		23.5
2:22	250	21.5		23.6
10:12	1440	16.5	2/18/15	~~23.0~~ 22.8

Sample: 0104 Grams Used: 50.0g DC: 6

Clock Time	T	R_h	Initials/Date	T(°C)
10:24	0	XXXX	JT 2/17/15	23.5
10:26	2	41.0		23.5
10:29	5	37.0		23.5
10:39	15	32.0		23.5
10:54	30	28.5		23.6
11:24	60	26.0		23.5
2:34	250	21.0		23.7
10:24	1440	16.0	2/18/15	22.8

Sample: 0101 Grams Used: 50.0g DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
10:16	0	XXXX	JT 2/17/15	23.5
10:18	2	37.0		23.5
10:21	5	34.0		23.5
10:31	15	29.0		23.5
10:46	30	27.0		23.5
11:16	60	25.5		23.5
2:26	250	21.0		23.6
10:16	1440	15.0	2/18/15	22.8

Sample: 0109 Grams Used: 50.0g DC: 6

Clock Time	T	R_h	Initials/Date	T(°C)
10:28	0	XXXX	JT 2/17/15	23.5
10:30	2	16.0		23.5
10:33	5	11.0		23.5
10:43	15	10.0		23.5
10:58	30	10.0		23.5
11:28	60	9.5		23.5
2:38	250	9.5		23.7
10:28	1440	8.0	2/18/15	22.8

Sample: 0103 Grams Used: 50.0g DC: 6

Clock Time	M	R_h	Initials/Date	T(°C)
10:20	0	XXXX	JT 2/17/15	23.5
10:22	2	42.0		23.5
10:25	5	38.0		23.5
10:35	15	34.0		23.5
10:50	30	30.5		23.6
11:20	60	27.0		23.5
2:30	250	21.0		23.6
10:20	1440	17.0	2/18/15	22.8

DC= Dispersant Constant M= Time in minutes after initial mixing R_h= Hydrometer Reading T=Water Temp (°C)

AQUA SURVEY, INC

GRAIN SIZE BENCHSHEET
SANDS RECOVERED FROM HYDROMETER

Job #: 35-005
Client: OCC Stone Harbor
Balance: AND GF-8K2 **Calibration: Yes:** ✓ **No:** ____

Oven: QL Model 40GC **Date In:** 2/18/15, 2/20/15 **Oven Temp:** 110°C, 110°C
Date Out: 2/19/15 2/20/15 **Oven Temp:** 110°C, 110°C

Sample ID	Container Mass (g)	Sample Mass and Container (g)	Sample Mass Retained on Sieve (g)
20150066	180.61 2/18/15	212.65	32.04
20150070	176.70	213.95	37.25
20150070 dup	176.93	214.28	37.35
20150070 trip	177.95	215.30	37.35
20150074	171.93	214.62	42.69
20150088	166.00 2/19/15	181.94	15.94
20150089	165.89	206.76	40.87
20150093a	170.96	213.58	42.62
20150097	175.89	180.99	5.10
20150099	164.33	172.07	7.74
20150100	164.94	166.11	1.17
20150101	160.54	170.42	9.88
20150103	163.88	165.06	1.18
20150104	133.59	138.15	4.56
20150109	171.84	214.71	42.87
Date/ Initials	2/18/15, 2/19/15	2/20/15	2/20/15

ASI Job #: 35-005
Client: OCC-Stone Harbor

Bulk Density = (M-M_tare)/V

M_tare =Weight of empty container
M_wet =Weight of container filled to volume with undried sample
M_dry =Weight of the oven dried sample and container
Volume: 25ml

ASI Sample ID	M_tare	M_wet	M_dry	BD wet	BD dry
20150062	18.4764	53.8605	35.3343	1.42	0.67
20150063	18.6365	62.5326	48.3679	1.76	1.19
20155066	18.6391	58.4705	43.1915	1.59	0.98
20150067	18.5765	54.0697	35.4484	1.42	0.67
20150070	18.6853	60.6265	45.7625	1.68	1.08
20150071	18.6065	58.6238	43.1970	1.60	0.98
20150074	18.7241	64.0489	51.4080	1.81	1.31
20150075	18.7225	53.3721	34.8355	1.39	0.64
20150076	18.6021	64.3378	52.7151	1.83	1.36
20150085	18.6638	53.4768	34.3343	1.39	0.63
20150086	18.7657	51.2382	31.4922	1.30	0.51
20150087	18.6184	64.7576	52.2050	1.85	1.34
20150088	18.6041	52.3799	33.6902	1.35	0.60
20150089	18.6128	62.5462	49.9328	1.76	1.25
20150097	18.7148	51.4834	31.8013	1.31	0.52
20150099	18.6728	52.7419	33.0801	1.36	0.58
20150100	18.7087	50.8795	30.5490	1.29	0.47
20150101	18.6163	52.9243	33.5587	1.37	0.60
20150103	18.5905	50.7951	30.3179	1.29	0.47
20150104	18.7191	51.5122	31.7641	1.31	0.52
20150104 dup	18.4834	51.5657	31.5823	1.32	0.52
20150104 trip	18.5812	51.5442	31.6526	1.32	0.52
20150109	18.7697	64.5693	52.8174	1.83	1.36

Bulk Density (Wet and Dry gms/ml)

Client: OCC-SH
Job #: 35-005

Sample #	Pycnometer ID	Volume (mls)	Pycnometer (gms)	Wet plus Pycnometer (gms)	Dry plus Pycnometer (gms)	Wet Bulk Density (gms/ml)	Dry Bulk Density (gms/ml)
20150062		25 ml	18.4764	53.8605	35.3343	1.4154	0.6743
20150063			18.63665	62.5326	48.3679	1.7558	1.1893
20150066			18.6391	58.4705	43.1915	1.5933	0.9821
20150067			18.5765	54.6697	35.4484	1.4197	0.6749
20150070			18.6853	60.6265	45.7625	1.6776	1.0831
20150071			18.6065	58.6238	43.1970	1.6007	0.9836
20150074			18.7241	64.0489	51.4080	1.8130	1.3074
20150075			18.7225	53.3721	34.8355	1.3860	0.6445
20150076			18.6021	64.3378	52.7151	1.8294	1.3645
20150085			18.6638	53.7468	34.3343	1.4033	0.6268
20150086			18.7657	51.2382	31.4922	1.2989	0.5091
20150087			18.6184	64.7576	52.2050	1.8456	1.3435
20150088			18.6041	52.3799	33.6902	1.3510	0.6034
20150089			18.6128	62.5462	49.9328	1.7573	1.2528
20150096 7 Dup			18.7148	51.4834	31.8013	1.3107	0.5235
20150099			18.6728	52.7419	33.0801	1.3628	0.5763
20150100			18.7087	50.8795	30.5490	1.2868	0.4736
20150101			18.6163	52.9243	33.5587	1.3723	0.5977
20150103			18.5905	50.7951	30.3179	1.2882	0.4691
20150104			18.7191	51.5122	31.7641	1.3117	0.5218
20150104Dup			18.4834	51.5657	31.5823	1.3233	0.5240
20150104 trip			18.5812	51.5442	31.6526	1.3185	0.5229
20150109			18.7697	64.5693	52.8174	1.8320	1.3619
Initials/date		DOA 2/19/15	DOA 2/19/15	DOA 2/19/15	DOA 2/27/15	DOA 2/19/15	DOA 2/27/15

Wet Bulk Density = ((Wet plus pycnometer) - (Pycnometer)) / Volume
Dry Bulk Density = ((Dry plus pycnometer) - (Pycnometer)) / Volume